Positive and Negative Impacts of Tourism on Environment:
A Case Study of Pattaya City, Thailand

Rohit Agarwal[1], Thanaporn Kariyapol[2,*], Nattaporn Pienchob[3]

[1,2]Sripatum International College, Sripatum University

[3]Office of International Relations, Sripatum University

ABSTRACT

Pattaya is located on the eastern coastline of Thailand's Gulf of Thailand, 149.2 km from Bangkok. It experienced considerable, rapid and mainly unplanned growth during 1960s and 1970s as a rest and recreation resort for US military personnel based in Thailand. Pattaya has been promoted as one of Thailand's major tourist destinations and continued to grow rapidly. Pattaya is well known for its beaches, its nightlife and a range of festivals and events. The paper investigates the influences of tourism on environmental sustainability of Pattaya beaches where are greatly affected in both positive and negative ways seeking for the solution to maintain Pattaya as one of the major tourist destinations of Thailand in the future.

Keywords: Pattaya, Tourism, Development, Environmental sustainability

* Corresponding Author; Email: thanaporn.ka@spu.ac.th

Introduction

The name Pattaya evolved from the march of Phraya Tak (later King Taksin) and his army from Ayutthaya to Chanthaburi, which took place before the fall of the former capital to Burmese invaders in 1767. In 1950's, the first regular visitors from Bangkok start to travel down to Pattaya – taking rough roads and journeys that could take more than 8 hours. These visitors started to realise that Pattaya had plenty to offer in terms of crystal clear, clean waters and diving opportunities. As more people start to visit so the restaurants and bars started to emerge. Pattaya had started to become more than just a sleepy fishing village, it had begun to evolve into what we know today (Longjit and Douglas, 2013; Leonard, 2014; Harsha, 2017).

Tourism is often considered as foreign exchange and revenue generating force to any country for the development of the economy. At the same time tourism industry is directly related to the physical environment of the destination. The quality of the environment, both natural and man-made, is essential to tourism. However, the relationship of tourism with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses and marinas. It has the potential to contribute in a positive manner to socio-economic achievements but, at the same time, its fast and sometimes uncontrolled growth can be the major cause of degradation of the environment. Biological and physical resources are in fact the assets that attract tourists. However, the stress imposed by tourism activities on fragile ecosystems accelerates and aggravates their depletion. Tourism in Thailand has focused on quantity rather than quality. The explosion of tourism has led to unequal distribution of financial advantage to large firms, while costs are borne by local people not directly profit from the tourism promotion. Worse are the environmental impacts of uncontrolled tourism development. The paper investigates the influences of tourism on environmental sustainability of Pattaya beaches where are greatly affected in both positive and negative ways seeking for the solution to maintain Pattaya as one of the major tourist destinations of Thailand in the future. (Smith, 1995; Longjit and Douglas, 2013; Leonard, 2014; Smith, 2003; Schauseil, 2015)

Tourism Impacts on Environment of Pattaya

1. Positive Impacts of Tourism in Pattaya

The potential positive environmental impacts of tourism can be to ensure higher water quality and better protection of local nature and natural resources. It can only be achieved when the tourism industry can contribute to conservation through:

1.1 Financial contributions:

Tourism can contribute directly to the conservation of sensitive areas and habitat. Revenue from entrance fees and similar sources can be allocated specifically to pay for the protection and management of environmentally sensitive areas. Special fees for operations or conservation activities can be collected from tourists or tour operators (Simmel, 1990; Essays UK, 2013)

By creating alternative sources of employment, tourism reduces problems such as over-fishing and deforestation in developing nations like Thailand. The revenue generated from tourism helps the authorities to build the facilities for the locals and the tourists. Pattaya is a not a big city but today it has all the facilities from hospital to the airport (Tourism Authority of Thailand, 1993; Essays UK, 2013; UNWTO, 2014)

1.2 Improved Environmental Management and Planning

According to the UNEP and WTO (2005), managing tourism destinations is an important part of controlling tourism's environmental impacts. Cleaner production techniques are important tools for planning and operating tourism facilities in a way that minimizes their environmental impacts. Pattaya hotel industry is taking steps in using green building (using energy-efficient and non-polluting construction materials, sewage systems and energy sources) to decrease its impact on the environment. And because waste treatment and disposal are often major, long-term environmental problems in the tourism industry, pollution prevention and waste minimization techniques are especially important for the tourism industry.

