In line with Malaysia’s goal to achieve high-income-nation status by 2020, the Tourism Transformation Plan 2020, with 12 New Key Economic Areas (NIKEA) in the Economic Transformation Programme (ETP), has a bullish target to achieve 36 million tourist arrivals and RM168 billion (US$48 billion) in tourism receipts by 2020 (PEMANDU, 2010). It is projected that by then, tourism will be the most important income contributor for the nation.

**Status of Ecotourism and Rural Tourism**

Under the big tourism umbrella, ecotourism and rural tourism has been growing at a rate of 30% per year and Malaysia is known as one of the best ecotourism destinations in the region. Nonetheless, in the last decade, the concept of ecotourism and rural tourism has melded into mainstream tourism to lose its distinctness (UNEP, 2010). The tourism industry’s interest in appearing to be ‘green’ or ‘sustainable’ has increased in exponential proportions over the past year. Although tourism is a profitable business (if managed well), the industry is taking a toll on the environment (not to mention the social impact on the local communities). For many people today, going on a ‘green-holiday’ is an increasingly central feature of the travel patterns that has spread across the globe. Consequently, the tourism industry’s growth throughout the years has created an increasing amount of stress economically, socially and environmentally as the carrying capacity of these destinations are not checked or adhered.

Hence, the development of sustainable rural tourism is dependent on fulfilling the objectives of all stakeholders in the system. The inter-relationships among the stakeholders must be fully identified since each stakeholder’s needs may be different from the other. Thus, it is imperative to have a holistic understanding of the impact of these mega development plans on key natural destinations, i.e. ecotourism and small-medium enterprises that make up 75% of the tourism industry in Malaysia.

**Moving Towards High-Yield Tourism**

Thus, the Ministry of Higher Education Malaysia has funded a nation-wide study that is deemed essential for the rural tourism industry in Malaysia to move towards high-yield tourism (see Box 1).

This ministry-funded study is segmented into two sub-programmes – Responsible Tourism Framework and Carrying Capacity Framework. These two frameworks address the three pillars of sustainable development - the economy, social and the environment (Figure 1).

**The Research Study Objectives**

1. To discover the various models used in economic, socio-cultural and environmental responsibility and carrying capacity in rural tourism destinations.
2. To develop appropriate economic, socio-cultural and environmental models to measure stakeholders’ impacts on rural tourism destinations.
3. To investigate all stakeholders’ perspectives on the economic, socio-cultural and environmental responsibility and carrying capacity in rural tourism destinations.
4. To develop economic, socio-cultural, and environment-responsive and carrying capacity indicators for rural tourism destinations.
5. To develop a tourism barometer to assess and monitor the economic, socio-cultural and environmental impact of rural tourism destinations using an integrated decision support system.

**Box 1: About the Research Study**

This RM9 million national study is funded under the Ministry of Higher Education’s Long Term Research Grant Scheme (LRGS) and is scheduled for completion in 5 years. The stakeholders for this collaborative interdisciplinary and multi-institutional study are the government, universities, NGOs and tourism professionals who will play a holistic role in sustaining the fragile rural tourism industry of Malaysia. The programme is led by Taylor’s University, Malaysia with three other project leaders within the programme, namely Universiti Sains Malaysia, Universiti Teknologi Malaysia and Universiti Putra Malaysia. Other associate researchers working on this project come from Universiti Malaya, Universiti Utara Malaysia, Universiti Malaysia Sarawak, Universiti Malaysia Sabah, Universiti Islam Antarabangsa, Universiti Kebangsaan Malaysia and Universiti Teknologi MARA. The project will also work closely with Wild Asia, a social enterprise group specialising in responsible tourism, Ministry of Tourism, Malaysia and other foreign universities namely University of Surrey, Washington State University and Rikkyo University, Japan. The programme is expected to generate a working application that can transform the fragile rural tourism of Malaysia into a responsible and sustainable tourism subsector.

**Figure 1:** General project framework.
balanced ecological processes that can help in the conservation of natural heritage.

