

# Blessed With Water, But Let's Not Be Complacent

by Ms. CC Tan

**ANYONE** who is anybody in the water management sector in Malaysia today would have heard of Tan Sri Dato' Ir. Shahrizaila Abdullah, a Senior Fellow of the Academy of Sciences who initiated and led the Sustainable Water Management Programme at the academy from 2006 until the middle of this year.

Prior to that, he had a long career in both the public and private sector, one that mainly concerned water. He served the government for over 30 years, retiring as the Director-General of the Department of Irrigation and Drainage in 1995.

During this tenure, he attended the landmark International Conference on Water and the Environment held in early 1992 in Dublin, Ireland which saw the formulation of the momentous Dublin Statement on Water and Sustainable Development, also known as the 1992 ICWE Dublin Principles on Water, subsequently endorsed by the world's first Earth Summit 1992 in Rio de Janeiro, Brazil. This document paved the way for water experts around the world to identify, plan and manage water security issues in their respective countries, and has served as a guide in all global water dialogues since.

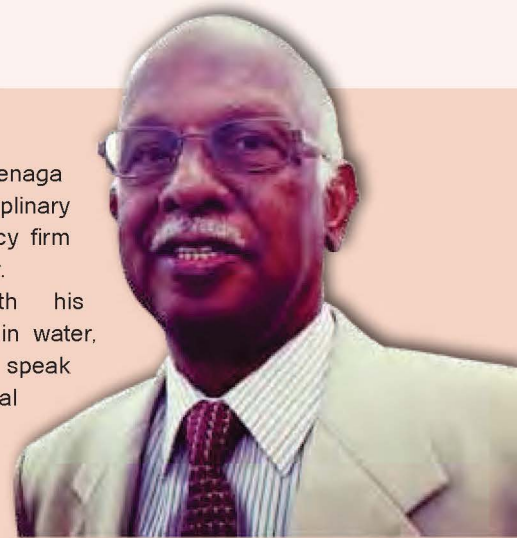
Following his retirement, he enjoyed an eight-year stint in the private sector, serving as Chairman and Specialist

consultant with KTA Tenaga Sdn Bhd, a multi-disciplinary engineering consultancy firm based in Kuala Lumpur.

In October, with his wealth of experience in water, he was invited to speak at the International Conference on Water and Wastewater Management 2013, where he shared his insights on the topic, "Integrated

Water Resources Management and the Transformation of Water Supply and Wastewater Management Services – a Malaysian Road Map".

In this issue of *JURUTERA*, Ir. Shahrizaila shares more of his thoughts about the realities of water management in Malaysia, and how we must manage this "finite, renewable, yet vulnerable resource" wisely – even if it seems to be in abundance now – to ensure our future needs will always be met.



## Q: What is the current outlook for global water security now, compared to say, 20 years ago?

A: The situation is still alarming because, firstly, how do you define water security? This is the global definition: Water security is defined as the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability.

With more than half of humanity currently urbanised, many cities are facing acute scarcity in providing clean, safe water. Urban managers are also increasingly daunted by the complex task of sanitation – i.e. managing wastewater generated by cities so that harmless, clean water is returned to the natural water cycle.

Globally, and Malaysia is no exception, the fast pace of development has inflicted severe damage to the health of both the terrestrial and aquatic ecosystems. One needs only to take a flight over the country to observe the poor state of the "teh tarik" rivers in many locations. It reflects the extent of pollution originating from unfettered development upstream that have led to severe ecosystem changes.

With continued population growth and the pressure on the environment, the challenge is really how to reverse this process. The logical way forward is to arrest the situation with a clear commitment not to inflict further damage with an accompanying roll back plan of rehabilitation.

## Q: How do you find current global initiatives that are in place now – are they good enough or has there been too much talk and not enough action?

