The theme, “Tourism responding to the challenge of climate change” is indeed apt for this publication. This macro topic that is engulfing the whole world needs to be addressed by every nation in this planet before Mother Nature is destroyed due to Man’s greed. There are many aspects of climate change that are discussed in this publication. As water is considered as one of the most important elements that will become scarce with the drastic change in the weather pattern in many parts of the world, this article would focus on how countries with tropical rainforests like Malaysia will be severely effected if water management is not seriously looked at, especially with the high growth in the tourism sector. The article is based solely on my personal viewpoint.

Water Shortage in a Tropical Rainforest Country like Malaysia?

As the population of the country grew, so has the number of inbound tourists coming into the country. From a mere 2.2 million in 1980, the figure increased to 7.45 million in 1990 and 10.22 million in 2000. After three decades, in 2007 a total of 20.97 million tourists visited Malaysia. Consequently, water usage per person also increased and the demand for freshwater continued to soar rapidly.

Even in our leading tourist destination in Malaysia like Langkawi, one can see the impact of poor water management on the local population. Langkawi receives an average of 2 million tourists per year but the total population of Langkawi is only 600,000. There are also three golf courses built in a drought prone island like Langkawi. Water management at Langkawi is also affected by the seepage of waste and waste-water into the water bodies. With the high number of tourists, it was reported that in 2002, Langkawi produced 1.1 kg of waste per day per capita compared to 0.75 kg of waste per day per capita in the city of Kuala Lumpur. All this waste will certainly seep into the water bodies and render them useless to the local population of Langkawi. So, is the water sufficient for the local population of Langkawi or is it only reserved for the high spending tourists?

Yet the supply of freshwater is finite and threatened by the climate change and intense pollution. Agenda 21, the Rio Declaration on Environment and Development, and the Statement of principles for the Sustainable Management of Forests were adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil in 1992.
Agenda 21 states that effectively integrated management of water resources is important to all socio-economic sectors. Our tourism industry has to respond, being a major economic boost for Malaysia and contributing to more than 231 million jobs worldwide in 2007.

Malaysia is a country with tropical rainforests and lush foliage with supposedly enough water for its needs on an annual basis; but tap water shortages continued to occur and water cuts are part of everyday life during certain parts of the year.

In addition to the management of water, there has been large amount of unplanned and unsustainable development projects in the highland forests in Malaysia, including inappropriate road building and excessive highland resort development. Excessive clearing of forests has led to the siltation of river pollution and contamination of the water supply. Forest clearance has resulted in frequent occurrences of soil erosion and landslides. Moreover, the quality of water has gradually deteriorated due to siltation and pollution from the construction work of the highland roads, while poorly constructed roads have contributed to soil erosion and water pollution.

During the last water crisis in 2002, in the first three months of that year, Klang Valley received more than average rainfall. Yet the nation was hit with water shortage. Levels at the dams fell to a critical point. It is quite obvious that poor management of the water resources was one of the main reasons for the crisis.

The catchment areas no longer retain water, as they should. Many reasons can be cited, probably all arising from lack of coordination between the state agencies. The catchment areas no longer retain water, as they should. Many reasons can be cited, probably all arising from lack of coordination between the state agencies. While one agency designates the catchment areas as reserves, another approves logging concessions on them. Yet others allow the development of forest-depleting golf courses and quarrying in catchment areas. Industries with potential to contaminate rivers that feed reservoirs are still allowed to operate upstream. It is time for relevant authorities in Malaysia to take a hard look at the utilization of land in and around catchment areas and come up with a clear and sensible policy. With the rapid changes in the world climate, micromanagement of the environment in every country is critical. Tourism being the largest industry in the world can certainly cushion the impact of this change in the climate.

In addition, inexpensive drinking water could be obtained in coastal areas by installing low-cost water-treatment plants that use solar energy for the desalination of seawater. Countries like Saudi Arabia already reaped the benefits from this abundant natural source of energy. Seawater can be desalinated near coastal areas, and untreated water thrown back into the sea or the salt zone, and the treated water supplied to small towns and villages by pumping stations. This process not only ensures the availability of abundant drinking water, but also provides employment to the locals. The salt obtained from this process can be used in commercial and industrial applications. The use of treated seawater may, in the future, save many lives in times of drought, including for countries blessed with tropical rainforests like Malaysia.
Save water for our next generation

Think before you use

Besides this, the generous use of drinking water and leakage in pipelines and taps in Malaysia are among the major causes of water wastage, amounting to millions of gallons per day. The use of clean drinking water for gardening, car washing and toilet flushing also add to the wastage of drinking water. Brackish water or treated sewage water can be used as substitutes for the filtered water for these purposes. Another cause of the problem is the mishandling of wastewater from raw sewage, industrial waste, and agriculture runoffs, which increase the contamination in natural sources of fresh water. Sewage water, therefore, ought not to be allowed to fall into the sea or rivers, but should be treated properly, and stored outside the cities or villages to be supplied back to the residents for use. The recycling of sewage water and its storage outside the cities will raise ground water levels, and the treated solid waste is a natural fertilizer. While recycling sewer water and its accumulation may create water-logging in some areas and increase the salinity of the soil, in most cases it will raise the water level and result in fertile soil. Water-logging and salinity may be controlled through the use of modern scientific technology.

In conclusion, over the past few years, the Malaysian environment has continued to deteriorate. The rapid growth of the tourism industry in Malaysia with little consideration to the environment and the natural eco-system that Malaysia is proud of has certainly made the crisis even more critical. The changes in the global climate further intensified the predicament. The rapid growth of the country prior to the economic crisis and the present global economic recession, whilst raising the GNP and income level, has had a toll on the environment. Uncontrolled growth with scant regard for ecological principles continues to be the order of the day. The climate is changing and it is certainly changing faster than expected. The generations to come will not enjoy Mother Nature as we have experienced here if the tourism community, collectively, does not formulate a strategy to address what must be considered the greatest challenge to the sustainability of tourism in the twenty-first century.
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