The fundamental indicators that will be extracted from the current practices will track changes in key economic, social and environmental components of the tourism industry, informing the achievements of the sustainability goals and measuring impacts of the tourism industry over time. These indicators will be used to measure the responsibility and sustainability of the rural tourism sites. Some examples of these indicators developed by Wild Asia to measure the commitment of stakeholders include commitment towards (i) supporting local development; (ii) respecting local cultures and sensitivities; (iii) staff; (iv) protecting rights of children; (v) protection of the environment; (vi) conservation efforts; (vii) efficient use of resources; (viii) responsible waste management; and (ix) responsible tourism. Only by being committed to addressing these issues can responsible tourism be achieved.

Sub-programme 2

For Sub-programme 2, the concept of eco-tourism carrying capacity serves as the main concept in a process of seeking (and selecting) “appropriate” (desirable, acceptable and feasible) types of tourism development. Carrying capacity in the rural tourism context basically means the ability for a rural tourism site to accommodate certain numbers of visitors in a particular time before it creates a negative impact. Pulau Sipadan in Sabah is an example of what can happen when the number of tourists (scuba divers and snorkellers) exceeded the capacity for the regeneration of the corals (which was once regarded as one of the best in the world). Today, the local government has successfully implemented the maximum number that the island has the capacity to cope per day for diving. The local government has also shut down most of the hotel operators in the island, resulting mainly in day trippers.

Taking selected rural tourist destinations as main case studies, Sub-programme 2 investigates the physical environment and the socio-economic carrying capacity of these destinations. It seeks to define the indigenous concept of carrying capacity and to come out with the appropriate methodological framework, models and indicators for assessing physical and socio-economic carrying capacity.

As to how the two sub-programmes on Responsible Rural Tourism Framework and Rural Tourism Carrying Capacity Framework are bridged is shown in the conceptual framework of Figure 2.

Projects under the Sub-programmes

The two sub-programmes have been further broken down into six projects. They are as follows:

**Sub-Programme 1: Responsible Rural Tourism Framework (RRTF)**

Project 1: Socio-Cultural Responsible Rural Tourism Framework
Project 2: Economic Responsible Rural Tourism Framework
Project 3: Environmental Responsible Rural Tourism Framework
Project 4: Modelling and Management of Responsible Rural Tourism Framework

**Sub-Programme 2: Rural Tourism Carrying Capacity Framework (RTCFF)**

Project 1: Socio-Economic Rural Tourism Capacity Framework
Project 2: Physical and Environmental Rural Tourism Capacity Framework

The core studies in both the sub-programmes (Responsible Tourism and Carrying Capacity) will look at the three main dimensions of pillars of sustainable eco-tourism – physical environment, socio-cultural and economics.

For the projects under Sub-programme 1 Responsible Rural Tourism Framework, dimensions investigated will include the environment, socio-cultural aspects and economics.

For the projects under Sub-programme 2 on Rural Tourism Carrying Capacity Framework, dimensions investigated will include socio-economic, physical aspects and the environment. Project 1 evaluates the threshold or the limit of acceptable change in the socio-cultural and economic activities of the local communities due to tourism development. While increased tourism activities can bring economic benefits, it will also create pressure on the environment, creating various environmental impacts. Project 2 analyses the physical impacts due to tourist activities and the limit of acceptable change that can take place. This project will propose various indicators of carrying capacity and the level of carrying capacity of the sites. Towards this end, the project will also formulate strategies and approaches to manage and increase the capacity of the local populations.

A tourism barometer will be developed to use the indicators conceptualised from the project as an integrated management system for evaluating and monitoring the status of all rural tourism sites in Malaysia. The tourism barometer will ideally be a real-time observatory centre that will monitor the environmental, socio-cultural and economic changes for both the human aspects (feedback from tourists, local communities, operators and local governments) and the science aspects (quality of the environment). The barometer can be proactively used by the enforcement unit in tackling any impact and degradation of any of these rural tourism sites. In short, the system will produce the ‘report card’ for each rural tourism site in the country.