1.3 Development and Improvement of Infrastructure

According to Kreag (2001) and Kodoatie et al. (2015), the definition of infrastructure is a physical system providing transportation, irrigation, drainage, building and other public facilities required to meet the base of the human needs in the social and economic scopes. According to Seetanah et al. (2011), there are various factors which simultaneously providing the interesting experiences from the tourism destination. They highlighted the importance of the infrastructure services including transportation service and others.

According to Glasson et al. (1995), tourism infrastructure is the component of an area tourism product. Infrastructure is the basic device which is the building and service institution whose existence is essential for the proper management to meet the economic and community needs. Tourism infrastructure is a collection of the various devices and institutions which become the basic materials and managements for tourism development. It consists of three basic elements which are accommodation facilities, food and beverage facilities and communication facilities (Tang, 2012).

Generally, the tourism infrastructure of an area which allows the tourists staying and carrying out the activities consist of the following below:

- Accommodation facility, such as hotel, resort, apartment, hostel and camping facilities.

- Gastronomic facility such as restaurant, bar and cafe

- Transportation to the destination

- The services around the recreation places, resort sky, diving school, sailing school, and golf club

- Retail network, and

- Other services (information, rental (vehicle, diving tools and others)

Tourism provides an incentive for investment in infrastructure such as transport network, as well as funding local medical, education and other important facilities. Tourist income often makes it possible to preserve and restore historic buildings and monuments. Improvements in the area's appearance through cleanup or repairs and the addition of public art such as murals, water fountains, and monuments (part of making a community ready for tourism) benefit visitors and residents alike. Tourism is generally considered a "clean" industry, one that is based on hotels, restaurants, shops and attractions, instead of factories. Today Pattaya is considered to be one of the most organized cities in Thailand. The beaches in Pattaya have undergone a full-blown makeover during the past few years. The local authorities have beautify the landscape, employ methods to combat coastal erosion, enhance beach safety by erecting surf warning signs, placing moorings for boats. Local residents have been forbidden to make any changes to the island's new beachscape (Hall, 2001; The Nation, 2018).

2. Negative Impacts of Tourism

Tourism puts enormous stress on local land use, and can lead to soil erosion, increased pollution, natural habitat loss, and more pressure on endangered species. These effects can gradually destroy the environmental resources on which tourism itself depends (Hunter and Green, 1995; Komchadluek, 2014; Everingham, 2016).

2.1 Pollution

Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage, oil and chemicals, even architectural/visual pollution (Everingham, 2016; The Nation, 2018).

Air Pollution and Noise

Transport by air, road, ship and rail is rapidly increasing in response to the rising number of tourists and their greater mobility. Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourist transportation has impacts on the global level, especially from carbon dioxide (CO2) emissions related to transportation energy use. And it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities (Glensor and Peak, 2004; Kontogeorgopoulos, 2005; Everingham, 2016).

Noise pollution from airplanes, cars, and buses, as well as recreational vehicles such as snowmobiles and jet skis, is a problem of modern life. In addition to causing annoyance, stress, and even hearing loss for humans, it causes distress to wildlife, especially in sensitive areas (Crimes Guide Report, 2004; The Nation, 2018).

Today, Pattaya is considered one of the "Unhealthy" areas for sensitive groups. Too many tourists' buses, cars and heavy traffic has polluted the air of this beautiful small city. The city is too noisy as there is a constant traffic in all parts of Pattaya. The nightlife in Pattaya has made the city too noisy (Smith and Duffy, 2003; Komchadluek, 2014; The Nation, 2018).

