Case Study

PUTRAJAYA INTO GREEN GROWTH CITY

Malaysia

February 2013

Lim Ai Yim
Independent Consultant & Advisor
E-mail: limaiyim@ymail.com

Quick facts	
Zone	Putrajaya
Topic	Green city planning, Sustainable infrastructure, Renewable energy
Implementing Agency	Malaysian government

Background

After the Malaysian Government's decision to move from Kuala Lumpur in June 1993, Putrajaya was chosen as the new Federal Government Administrative Centre. In April 1994, the Government approved a Conceptual Scheme, based on the Garden City Concept, to turn Putrajaya into an intelligent city and a 'city-in-a-garden'. These decisions entail the planning of Putrajaya to incorporate high green technology features during the development and management stages, as well as to ensure the city's integration with the existing natural environment. The way in which the Conceptual Scheme was practically carried out was the division of the city into 20 precincts, and the designation of 40% of the entire city area solely as open space. This led to the planting of 1.6 million shaded trees since 1997, and the creation of 400 hectares of artificial lake and 200 hectares of wetlands. These areas perform the function of carbon sinks; the wetlands in particular also act as a filtration system for the lake water in replacement of a conventional system. On the lake, a man-made island houses the central business precincts, while the residential precincts are organized following a neighborhood planning concept.

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Policy Details

At the Copenhagen COP15 of the UNFCCC in 2009, Malaysia committed to reducing its carbon emissions to 40 per cent by 2020 compared with its 2005 levels, subject to assistance from developed countries. In tabling the 2010 Malaysian Budget, Malaysian's Prime Minister Najib Razak announced the intention "to develop Putrajaya and Cyberjaya as pioneer townships in Green Technology as a showcase for the development of other townships". The aim of greening Putrajaya is to conserve the natural environment by minimizing and reducing degradation and the negative impact of human activities, including carbon emissions.

The vision of Putrajaya turning from a Garden City to a Green City required the development of a further policy framework. The latter includes land use management, the implementation of an integrated transportation system, waste and water management, the diversification of the urban economy, the strengthening of tourism, and the adoption of effective multi-level governance.

Integrated land use management and transit planning has greatly contributed towards the reduction of carbon emissions, with the promotion of compact and cellular development of neighborhood centers along main transportation routes. Government residential quarters have been placed in Putrajaya itself, reducing the distance and travel time from the work place to the residential areas. The public to private transportation ratio is 70 to 30, with rail and environmentally-friendly buses being the back bone of public transport. A network of pedestrian walkways and cycle paths has also reduced the need to use motorized transportation.

Since the construction stage of the city, the reuse of local resources, such as the composting of previously existing oil palm waste to be used as mulching material for the landscaping of the wetlands, have reduced costs and waste loads. Solid waste management was realized through the provision of permanent and mobile 3R facilities and composting of food and garden waste within residential and governmental areas. Water is managed through a centralized sewage treatment plant which re-uses treated water along with harvested rain water for irrigation purposes.

In order to promote the efficiency of buildings, construction using green standards along with the retrofitting of buildings has been encouraged. As a result, three buildings in Putrajaya have already been awarded green certification: the Energy Commission's building, the Ministry of Energy, Green Technology and Water's office, and the Prime Minister's Office Complex. Offices and public spaces are adopting the use of LEDs, while parks and bus stops are supplied energy by solar panels, through the TNB 5MW Solar Farm Project. In all Government agencies, there is an extensive use of online services as a plan to drastically reduce paper usage along with the need to travel.

These holistic efforts have involved all stakeholders, including the private sector and NGOs along with representatives from the local community, therefore coupling multi-sectoral policies with multi-level governance. The results of such collaboration efforts in the implementation of greening goals in Putrajaya have been recognized through various awards and recognitions won: Putrajaya was awarded the Sustainable City Status in the Malaysia Urban Indicators Network (MURNInet 2010) by the Federal Town & Country Planning Department, in addition to the Asean Environmentally Sustainable City Awards 2011 by the ASEAN Working Group on Environmentally Sustainable Cities (AWGESC), as well as the Excellence Award for Taman Wetland Putrajaya in the Green City Category by the Institute of Landscape Architects Malaysia. The Putrajaya Lake and Wetlands have been categorized as an Ecohydrological Operational Site by the UNESCO International Hydrological Program (IHP).

Recognitions such as these demonstrate the government's commitment to the vision of planning and transforming Putrajaya into a pioneer green city in Malaysia. The Putrajaya Green Growth Action Plan will further these efforts by continuing to develop the city along the path of sustainability and low carbon Green Growth.

References

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