

Putting the treasure below us to good use

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Water is the essence of life and in Malaysia, we are sitting on quite an ocean of it, some five trillion cubic litres, in fact. And the government is getting serious about putting this vast underground treasure trove to use. ELIZABETH JOHN and CHAI MEI LING get the lowdown

IF we had a pound sterling for every cubic metre of water stored underground, we'd be worth as much as Britain.

The British National Statistics Office recently valued the island — houses, public buildings and all — at close to £5 trillion (RM34 trillion).

That's the same amount of groundwater Malaysians are sitting on today even as they worry about El Nino and the threat of drought.

Little wonder then that Prime Minister Datuk Seri Abdullah Ahmad Badawi wants the resource mapped and detailed information quickly gathered.

Right now, less than two per cent of the national water use originates from groundwater, says Mohammed Hatta Abd Karim, the deputy director-general of operations at the Minerals and Geoscience Department.

Less than half that amount is used by industry and agriculture. The bulk is used for domestic water supply as in Kelantan where 70 per cent of the water people drink, bathe and cook with, comes from groundwater.

But groundwater is capable of playing a much bigger role. It can easily fill in where stressed out rivers fall short, says Hatta.

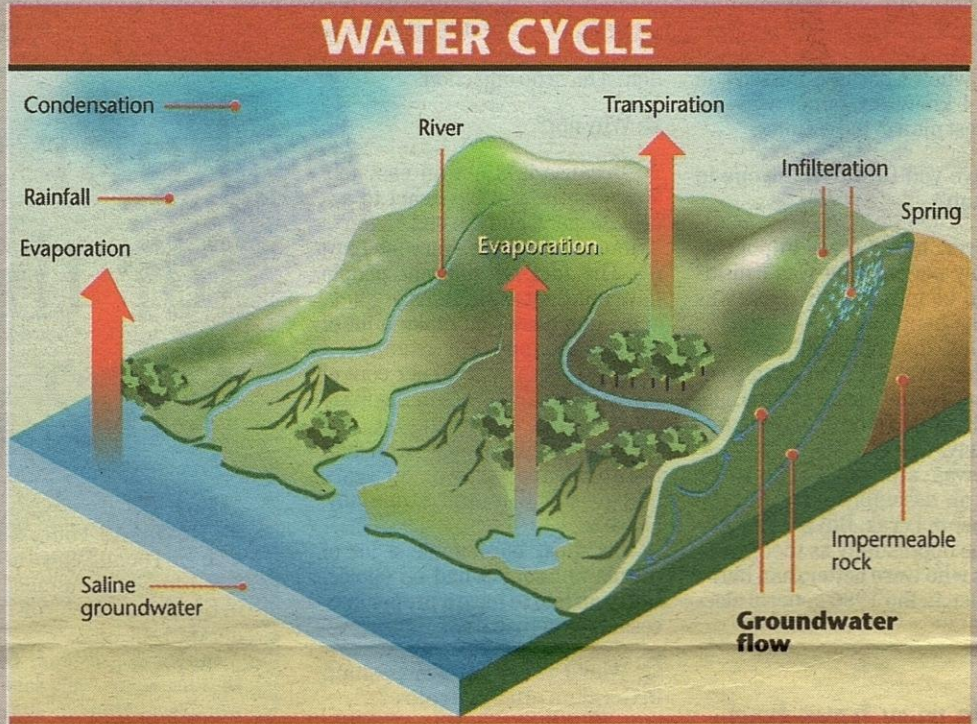
Groundwater is abundant. One billion cubic metres of water fills about 300,000 Olympic-sized swimming pools. We have five trillion cubic metres, most of which we'll never need to use, says Hatta.

It is most abundant in Kelantan, Terengganu, coastal Pahang and southern Selangor.

There's even enough in some parts of Perak for the state to study the possibility of extracting it and selling it to a parched Selangor, he says.

Malaysia hasn't had many problems with extraction so far, says Hatta. Kelantan has depended on groundwater since the 1970s with few issues.

"There's a fear that land will subside when water is extracted like it did in Bangkok. People are afraid salt water from the coast will seep into the space left by the ground water that's



Minerals and Geoscience Department deputy director-general of operations Mohammed Hatta Abd Karim

pumped out. But after three decades, we haven't seen subsidence or saline intrusion in Kelantan because of groundwater extraction."

If Malaysia really wants groundwater on tap, it can be done as long as three things are in place: Information, laws and good management, he says.

In south Selangor, the department, which has in-depth knowledge of the area, could help develop groundwater sup-

ply in two to three years, linking it to homes through existing treatment plants and pipes.

In other places, it will take much longer, no thanks to sketchy information, says Hatta. Minuscule budgets for studies as well as a lack of technology and experts have hampered the department's work on groundwater.

Under the Ninth Malaysia Plan, the department has enough money to drill just four wells every year in each state to study how much groundwater there is.

"So I would say that we know only about 50 per cent of what we should about shallow aquifers and 20 per cent about deep aquifers."

Our vast underground water stores also need more protection; specific laws on drilling, pumping from wells and monitoring well performance.

It's time to configure a federal law to address issues like aquifers that span two states, dispute resolution and water transfers.

Recharge areas — places where rainfall is absorbed and

trickles down into underground stores — need protection. Like forest catchments that ensure a river's water supply, it must be protected from pollution.

But none of this matters without strict enforcement and good management, says Hatta.

Without knowledgeable people in charge and a respect for rules, a valuable resource can be easily destroyed.

Using groundwater isn't just a case of drilling a couple of wells willy-nilly. The whole supply system also needs a rethink and groundwater must be used selectively, says Hatta.

Groundwater should be used where surface water isn't readily available, like on islands or where piping river water to a community will be very costly, suggests Hatta.

If groundwater is of good quality, it should be used for drinking rather than industry.

"Just because we have so much, it doesn't mean we can waste it," says Hatta. "It also doesn't mean we can now happily leave the tap running. Water prices can only go up and we still have to pay the bills."