

# Riveted by river resources

## BALANCING RESOURCE

**USAGE:** Water security deserves special attention in Asia

**T**HE United Nations Conference on Climate Change in Doha, Qatar, will showcase 11 *hikma* or wisdom sessions on traditional Arabian lifestyles in the desert. Across the Arab world, populations have thrived for centuries despite challenges, such as drought and desertification. Their conservation practices such as *hima* and *aflaj* have roots in antiquity.

One of the world's oldest conservation systems, *himas* are a locally managed preserve in which locals control the use of the land to protect water, wildlife and trees.

Since ancient times, the irrigation system *aflaj* distributes water equally to communities for agricultural and domestic use.

Yet, natural resource management, once a local matter, has evolved into larger scales of consideration, including nation-state, regional and global systems.

Consequently, traditional knowledge alone is insufficient in confronting resource scarcity and in adapting to climate impacts.

What it does well is in giving a

human feel to the otherwise esoteric management of resources such as water, energy and food. For distant village communities, a river is a source of spiritual values that provide them not only livelihood but also a sense of place. Therefore, it should be managed sustainably and collectively.

In modern administration, water is thought of differently. Global demand for water has tripled since the 1950s but is beset by the steady decline of the supply of fresh water.

Hence, control of rivers has long been considered as fundamental to economic and social advancement.

Governments built reservoirs and dams for flood control, irrigation, water supply and hydropower generation, fragmenting some 60 per cent of 227 of the world's largest rivers.

The ecological impact of the large-scale alteration of rivers is severe. With reduced natural flow, major Asian rivers are drying up before they reach the sea.

These include the mighty Ganges, the Indus, and the Huang He. Given that Asia is home to three-fifths of the world's population, many fear that the multiplier effect of climate change will exacerbate water shortages in the region.

Analysts believe that water stress in Asia could lead to the spectre of interstate water conflict. This fear is not unfounded as conflict over water has been a feature of human history.

The Arab-Israeli War of 1967 was partly triggered by fighting over



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the of the tributaries of the Jordan River.

Now, water is not merely an environmental issue, but also a strategic issue. A major cause of diplomatic anxiety between neighbours in Asia is the construction of dams on international rivers to generate electricity.

China's Great Water Diversion Plan alarms countries in South and Southeast Asia. The plan entails the construction of mega-dams and inter-basin transfer plan on interstate rivers to meet China's thirst for water and energy.

It involves the upper reaches of Brahmaputra, Mekong, Salween, and Arun Rivers, unmistakably the

water lifeblood of countries in the region. The Mekong River, for instance, flows from the headwaters in the Tibetan Plateau for 4,880km through China, Myanmar, Laos, Thailand, Cambodia and Vietnam. It drains 805,604 square kilometres of land known as the Mekong basin, a major granary for Asia.

Governments in the region plan to build 11 dams on the Lower Mekong River and 77 more in the Mekong Basin. Today, 60 million people live in the Lower Mekong Basin, and 80 per cent rely directly on the river system for their food and livelihoods.

Inland fisheries, important for food security here, will be at jeop-

ardy. If all the dams were built according to plan, the total loss in fish resources would be between 26 and 42 per cent, amounting to devastating economic loss of around US\$476 million (RM1.4 billion) per year.

Similarly, the move by Kyrgyzstan to construct its Kamarata Dam has strained regional relations in Central Asia, and so has Tajikistan's plan to rebuild its Rogun Dam.

This is because the Syr Darya and Amu Darya Rivers, which originate in the mountains of these two countries, flow through Uzbekistan, Turkmenistan and Kazakhstan. These three downstream countries are well endowed with energy resources that the upstream states are reliant on.

The securitisation of water need not mean water wars, a concept popular media has paid much attention to. Rather, water security is a policy framing that articulates the desirability of balancing competing resource usage.

Its useful offshoot is the recent political reference to the water-energy-food nexus. The argument is that water deserves special attention as it is needed to generate energy and to produce food, resulting in complex resources interdependency.

Recognising the connection is necessary as the three resources are traditionally managed as separate issues across the spectrum of policy, planning, design and operation.

While hedging against the threat of security vulnerabilities, countries could also tap trade and investment opportunities as we map the resource nexus.