Solid Waste and Littering

The World Tourism Organization estimation that revenue from international tourism increases each year but the trip to that fabulous exotic city might be causing more problems than realization, as there are multiple negative impacts tourism can have on the environment. These include putting a large demand on energy, resources and on the waste management system of the city you're in. The United Nations Environment Program (UNEP) estimates that 4.8 million tons, 14 per cent of all solid waste, is produced each year solely by tourists. This waste can potentially overload waste management systems, in areas with high concentrations of tourist activities and appealing natural attractions, waste disposal is a serious problem and improper disposal can be a major despoiler of the natural environment, rivers, scenic areas, and roadsides. Solid waste and littering can degrade the physical appearance of the water and shoreline and cause the death of marine animals (UNEP, 1997; Komchadluek, 2014; The Nation, 2018).

Irresponsible tourist-boat operators have been blamed for dumping their rubbish into the sea, resulting in a large amount of garbage being washed ashore onto one beach in particular in Pattaya and harming both tourism and the environment in Pattaya Bay more generally. It is not only making the beaches dirty and harming tourism, but it is also the main cause of death for many aquatic animals, such as turtles and whales – and is generating many environmental problems. According to Greenpeace, Thailand is ranked sixth on the list of countries that generate the largest amount of waste into the sea, leaking more than 1 million tons of waste into coastal waters a year (Komchadluek, 2014; Everingham, 2016; OSAC, 2016).

Sewage

Construction of hotels, recreation and other infrastructure facilities often leads to increased sewage pollution. Waste water pollutes seas and rivers surrounding tourist attractions, damaging the flora and fauna. Sewage runoff causes serious damage to coral reefs. Changes in salinity and transparency can have wide-ranging impacts on coastal environments. And sewage pollution can threaten the health of humans and animals. Sewers and sewage-treatment facilities have lagged behind the construction boom, meaning that most sewage now flows into storm drains that empty directly into the sea in Pattaya. Estimates of the extent of the pollution vary, but one study showed about 10,000 cubic meters of raw sewage flowing into the water along Pattaya beach each day. A study by the National Environmental Board said fecal matter in the water is seven times higher than the safety limit. "The seawater in South Pattaya and Jomtien Beach is no longer safe for swimming (Smith and Duffy, 2003; Everingham, 2016).

Aesthetic Pollution

Modern society tends to put a price on everything and turn both tangible and intangible items into commodities. However, values in our society cannot simply be calculated in monetary terms. Money can of course make economic values tangible and accountable, but this is not the only form of value: Simmel (1990) argued that money is entirely a sociological phenomenon, a form of human interaction. Smith and Duffy (2003) point out that economic value cannot explain our sentiments for a person, or how we feel about beautiful scenery.

In tourism, aesthetic value is commonly used for judging natural reserves and is also one of the criteria for judging cultural resources, as cited in the UNESCO criteria for assessing potential World Heritage sites. Aesthetic value is the ''feeling'' people have about certain landscapes. The scenery can resonate with certain emotions for them, and each individual may place a different aesthetic value on the same scenery based on their different value system. This resonance can cause the tourist to transfer such visual experiences into a certain kind of feeling, and into one page

of his or her memory bank. To ensure good memories for travelers and tourists, the aesthetic perception has to be incorporated into tourism planning. However, tourism professionals and planners often neglect the dimension of aesthetic perception in tourism planning; much tourism planning in Thailand has ruined the aesthetic value of scenery by allowing large tourism installations to be superimposed upon it. The main problem in Pattaya is litter which has turned the seawater black. Beach litter is derived from three main sources: marine, riverine (including torrents) and beach user discards. Visitor enjoyment of any beach is likely to be marred by litter. The variety of litter found in recreational water or washed up on the beach is considerable (Smith, 2003; UNWTO, 2004; Everingham, 2016).

