

TABLE TALK WITH ASIT BISWAS  
AND CECILIA TORTAJADA

## *Plumbing Singapore's water story*

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Prof Biswas and Dr Tortajada are writing a book about Singapore's stellar success in managing its water resources. ST Photo: RAJ NADARAJAN

**ONE** evening in Spain in 2006, global water experts Asit Biswas (AB) and Cecilia Tortajada (CT) sent a last-gasp e-mail message to Mr Khoo Teng Chye, chief executive of Singapore's national water authority PUB.

Professor Biswas, 71, and Dr Tortajada, 48, are husband and wife, and they were then preparing to contribute to the Human Development Report on the world's best water management systems, including those in Britain and the United States when, six weeks before their deadline, someone said they should study Singapore's water systems. So they shot off a note to Mr Khoo, even as a friend who used to work in Singapore warned them that it would take ages to get such data from the Government.

However, Prof Biswas recalls, 'Lo and behold, when we woke up the next morning, we received an e-mail from Mr Khoo saying, 'What do you need?

Whatever you need is at your disposal.'" So the Biswases not only got to report Singapore as an epitome of water management, but are now also completing a book titled *The Singapore Water Story*, which they hope to launch here next year.

Working with PUB impressed them so, they nominated it for the Stockholm Water Prize in 2007, the Oscars for the industry, and PUB toasted its eventual win in Sweden with Newater, the reclaimed water produced by PUB.

Prof Biswas, himself a Stockholm Water Prize winner in 2006, is the founder-president of the Third World Centre for Water Management in Mexico, of which his Mexican wife is deputy president. Between them to date, they have advised more than 20 governments on national and international water policies and best practices, including recommending that the National University of Singapore

(NUS) set up the Institute of Water Policy. They met when Prof Biswas was at the World Bank and advising the National Water Commission of Mexico, where Dr Tortajada worked.

Prof Biswas is currently a Distinguished Visiting Professor at NUS' Lee Kuan Yew School of Public Policy, while his wife is a visiting don at the same school. They sat down with me earlier this month to discuss the recent floods here.

■ *What do you make of Singapore's flood woes?*

**AB:** One of the facts of life anywhere in the world is that you cannot eliminate floods completely, technically or otherwise. You can only manage them, and control them - to a certain extent. I try to tell my students at Oxford University that no society has unlimited money to do so.

**CT:** But the Government's response to the floods here was fast, which you don't have in many other places. And it's good that the people of Singapore question the Government because then it improves. Many people in other cities say, 'We'll live with this', and as a result their governments tend not to bear responsibility. But again, you can have big barriers in Orchard Road, but if you have higher precipitation than that, there is nothing you can do because the infrastructure is designed to keep out a certain amount of water at a time.

■ *Singapore's infrastructure has never been better and it's had monsoon rains forever, so why can't we better control floods?*

**AB:** If you look at the way some of the shopping malls in Orchard Road are designed, any time the floodwaters go over street level, all the water can go only into the basements. That design is not the best. What you have to do is provide some sort of buffer or walls for malls so the water is kept on the street and does not flow down to mall basements. That will not need an enormous amount of money.

**CT:** What's happening now is that people are wealthier and their shops have more expensive goods. So their losses are higher, not because of unusual floods but because they have much more goods, which are much more expensive.

**AB:** And with urbanisation, everything is made of concrete so the floodwaters also have difficulty percolating. So these are some of the things which need to be explained to the people so they realise that there is nothing wrong with floods, but we have to be prepared to manage them.

■ *Some have attributed Singapore's floods to the rapidly changing weather. Is the weather really changing like so?*

**AB:** I cannot tell you with a straight face that the weather has changed. But as a scientist, I can confirm that the weather is changing slowly, although we have no evidence. The weather throughout history has always fluctuated.

■ *What might be the possible factors for the current freak weather?*

**AB:** Climate change has become a very popular topic. But it is such a complex topic, we really do not understand it

fully. There are so many things going on at the same time that no scientist worth his salt would tell you, 'This is the reason the climate is changing.' And there is a minority of scientists who are still saying that there is no such thing as climate change. That is also a problem because science does not progress by consensus.

