

CELEBRATING  
COMMERCIALISATION  
YEAR 2014

# iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention  
innovation  
& design  
exposition 2014

INNOVATEUR  
wannabe!  
2014

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UNIVERSITI TEKNOLOGI MARA  
MALAYSIA

*Bridging  
the valley of death :  
advancing the  
commercialisation  
of research*

RESEARCH BOOK

# iiindex2014

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innovation  
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## FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed  
Pro-Chancellor, Universiti Teknologi MARA

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## ASSESSMENT ON RECREATION CARRYING CAPACITY OF SELANGOR FOREST RECREATION AREAS

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Forest parks have been prominent attraction for ecotourism in the State of Selangor where both local and foreign visitors are able to observe closely and understand geological heritage and biological conservation and management of the park. As a result, anthropogenic activity has greatly influenced the current condition within the park and along the forest park boundary. It has consequently been exposed to tremendous physical development to provide improved infrastructure and facilities as to cater to the demands of the tourist. Rapid development has negatively affected natural heritage and resources as unsustainable tourism that this regard for the natural heritage. As public visit to park and protected areas continue to increase and may threaten the integrity of natural resources and the quality of the visitor experience. The main objective of this research was to determine the recreation carrying capacity at the Selangor Forest Recreation area. The capacity value and annual visitation of the visitor were examined in order to generate an acceptable number of tourist arrival carrying capacity as the indicator for measuring and evaluating the management of the park. This study is expected to continue in terms of providing appropriate guidelines for the managers. The concept of carrying capacity derived from ecology usually refers to the maximum population that can be carried for an organism, given a certain quantity of food, habitat, water and other life supporting infrastructure, faced with the problem of land degradation, environmental pollution, resources exhaustion and population expansion. The literature on the carrying capacity distinguishes between biological or ecological carrying capacity is the maximum population of a species that can be supported by a habitat area without damaging the area reducing its future capacity to support the species. In relation to the concept of the sustainability, the growth limits and carrying capacity of the destination including physical impact on the area, both from the environmental and experiential point of view must be considered. Certain destinations with fragile ecosystem may easily become disrupted and detrimental by increasing the number of visitors, over capacity created great impact not only on the physical environmental aspect but also on social, cultural and economic sub system of the destination. Over the years Malaysia has experienced rapid population growth and improved economic activities, thus the greater mobility and increased leisure time have also lead to a growing demand for outdoor recreational activities. This situation has affected many existing recreational areas particularly along the coastal and estuarine areas. Evidence from island destinations such as Langkawi, Pangkor, Tioman and Redang experienced an increase in tourist population involved in recreational activities, Hence certain recreation resources are experiencing over utilization, resulting in degradation of the resources and environment, hence reduction in the quality of the recreation experience. Due to the increasing number of visitors to the natural area may affect the level of the satisfaction. Theoretically, those who made their first trip to the area would significantly receive a greater level of experience. Therefore there is a need to ensure the tourism industry remains environmentally socially and economically sustainable.