A: Global dialogues and forums have been useful in highlighting issues and sharing of experiences and solutions



Semenyih Dam Intake  
(Photo courtesy of Dato' Ir. Haji Hanapi bin Mohamad Noor)

for common benefit. But how much of this information reaches the grass roots for its adoption and effective implementation leaves much to be desired. There are many good lessons learnt and the onus falls on individual governments to ensure their implementation on the ground. So going by the track records of the last decade or so – while a lot of good things have been done – the actual delivery (of water security goals) is still not up to mark.

**Q: Why is that happening?**

A: It's basically an issue of resources – both financial and human capital. There are countries that are economically poor and there are countries that are technologically poor. So this is the dimension in which we're talking about. You may have the money but if you are technologically lacking, then things still won't get done. What we'd like to see is governments or individual countries coming up with both capacity building, which means developing the human capital, and incorporating science and technology in problem solving, together with the finance. But one, alone, is not going to provide the solution.

How many countries, especially developing countries, are in a position to do that? In that respect, there is a little bit of a sense of doom and gloom being spread, but I don't think

we should concern ourselves too much with that. Solutions are there. The last global Earth Summit and World Water Forum, it's about finding solutions – solutions for water.

**Q: Is there any particular country that has struck you where its water management has improved by leaps and bounds?**

A: Well, I think when they talk about developed countries, they have it. They have the economic capability, the technological know-how and the talents. Even so, amongst the middle-income countries, there have been some very good success stories and I would say that Malaysia does fare well in that context. We have the means, we have the technology and we also have fairly well-trained people. And there has also been good response from our non-governmental organisations. But I won't say that we have excelled in it.

Our problems have largely been due to the structure of the country's administration – Federal/State dichotomy. There are countries with a similar sort of political environment, for example, the US also has to contend with a system of State governments and a Federal government, and the reason they have overcome it is that the resource is spread across the nation, and every State is individually rich.

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Sri Perigi Waterfall at Yan, Kedah

(Photo courtesy of Dato' Ir. Haji Hanapi bin Mohamad Noor)

**Q: So because they are individually affluent, they are able to look at the greater good?**

**A:** Yes. If every State in Malaysia is rich, I don't think they need the (assistance) of the Federal government. So we'll have to accept some inefficiencies because of this.

**Q: Is this the main challenge in water security management here – that it is territorial in nature?**

**A:** No. The other reason is that we are blessed with so much water that we tend to be complacent. We have between 2,000 and 3,000mm rainfall per annum – we have so much water, so why should we worry? That is actually a negative attitude for the people to have. Why is Singapore successful?

**Q: Because water is scarce in the Republic and necessity becomes the mother of invention there?**

**A:** Yes, it's a very simple question of survival. Scarcity forces them to do everything to put it right. I actually never like to compare Malaysia with Singapore because the country is very different from ours. Every time we talk about a (water management) project, we have to talk about the economics of it – we can't run away from that – and it often ends up that we can't really justify economically some of the things that we want to do because water is plenty here.

**Q: So there's no pressure to allocate whatever amount of money and resources for it?**

**A:** Yes, so people here are therefore more prepared to accept a little bit of pollution here and there, when by right, we should not be. That mentality is not right. Unfortunately, the only thing that can change that is how to get economics into the equation. In other words, we have got to get people thinking that waste water has got its economic value. We have to work on that. That's the only way to get things going. There are good examples of countries which have used waste water successfully and we should do the same, if not for now, then for the future.

**Q: Why has Malaysia been resistant to it?**

**A:** It's economics. There's an easier solution to get what you want. Take, for example the case of Sg. Perak. It has plenty of potential for tourism such as river cruises. There's so much to see, so much of history. There are opportunities and economic value. With all this potential, we can invest in proper dredging. The tourism sector will pay for the cleaning up process. At the end of the day, someone has to pay for that.

It's got to be value-added. In trying to clean up, you must also bring in something so that the cost of cleaning up is recovered in the form of new wealth creation. This is what Singapore has been doing, though it's incidental. In trying to get clean water, they have invested in and developed technology – membrane technology to filter water. But in the process, this technology has become a money earner. Countries around the world which want the same technology, will have to pay if Singapore patented it.