The next Intergovernmental Panel on Climate Change report is surely going to increase the range of the potential for climate change, because people are realising that if something happens, something else changes, and that affects something else and you don't know the final result.

■ *Floods aside, what about Singapore helps it manage water well?*

**CT:** Its efficiency. What the Government calls 'PPP', that is, the public sector, the private sector and the people, is something I like very much because normally, you have the public and private sectors and the people are always left aside, but not in Singapore. Also, nowhere else have we found such long-term planning.

■ *Hasn't sheer survival instinct made Singapore so efficient?*

**CT:** It is so. But at the same time, many cities globally have many constraints they don't plan for, or respond to.

■ *Might it be because Singapore has more money to do so?*

**CT:** No. Singapore at independence did not have money. That Singapore has

money now is a result of long-term planning and hard work, not otherwise.

**AB:** Also, we had two interviews with Mr Lee Kuan Yew for our upcoming book. He's the only leader in the world who's been interested in water. And we asked him: What, initially, got him interested in water? He said two things: One was that when he was a young man during the Japanese Occupation, the British blew up the Causeway to stop the Japanese from coming to Singapore. And below the Causeway was the pipe that was bringing water in from Malaysia. So Singapore had only one week's supply of water left and that made him realise how dependent they were on water from outside.

The second thing he said was that after Singapore became an independent country in 1965, the British High Commissioner came to see him and told him that the Malaysian prime minister Tunku Abdul Rahman had told him that Singapore would have to do exactly what Malaysia wants, otherwise they would turn off the tap. So Mr Lee brought the best people in Singapore together and said, 'Tell me how much rain falls in Singapore, and how much of it we can collect.' And from then on, he had three to four people in his office all the time to decide whether some developments could go on or not, depending on the water used.

■ *What exactly has Singapore done since that impresses you?*

**CT:** Technology exists everywhere and very wealthy countries could have the same technology that Singapore uses. But they cannot come to the same solutions because, unlike Singapore,

they have not sorted out their institutional, legal and corruption problems.

■ *Still, why isn't a Singaporean running the Institute of Water Policy?*

**AB:** You have extremely good technocrats in Singapore but I'm sorry to tell you that there are not very many policy experts. Policy looks at a longer-term vision and has a governance aspect, whereas planning and management look at details.

**CT:** I don't think that the water sector in Singapore is short on skills to develop policies; I think it has developed the policies and their implementation but it could gain much more with support and dialogue from the universities here.

### ***Sharing their lives and their life's work***

DIFFIDENT yet direct, Canadian don Asit Biswas and his Mexican wife Cecilia Tortajada are that rare couple who share not only a life together but also their life's work. These global water experts have been blown away by Singapore's long view and relentlessly efficient ways with water. Here they are on:

■ **Prof Biswas on why forward planning for floods is tricky**

'You can plan for a once in a 1,000 years flood, which means that for 999 years, you won't need such infrastructure. Do

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you want to spend an enormous amount of money on that?'

■ **Dr Tortajada on flash floods**

'You can plan all you want, but if you have one of those rains, there's nothing you can do - well, yes, there is: You can go to the top of your house until the floods subside.'

■ **Dr Tortajada on Singapore**

'With Singapore, everything is always a process. Whereas in many other places, once a global event like the World Cup is over, everything is finished and everyone is finished!'

■ **Dr Tortajada on Singapore's economic success**

'Development in Singapore did not happen around water. But development in Singapore would not have happened had there not been all this planning for water.'

Prof Biswas on his first meeting with Mr Lee Kuan Yew

'I was in front of this giant of the 20th century. (I felt) a sense of awe and reverence but in two minutes, he put me and my wife at ease.'

■ **Prof Biswas on Mr Lee**

'Here is a man I could work with all my life. And if there is a next life, I hope I have a chance to work with him again.'