Some examples of unwanted recreational water flotsam and jetsam include wooden crates and palettes, cardboard cartons, newspaper, steel drums, plastic containers and foam products, rubber goods such as vehicle tyres, bottles and cans, dead animals or animal bones, human hair, discarded clothing, hypodermic syringes, needles and other medical wastes, bottle tops, cigarette butts and packets, matchsticks, fish netting and rope ends. And also inconsistent scenarios and disturbed sceneries for natural environment can be seen in the Pattaya. The tables and chairs in the restaurants in coastal area and arm chairs in sand area make lot of disturbance the natural beauty of environment (Smith, 2003; UNWTO, 2004; OSAC, 2006; Khaosod, 2017; The Nation, 2018).

2.2 Physical Impacts

Construction activities and infrastructure development

Space is needed to build hotels, restaurants and shops. The natural environment is destroyed for new developments, and to provide building materials. Local resources are stretched to provide tourists with food and transport. It causes looming environmental disaster with buildings constructed too close to the shore. Now people do not find white sandy beach or any sand dunes in Pattaya anymore. There is no beach in Pattaya which is not occupied by the street hawkers or the beach chair owners. Authorities have concerned the pathway next to the beach for the convenience of the tourists. The number of roads and facilities have been increased to keep pace with the growing visitor numbers and to supply amenities, infrastructure and parking lots for all these tourists. These actions have caused habitat loss on the beach and are accompanied by various forms of pollution including air pollution from automobile emission (Reiginger and Turner, 2003; Everingham, 2016).

Anchoring and other marine activities

In marine areas (around coastal waters, reefs, beach and shoreline, offshore waters, uplands and lagoons) many tourist activities occur in or around fragile ecosystems. Anchoring,

snorkeling, sport fishing and scuba diving, yachting, and cruising are some of the activities that can cause direct degradation of marine ecosystems such as coral reefs, and subsequent impacts on coastal protection and fisheries (Hall, 2001).

The reefs and corals on the Pattaya side are pretty much damaged and will not find it as scenic as it should be and getting them to recover is very difficult. Tourism activity is heaping even more pressure on these beleaguered ecosystems in Pattaya. The increasing number of tourists, boats that anchor on the corals, people walking on corals while playing in the water, feeding marine animals and catching them to take photos of with them are the main causes of destruction (Komchadluek, 2014; Khaosod, 2017; The Nation, 2018).

Conclusion

It can therefore be concluded that the Bio-diversity of Pattaya have changed drastically. A place which once a peaceful fishermen village now caters tourists. Though it may contribute to the growth of the country's economy, the tourism industry damages communities and the environment. This industry has great potential to increase its support for the environment and spread awareness of environmental problems. Because tourism puts people in closer contact with nature and the environment. Tourism can play a key role in the creation of environmental information and increasing awareness among tourists about the ecological consequences play activities. Government section should play the major role to encourage local people as well as tourists to protect and prevent the environment in Pattaya city promoting the ecotourism in the city. Ecotourism is 'environment-friendly' tourism which promotes to fulfill dual goals of economic development and the conservation of natural environment. It is the fastest growing segment of international tourism, which contributes to the environmental protection and calls for the sustainable use of natural resources for tourism development. Tourism can be sustainable and that by investing in biodiversity through the process of environmental management, it is possible to integrate a leisure development with a valuable part of our natural heritage.

Suggestions

The shift in management power in Pattaya from the local to the national level demonstrates that in order to manage tourism development more sustainably and effectively, 'intervention and regulation by the state' is essential (Bramwell and Lane, 2010) as the state has the human capacity, financial resources and power which the local authority might be lacking. In addition, the sustainability of tourism development depends on partnership, co-operation and co-ordination

among the various key stakeholders in monitoring the outcome of tourism operations and practices. The partnerships among the state and the key stakeholders at different levels of tourism development are crucial as sustainable tourism has been viewed increasingly as needing an 'adaptive management' tool to 'enhance its resilience to disturbance rather than to achieve stability' (Farrell and Twining-Ward, 2005). Thus, besides implementing environmental regulations or sustainability policies, government should consider working more closely with a broad range of stakeholders. In many instances, NGOs play an important role in advancing the implementation of sustainability programs and creating awareness and educating the public and policy makers (Strange and Baley, 2008)

'Achieving sustainability takes time' and tourism policy makers need to recognize there is no short-cut approach to the sustainability of Pattaya's tourism by adopting ad hoc 'problem-avoiding' approaches (Smith and Eadington, 1992). It requires commitment and participation from all levels of stakeholders, and the community to achieve an 'absolute sustainability' (Gössling et al., 2009). This also ultimately requires moving the sustainability of Pattaya's tourism 'beyond the beach'.