**Conclusion**

The six projects under the two sub-programmes will work hand in hand to achieve the common objectives outlined in the project. This fundamental study will play an important role in innovating new approaches by developing indicators to holistically measure the multi-dimensional relationships between different tourism models and the linkages to local economies and the environment in key natural and rural destinations in Malaysia. After all, if we do not conserve the nature, culture and attractions that tourists come to Malaysia for in the first place, there will be no tourism business in the future. The project will indeed contribute to developing a high-yield ecotourism industry. By having systematic management of all rural tourism sites in Malaysia which is one of the main pull factors for tourists to visit the country, the quality and management of these sites will be exceptional. Hence, we would be able to attract tourists that have high disposable income to experience rural tourism in its natural setting.

**References**


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Green Township Policy Initiatives in Malaysia

A green township can be conceived as an integrated planned habitat that gives emphasis to the protection, use and recycling of natural resources, besides promoting public health, safety and general welfare of the urban people. Some key characteristics of future Green Cities are: waste free, transport efficient with widely available public transportation, walkable and cycle-friendly, wholly energy independent with minimal carbon output including reduced fossil-fuel use, adoption of sustainable building practices, promotion of ‘green space’ and parks as ‘lungs of the cities’ to ensure clean air quality, implementation of energy-efficient initiatives, and development of well-organised mixed-use neighbourhoods that combine living, working and shopping. Instrumental to green urbanism is community network and cohesion, green consciousness and commitment.

The neighbourhood as a basic module in developing green cities becomes the front line in incorporating efforts in designs and activities to reduce greenhouse gas emissions while meeting a host of other community goals. As the quality of people’s homes is influenced by the spaces around them, there is increasing recognition that well-designed, well-managed green spaces by and in between housing are crucial to making neighbourhoods liveable, and contribute to people’s quality of life. Green elements such as the network of green spaces and corridors, tree-lined streets, significant private landscaping (including green roofs) or even small scale local community agriculture are examples of good green applications. Thus, buildings in the neighbourhood are often ‘green’ with excellent environmental performance; area-wide green infrastructure is common place and would include low-impact storm water management to district energy systems.

Most important in planning a green neighbourhood is creating the vision, giving policy directions and guidelines that describe all aspects necessary for a green neighbourhood towards achieving its set of goals. Making a commitment to neighbourhood designs that will support a low-emission lifestyle for all residents would involve the widest possible range of stakeholders and community support to set up and maintain internal systems to ensure continued improvements and refinements as the plan is being implemented.

The Malaysian government has been continually promoting environmental stewardship in all development plans. Since the 8th Malaysia Plan (2001-2005), the incorporation of environmental consideration into planning and development has been intensified. Consequently, the sustainable use of energy has been identified in the 9th Malaysia Plan, highlighting strategies for using energy efficiently through the promotion of greater use of renewable energy for power generation by industries and intensifying energy efficient initiatives in the industrial, transport and commercial sectors as well as applications in government buildings. The 10th Malaysia Plan reinforces and places further emphasis on the use of renewable energy and on increasing energy efficiency. Various measures such as relevant guidelines, standards and laws would be introduced to ensure efficient use of energy and to reduce greenhouse gas emissions.

In tandem with the Malaysia Plans and other national policies, the Ministry of Housing and Local Government of Malaysia through its Department of Town and Country Planning, had translated these into spatial form through the National Physical Plan (NPP) and the National Urbanisation Policy (NUP).

National Physical Plan (NPP)
First approved by the National Physical Planning Council in 2005, the goal of the National Physical Plan (NPP) is to establish an efficient, equitable and sustainable national spatial framework to guide the overall development of the country towards achieving developed nation status by 2020. The NPP is prepared in accordance with the provisions of the Town and Country Planning Act 1976 (Act 172). Selected policies supporting the green urbanism concept and initiatives are summarised as follows:

1. Promoting transit-oriented development (TOD) concept as the basis of urban land use planning to ensure viability of public transport, supported by walkway linkages to promote connectivity and to reduce emissions.

2. All urban settlements will be serviced by an integrated network of solid-waste disposal and/or recovery facilities. Waste generation management will be promoted including recycling of waste, solid waste collection and disposal in accordance with the National Solid Waste Master Plan.

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