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MediaTitle	New Straits Times		
Date	06 May 2017	Language	English
Circulation	74,711	Readership	240,000
Section	Local News	Page No	18
ArticleSize	643 cm ²	Journalist	Rosli Zakaria
PR Value	RM 66,240		

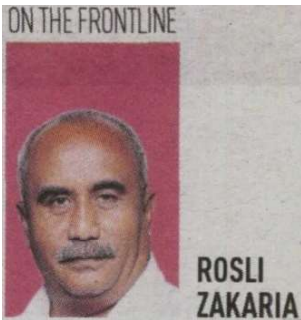


HYDROELECTRIC PROJECT

SUSTAINABLE DEVELOPMENT PLAN NEEDED

It must manage the environment and wildlife, including rehabilitating flora, fauna and aquatic resources

Sultan Mahmud Hydroelectric Dam in Terengganu. During its construction, there were untold losses to flora and fauna under the 38,000ha of waterbody that created Tasik Kenjir. FILE PIC



HUMAN interventions in reshaping nature for the sake of development has more often than not resulted in the degradation of the ecosystem and one particular example is the construction of hydroelectric dams.

True, the power generated by hydroelectric dams are renewable energy, but it is not true that by providing renewable energy, dams are environment-friendly.

From day one in the construction of a dam, forests have to be cleared and, in the process, wildlife are permanently displaced. Next, the river ecosystem is disturbed because a dam will remove the path for fish to spawn

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upstream. The alteration of the river flow affects the water quality, changes wildlife migration patterns and reduces the strength of the river, which ultimately affects the estuarine hydrodynamics, now visibly evident along Sungai Terengganu from the confluence at Kuala Berang. Further downstream, the weak river current can no longer push the flow to the sea and this results in the build-up of sand-bars.

During the early stages of the Sultan Mahmud Hydroelectric Dam, the National Parks and Wildlife Department had a busy time saving and relocating animals to areas fringing the lake.

Some animals, such as elephants, tigers, bears, tapirs and deer, were also reportedly seen swimming in the flooded areas to higher ground.

Then, several years ago, Tenaga Nasional Bhd built a second dam at the upper reaches of Sungai Tembat, which is now called Tasik Puah and Tasik Tembat.

We all know that hydroelectric dams are important for the future needs of a developing nation, but while the intention is good, equal emphasis should be accorded to other aspects that affect the environment.

The ripple-effect from the construction of a dam must be researched, and contingency plans must be put in place thoroughly before the structures are built.

The creation of Tasik Puah and Tasik Kemat have damaged the ecosystem, but now, TNB had set up TNB Research Sdn Bhd that has been given a grant to conduct research related to the environment.

Better late than never.

TNB Research has to come up with a sustainable development plan for the hydroelectric project in Hulu Terengganu with the main thrust of ensuring all projects were implemented in harmony with the environment.

Correcting past mistakes during the construction of the Sultan Mahmud Hydroelectric Dam will be an uphill task for TNB Research. It will need a team of ex-

perts to look into every aspect of environmental degradation and propose remedial measures which can be costly.

Although the dams that created Tasik Puah and Tasik Tembat are not as massive as the Three Gorges Dam across the Yangtze River in China which displaced more than 1.2 million people and caused irreversible damage to the river system, its impact is somewhat similar.

TNB Research will need to come up with many plans to manage the environment and wildlife, rehabilitation of flora and fauna, and conservation and reviving of aquatic resources. Managing these plans to ensure its sustainability will require the services of experts.

The team of experts, who may include researchers, need to work closely with the Department of Environment by providing their findings as well as recommendations to promote the wellbeing of the environment and its ecosystem from further degradation.

TNB Research should also work closely with the Forestry Department, Fisheries Department and the National Parks and Wildlife Department to apply the Tagal System, a unique way of conserving nature by banning fishing or hunting at certain times or in certain zones.

The Tagal System was introduced by the Fisheries Department in Sabah a few years ago. It involved 221 rivers and is participated by folks in 531 villages who earned more than RM30,000 a year by turning the rivers into tourism product.

It also contributed to a more efficient environmental management and sustainable economic and social development of the community because the revenue was not derived from the sale of fish, but from entrance fees collected from tourists who come to observe the fish.

The Kelah Sanctuary at Sungai Petang in Tasik Kenyir, managed by the Central Terengganu Development Authority, is an excel-

lent example of the Tagal System and had provided income for the agency.

It should be extended to other rivers in Tasik Kenyir, and TNB Research should also introduce the Tagal System at rivers feeding Tasik Puah and Tasik Tembat.

This system can benefit hundreds of fishermen whose licences to operate in Tasik Kenyir were terminated in 2004. These fishermen can become the guardians of these rivers and supplement their income under the Tagal system.

It is also a subtle way of changing the mindset of fishermen from a collector of resources, to protector of the ecosystem, while at the same time, earn some income.

It is also good to know that TNB is replanting 30,000 trees on islands and areas affected by its hydroelectric dams in Tasik Kenyir, Tasik Puah and Tasik Tembat, and about 10,000 trees within its stations in Hulu Terengganu, starting this year.

TNB has shown that while it acknowledged the environmental damaged cause by the construction of dams, it has also taken responsibility to repair the damage by setting up TBN Resources to ensure sustainability of environment.

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