Another approach could be to involve local community as the previous researches suggest that it is impossible to sustain tourism in Pattaya if that is not supported by the local community. Therefore, the policy makers need to get them involved in making decisions and understand their aspirations when planning tourism projects. They need to identify a diverse group of people in the community and informing them about the project, benefits of the project to the community and related issues. From the information that they are given, they should be allowed to make the recommendations that they believe to be the most appropriate for their community. Community participation can be facilitated by both informal and formal forms such as public hearings, advisory committees, surveys, focus groups, collaboration, and written comments. Hence, future tourism endeavors need to consider this requirement more critically or else the decisions taken by planners and officers could be competing with local community aspirations and interests. Such an effective participation can avoid conflicts between stakeholders such as the local community, hotels and the governments on tourism development projects.

It is also essential to raise the awareness of the local people of the importance of tourism, it is equally important that tourism planners are given recommendations to provide clear information to the local communities about the long term benefits of tourism. Even more important is the direct involvement of representatives of the local community in development decisions affecting their locality. As for methods of dealing with immoral behavior. It is recommended that officials require

to activate strict laws and apply them to both tourists and local people when there are identified incidents of misbehavior. It might be useful to include as part of the education process for both tourists and locals examples of bad experiences in the past in order to avoid similar occurrences in the future.

References

Bramwell, B. and Lane, B. (2010). Sustainable tourism and the evolving roles of government
    planning. *Journal of Sustainable Tourism*, 18(1), 1–5.

Essays UK. (2013). *The Economic, Social and Environmental Impacts of Tourism in Thailand*.
    [Online]. Retrieved June 26, 2018, from: https://www.ukessays.com/essays/tourism/tourism-
    in-thailand.php?vref=1.

Everingham, J. (2016). *Pros & cons of Pattaya, Thailand; beach resort & nightlife*. [Online].
    Retrieved July 12, 2018, from: http://true-beachfront.com/guide/pros-cons-of-pattaya-
    thailand-beach-resort-nightlife.

Farrell, B. and Twining-Ward, L. (2005). Seven steps towards sustainability: Tourism in the context
    of new knowledge. *Journal of Sustainable Tourism*, 13(2), 109–122.

Glasson, J., Godfrey, K. and Goodey, B. (1995). *Towards Visitor Impact Management; Visitor
    Impacts, Carrying Capacity and Management Responses in Europe's Historic Towns and
    Cities*. Aldershot: Avebury.

Glensor. R.W. and Peak K.J. (2004). Crimes against tourists Guide. *Crimes Guide Report*, No.26.
    [Online] Retrieved June 29, 2018, from:
    http://www.popcenter.org/problems/crimes_against_tourists/#endref1.

Gössling, S., Hall, C. and Weaver, D. (2009). *Sustainable tourism future*. New York: Routledge.

Hall M.C. (2001). Trends in Ocean And Coastal Tourism: The End of The Last Frontier?, *Ocean &
    Coastal Management*, 44, 601-618.

Harsha. (2017). *Pattaya where it all began*. [Online]. Retrieved June 19, 2018, from:
    https://lovepattayathailand.com/pattaya-history/.

Hunter, C. and Green, H. (1995). *Tourism and the Environment: A sustainable relationship*.
    Routledge, London.

Khaosod. (2017). *Pattaya beach still turbid black waste water treatment system. Tourists do not
    dare to play water*. {Online]. Retrieved July 23, 2018, from:
    https://www.khaosod.co.th/around-thailand/news_447764. (in Thai)

Kodoatie, R. J., Pengantar M. I., Pustaka P. Y. and Panasiuk, A. (2015). *Tourism Infrastructure as Determinant of Regional Development*. Poland: University of Szczecin.

