



JOJAPS

eISSN 2504-8457



Journal Online Jaringan Pengajian Seni Bina (JOJAPS)

Eco Rover Beach

Abdul Nazdrin Hakimi bin Ahmad Kamalariffin, Muhammad Alif Hurairah bin Noor Haladdin, Siti Nur Fatimah binti Abdul Rahman & Noor Syahieda binti Mat Shah

University of Technology MARA(UiTM) Puncak Alam Campus

Abstract

Eco Rover Beach is an innovative product designed to make it easy to clean the beach. This innovation focuses on ensuring that beach quality is maintained clean and free of macro waste in a sustainable way. This is because most of the beach in Malaysia is filled with stranded and discarded waste, and cleaning it requires a lot of effort and energy. The most important factors influencing beach selection, particularly by foreign tourists, were cleanliness. Eco Rover products deliberately innovate in line with the previous notion to demonstrate the importance of beach cleanliness to local and non-local beach users. With the lever that can be used to control the stainless-steel mesh philtre which acts as a segregation of sands and macro waste, the Eco Rover product can scrape up trash on the beach site. The Eco Rover chassis is made of eco-friendly material such as steel; as it comes from recycled scrap metals, the eco-friendliest metals are also extremely resistant to wear and tear at a fraction of the cost compared to conventional materials. The creation of Eco Rover will be a green, easy, and cost-effective process aligned with the main objective of environmental and energy sustainability.

© 2020 Published by JOJAPS Limited.

Keywords: *Eco Rover Beach, Eco-friendly, Environment, Sustainability, Beach, Tourism*

1. Introduction

One of the key reasons for the urban infrastructural development of these beach areas and the consequent beach environmental issues is the rapid growth of coastal tourism in the last 40 years (CM, 2001). In the sense of coastal tourism, which is an operation at the interface between humanity, land and sea, the issue of sustainability is especially relevant (Ramachandran A, 2005). Therefore, coastal tourism faces the challenge of balancing the economic benefits of tourism with preserving environmental sustainability and the inevitable shift of its own character with the progression of time. Sea beaches play a central role in this context, where planning and management concerns are becoming increasingly relevant when it comes to implementing sustainable development strategies (Silva CP, 2007).

To draw tourists, coastal tourism is almost entirely dependent on the beauty of the natural coastal climate. Coastal tourism thus raises unique demands for sustainability, as the consequences of environmental degradation are more affected than other tourism locations especially of water quality congestion, in part because of the restricted access points for coastal locations; issues of social integration, as migrants are often a major source of labor; and the fickleness of tourism, as visitors will inevitably search for 'another beach' (Gilbert, 1949); (Franz, 1985); (Smith, 1991); (Wong, 1993); (Gomez, 1995); (Gormsen, 1997); (Murray, 2007); (Scheyvens, 2008). The pressures created by human activities inevitably impact on beach ecosystems with the increase in demand for growth. The vulnerability of such ecosystems to global climate change and sea-level rise has been a problem in recent years (Beatley, 2002); (Kay, 2005); (Harvey, 2006); (Phillips, 2006).

2. Eco Rover Beach Designation

Eco Rover beach is an innovation product that be created to help people to clean the beach. The aim or objective of this product is to ensure that beach qualities are kept sustainably clean and free of macro waste. Eco Rover products are deliberately creative to demonstrate local and non-local beach users the necessity of beach cleanliness while improving the features and functionality of the product and reducing their effect on the environment.

The chassis was made of steel: recycled scrap metals. This type of steel is usually easy to recycle cos steel does not have to be sorted by size or color and it can be recycled repeatedly without losing its innate strength. Because it retains its natural qualities no matter how many times its recycled, recycle steel can be used in everything from construction to cars without the quality being compromised. Next is the biodegradable tyre to keep the sustainability environment. Rubber tyre which being thrown into landfills or sea decompose very slowly, they are fire risk and can release chemical into the soil. If they collect water, it also become a breeding ground for mosquito. By using the biodegradable tyres, it can be recycled for many times cos it contains the polymer which can make the substance very similar to natural rubber. Last main component that being use in creating this Eco Rover Beach (ERB) are stainless-steel mesh filter which basically are the same material from the ERB chassis. According to the Ocean Conservancy statistic, 75% of land-based ocean plastic is from uncollected waste that makes its way to waterways before eventually reaching the ocean.

This product has been created for the possible reason cited for this wide adoption. From the opportunities side, as demand changes rapidly, many people see these problems as an opportunity to create and have a competitive advantage for marketing non-environmental response alternatives. From the government view, it can be highlighted that governments want to protect consumers and society that can reduce production of harmful goods or by products and industry can use.

3. Conclusion

As a conclusion, Innovation is increasingly supported by the fact that innovation growth is essential to generate, sustain and enhance economic growth or competitive and secure organizational sustainability growth. As in today, most companies or industries face a rapid pace of external technological and market change, and these external changes have driven organizations and even economic growth. The success of certain companies is that they have expertise, histories, and networks of partnerships relative to their rivals or previous incumbents. In the new century, creativity has become much more important to organizations. And powered by advanced machinery and outstanding labour power, these goods are created by people's creative ideas to take advantage of external and internal resources and to gain market advantages and opportunities over competitors. Innovation is also increasingly seen as an effective means of gaining competitive advantage and a better path to protecting and competing in strategic positions.

References

- Beatley, T. B. (2002). *An Introduction to Coastal Zone Management. Washington D.C.:Island Press.*
- CM, H. (2001). Trends in ocean and coastal tourism: The end of the last frontier? . *Ocean and Coastal Management* 44, 601-618.
- Franz, J. C. (1985). Pattaya-Penang-Bali: Asia's leading beach resorts (Part-two). *Tourism Recreation Research*, 10(1), 25-30.
- Gilbert, E. W. (1949). The growth of Brighton. *The Geographical Journal*, 114(1), 30-52.
- Gomez, M. J. (1995). Coastal areas: Process, typologies and prospects. *European Tourism: Regions, Spaces and Restructuring*, 111-126.
- Gormsen, E. (1997). The impact of tourism on coastal areas. *GeoJournal*, 42(1), 39-54.
- Harvey, N. (2006). *Global Change and Integrated Coastal Management: The Asia-Pacific Region. Dordrecht, The Netherlands: Springer-Verlag).*
- Kay, R. &. (2005). *Coastal Planning and Management. (London: Taylor & Francis).*
- Murray, G. (2007). Constructing paradise: the impacts of big tourism in the Mexican coastal zone. *Coastal Management*, 35(2), 339-355.
- Phillips, M. R. (2006).) Erosion and tourism infrastructure in the coastal zone: Problems, consequences and management. *Tourism Management*, 27(3), 517-524.
- Ramachandran A, E. B. (2005). Coastal regulation zone rules in coastal panchayats (villages) of Kerala, India vis-à-vis socio-economic impacts from the recently introduced peoples' participatory programme for local self-governance and sustainable development. *Ocean and Coastal Management* 48, 632-653.
- Scheyvens, R. &. (2008). Tourism and poverty reduction: issues for small island states. *Tourism Geographies*, 10(1), 22- 41.

Silva CP, A. F. (2007). The management of beach carrying capacity: The case of northern Portugal. *Journal of Coastal Research* 50 (Special Issue), 135-139.

Smith, R. A. (1991). Beach resorts: A model of development evolution. *Landscape and Urban Planning*, 21(3), 189-210.

Wong, P. P. (1993). Island tourism development in Peninsular Malaysia: environmental perspective. *Tourism vs. Environment: the Case for Coastal Areas*, 83-98.