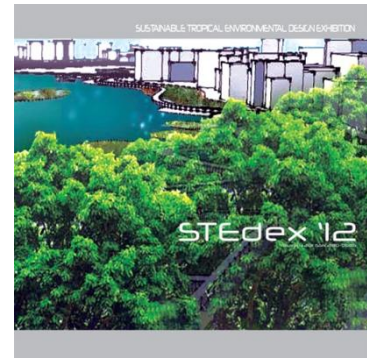


## **Soul of Nature**

*Sustainable Tropical Environmental Design Exhibition 2012*

<http://www.vlmp.upm.edu.my>



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Ecological restoration are focus for mainly large natural areas and reserves. Large reserves are generally better for biodiversity conservation and sustainability which can support more species than smaller ones. However, in recent decades, the practice of restoration has been expanded to smaller green reserves of urban ecosystem which present different challenges and opportunities. Due to their proximity to urban areas and the city dwellers, their recreational and environmental burdens are continuously increasing. An understanding of human and urbanization impact on these diminishing urban forests and contemplating practical design approaches call for urgent solutions.

Hence, the sensitive area landscape studio's project for the year 2011 addressed urban green forest reserves in Klang Valley where the most intensive development in Malaysia is taking place. The original landscape of Klang Valley had been altered through time by human interventions forming and intensive agricultural production and recently for residential, commercial, educational and industrial purposes. Depending on their intensity of development, these human activities have gradually encroached the remaining green lungs. They resulted in a scattered green reserves where secondary forest of different stages of succession are becoming small green remnants embedded in an urban matrix area.

Three significant Klang Valley's green forest reserves were selected for the exercise. They are the Bukit Nenas Forest Reserve (BNFR), the Ayer Hitam Forest Reserve (AHFR) and the Kota Damansara Forest Reserve (KDFR). Since they serve as the remaining tropical rainforests that still stand tall in the region, they have been gazetted as the Permanent Reserved Forest in Klang Valley. The BNFR is one of the oldest remnant tropical forest ecosystem located right in the middle of the city centre of Kuala Lumpur with an area of approximately 9.5 hectares. It is classified as a managed lowland dipterocarp forest consisting of various species of dipterocarps and non dipterocarps. It is unique in being the smallest existing tropical rainforest in the country, serving as a biodiversity reserve and a vital green lung for Kuala Lumpur metropolis.

The AHFR is strategically located in the southern part of Klang Valley. Surrounded by residential, industrial and commercial area, it comprises 1248 hectares of hilly and low land ranging from 15.2 to 152.5 meter above sea level. It contains lowland dipterocarp forest, categorized as 'Kedondong Kempas Forest' and become a secondary forest because of previous logging and cultivation activities. Today, the AHFR is managed by Universiti Putra Malaysia (UPM), with limited carrying capacity – for education, research and extension as well as for recreation.

The KDFR, also known as the Sungai Buloh Forest Reserve, is another green reserve located in the western outskirts of Kuala Lumpur, surrounded by highways, residential and industrial areas. This 600-hectare forest reserve is classified as a secondary forest and a Sensitive Area Class II because of logging activities in the past. Despite being classified as secondary forests, a number of primary forest species are still observable at all sites. Both AHFR and KDFR act as the prominent green lungs of the Klang Valley as well as an important source of recreation and education for urban communities. For the studio exercise, investigation began by approaching the stakeholders, in particular, the forestry department and the communities in order to gain in-depth understanding of the sites and the issues. The process for sensitive landscape planning and design covers site analysis, site assessment and case studies. The basic understanding had led students to innovatively and creatively formulate the best method for the sites' rehabilitation, restoration and revitalization of the landscape characters and functions. The following works show some constructive solutions which relied on the ability to solve those sensitive sites' issue/s.

'Root of Symbiosis' addresses the function of the BNFR as a hub of the city's ecosystem by linking and integrating the main hub with adjacent green spaces through river corridors and parkways. The core of BNFR are expressed by 'Echo Tropical rainforest', designed by Mustafa Ali Gunawan, which signifies the biological interaction between urban and natural environments in order to rejuvenate symbiosis. The 'Therapeutic Forest' is designed by Muhamad Afiq Muhamad Anuar which embraces nature for stimulating the human five senses as well as to revitalize the city's environment.

The idea to revive the AHFR is expressed by 'The Relic Rhapsody', via sustaining the integrity and credibility of the educational forest. As the forest planned to be a centre of forest education and research in the region, the Faculty of Forestry UPM was thus established at the site. To create a strong image for the faculty, designers Alia Hanie Roslan and Lim Hong Ann, in their works 'Capturing Nature' and 'Nature Unfolding' respectively forward the ideas of integrating the built and natural environments by highlighting and blending their relationships harmoniously through nature, art, space and architecture.

Finally 'The Return for Return' focuses on the conservation of the KDFR to enhance the natural character of lowland dipterocarp forest which is rich in biodiversity. To balance the forest's need for environmental conservation and community's needs of recreation and education, designers, Yong Jia Yu and Ng Ooi Tee, forward the projects titled 'Feel the Layers, Feel the Forest' and 'River Adytum' to highlight the significant features and quality of tropical rainforest in bringing the inspiration and appreciation of nature.

As a conclusion, these exercises have brought some innovative and creative ideas in protecting the natural resources of urban ecosystem for future sustainability. It is important now to move beyond simply protecting these green reserves, but to reverse the pattern of diminishing forest areas, by replicating and expanding urban forest establishments in new development areas. The landscape architecture profession has also moved to a different level in maximizing the utilization of these highly modified landscapes. Its role will now include highlighting the significant role of urban forests in maintaining biodiversity, improving the ecosystem function, enhancing environmental aesthetics, and creating educational opportunities and human relationship with nature.