Komchadluek. (2014). *'Pattaya' collapsed foreign tourists*. [Online]. Retrieved June 14, 2018, from: http://www.komchadluek.net/news/local/183237. (in Thai)

Kontogeorgopoulos, N. (2005). Ecotourism and Mass Tourism in Southern Thailand: Spatial Interdependence, Structural Connections, and Staged Authenticity, *Geo Journal*, [Online] 61(1), 1-11. Retrieved June 14, 2018, from: http://soundideas.pugetsound.edu/cgi/viewcontent.cgi?article=1985&context=faculty_pubs.

Kreag, G. (2001). *Impacts of Tourism*. [Online]. Retrieved July 12, 2018, from: http://www.seagrant.umn.edu/tourism/pdfs/ImpactsTourism.pdf.

Leonard H. L. B. (2014*). The History of Pattaya Beach Tourism*. [Online]. Retrieved June 19, 2018, from: http://www.pattayatrader.com/travel/History-Sep14.

Longjit, C. and Douglas G. P. (2013). Managing a mature coastal destination: Pattaya, Thailand, *Journal of Destination Marketing & Management*, 2 (3), 165-175.

OSAC. (2016). *Crime & Safety Report: Bangkok 2016*. [Online]. Retrieved March 20, 2018, from: https://www.osac.gov/pages/ContentReportDetails.aspx?cid=19119.

Reiginger, Y. and Turner, L. W. (2003). *Cross-Cultural Behaviour in Tourism*.[Online]. Oxford: Butterworth-Heinemann.

Schauseil, J. (2015). *Sattahip and the history of GIs coming to Pattaya*. [Online]. Retrieved June 29, 2018, from: http://thailandandpattaya.blogspot.com/2008/10/sattahip-and-history-of-gis-coming-to.html.

Seetanah, B. T. D., Juwaheer, M. J., Lamport, S., Rojid, R. V., Sannassee A. U. and Subadar. (2011). *Does Infrastructure Matter In Tourist Development?*. Mauritius: University of Mauritius.

Simmel, G. (1990). *The philosophy of money*. London: Routledge.

Smith, M., and Duffy, R. (2003). *The ethics of tourism development*. London: Routledge.

Smith, M. K. (2003). *Issues in Cultural Tourism Studies*. London: Routledge.

Smith, S.L.J. (1995). *Tourism Analysis: A Handbook*. (2nd ed.). Harlow: Longman.

Smith, V. L. (1992). *A case study in 'Alternative' tourism*. Philadelphia: University of Pennsylvania Press.

Strange, T. and Bayley, A. (2008). *Sustainable Development: Linking Economy, Society, Environment*, Paris: OECD.

Tourism Authority of Thailand. (1993). *An Outline of Problems and Remedies of Tourism Impact on the Environment*. Bangkok: Tourism Authority of Thailand.

Tang, L. (2012). *Cultural Tourism: To Protect or to Destroy the Destination?* [Online]. Retrieved
    June 29, 2018, from: http://www.tourism-master.nl/2010/11/01/cultural-tourism-to-protect-
    or-to-destroy-the-destination/.

The Nation. (2018). *Pattaya beach businesses blame tourist boat operators for rising level of
    garbage being washed ashore*. [Online]. Retrieved July 12, 2018, from:
    http://www.nationmultimedia.com/detail/breakingnews/30335244.

UNEP. (2015). *Socio-cultural impacts of tourism*. [Online]. Retrieved June 29, 2018, from:
    https://goo.gl/vKPi7u.

UNEP and WTO. (2005). *Making Tourism More Sustainable - A Guide for Policy Makers*. Nairobi:
    UNEP & WTO.

UNWTO. (2014). *Global report of adventure tourism*. [Online]. Retrieved June 24, 2018, from:
    http://cf.cdn.unwto.org/sites/all/files/pdf/final_1global_report_on_adventure_tourism.pdf.