**Q: You talk about cleaning up the river, economic benefits and such. If people's attitude towards water doesn't change, can this happen?**

**A:** I think Malaysia should reach a point where the community takes care of its own water. If we can reach that stage, then we are there. That is the ultimate. In other words, you care for your own water and if somebody pollutes it, you go after the guy.

**Q: Yet there is a very clear lack of ownership among Malaysians. Most will just point at a polluted river and say 'Ini kerana kerajaan tak buat apa-apa' (This is because the government didn't do anything), or that the DID (Department of Irrigation and Drainage) didn't monitor the river's cleanliness**

**A:** That's the point. It'll have to come at some point in time and I'm still hopeful it's possible. But the other point that we need to look at is our local authorities. They have to be strong to enforce rules and regulations. Kuala Lumpur City Hall is strong, but not all the local authorities are like it. Pollution is human created – and the power to curb it is with the local authorities. If they allow rubbish to get into drains, it will eventually flow into the river. I always believe that at the end of the day, the best solution to pollution is to tackle it at the source. In Japan's tube station for example, if the Japanese people see a piece of scrap of rubbish on the floor, they will pick it up and dispose of at the nearest rubbish bin. Are we prepared to do that?

**Q: In the past decade, there has been very strong campaigning, not only by the DID but also by NGOs, on loving our rivers and cleaning our rivers. Do you think it has been effective?**

**A:** Awareness has been created but to say that people are now willing to do something about it – that still remains to be seen. It's the complacency that we have, which is the bad effect to having plenty of water.

**Q: Talking about plenty, in Malaysia, there has been much talk about water crises and water scarcity is an issue. Is there enough water actually for all our sectors?**

**A:** Malaysia has enough but it's more a management issue. So water security is achievable for us, but it's still a management issue. At the end of the day, when we talk about participatory management, if all these things fall in place, we will be there. The people need to drive this.

**Q: What are your thoughts on Supply Management vs Demand Management in water?**

**A:** In the past few decades, we have always been employing the supply management technique in addressing our water needs. When there is a new housing village, we look for new sources of water to accommodate the growing needs. But holistically, it should be both – you can't have one without the other. If we build more dams, we will destroy the environment.

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**“With more than half of humanity currently urbanised, many cities are facing acute scarcity in providing clean, safe water.”**

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When there is a crisis, when you're short of water, look at the demand side as well – are there ways and means we can take to reduce the demand of water?

Malaysia's current per capita water usage is 240 litres per person, per day, compared to 140 litres per person, per day, for Singapore. So if we can bring down the demand, we don't have to keep looking for new sources of water.

The amount of non-revenue water also need to be brought down – that requires investment. Some of this is due to old-pipe leakage. There is also corruption – the bigger users who steal. They've been doing this too, though the water supply people have been slowly plugging that. One of the good things about privatisation is that you have better efficiency. They also appreciate that when they save water, they can also sell more.

The other aspect of demand management (human system integration) that we should look at is that water policy sits among a larger system of nested policies comprising of economic policy, food policy, health policy, and environmental policy. All these policies should take into account water usage and management. For example in health, clean water and good sanitation contributes to good health.

**Q: So all these policies should integrate good water management practices into them?**

**A:** Yes, they should.

**Q: What are your comments about the 'Water Crisis' in Selangor?**

**A:** I believe it's always good to invest in the future when it comes to water. One of the good things that we inherited (from the British) was a lot of foresight – in the sense that dams were built much earlier. When I first started my career, the amount of water released from the dams were quite low because dams were planned to accommodate the rise in demand for the next 50 years. Any investment for longer term benefits is always good because it won't be cheap later as land prices will continue to escalate, so Selangor has got to look forward. We should not be talking about fulfilling immediate needs – let's think about looking after the people, two to three generations from now. ■