

# In Conversation: Asit K. Biswas and Murad J. Bino

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*Stephen Dale*

In the Middle East and North Africa, water is rapidly becoming the key development issue. In response, policymakers have proposed or tried to implement policies such as higher water tariffs or privatization, but have done so without considering local culture and values. Yet culture, including religion, clearly influences how people perceive and manage a resource such as water, and must be considered during policy development.

Exploring the intersection of Islamic law and the modern water crisis is the goal of [\*Water Management in Islam\*](#), recently published by IDRC and United Nations University Press. Stephen Dale recently interviewed two of the book's co-editors, Professor Asit K. Biswas and Dr Murad J. Bino, for *IDRC Reports Online*.

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***Water Management in Islam* refers at one point to a water crisis that occurred in Amman, Jordan. As a resident of Amman, what was that experience like, Dr Bino?**

**Dr Bino:** That incident happened in the summer of 1998, when one of the main reservoirs — which supplies 40 percent of the city — was contaminated with algae. In Amman, water is already rationed: you [receive] a supply only two times a week. When this happened there was no supply for two weeks continuously and the situation became very tense. It was especially upsetting for the poor, because in these situations a black market arises. The price of water is normally set at US\$2.50 per cubic metre, delivered by tanker, but on the black market the price rose to \$18 per cubic metre. If you have the money, you can buy the water. But if you are poor, what do you do?

**Are the poor especially at risk as water supplies tighten throughout the Islamic world?**

**Professor Biswas:** This is an important issue for all developing countries — not just the Islamic world. Often the poor pay for water services at a much higher rate than the rich, irrespective of whether they live in Cairo or Mexico City. The World Commission on Water, of which I was a member, recommended that consumers be charged for water, but with targeted subsidies to the poor.

**How does Islam address the need of the poor to have access to drinking water?**

**Dr Bino:** Islam teaches that water, pasture, and firewood are the common rights of all Muslims. This means that, if you have water, you cannot withdraw it from your neighbour. If you have a

natural stream flowing through your property, and somebody passes by who is thirsty, he can trespass your property, drink, and go out — you cannot stop him. And if he has a herd of animals, he can bring the animals to the water. The concept is that these resources are a gift from God to humans on earth — we have to respect these resources and share them, not waste them.

**How does this principle of water as a common right mesh with the realities of the modern world, where there are high costs involved with treating and distributing water?**

**Professor Biswas:** The days when people could drink directly from streams, rivers, and lakes is coming rapidly to an end, partly because of increasing contamination. But Islam provides guidance on these matters. If there are costs involved with transporting water, water providers can charge for that. So today, when dams have to be built to store water, or water treatment plants and pipelines have to be constructed, or drainage systems and treatment plants are necessary to collect and treat wastewater, consumers can be charged for these services.

**Should the private sector be playing a bigger role in the construction of water infrastructure?**

**Dr Bino:** We see in Jordan that the government's water department is running so much in debt that they cannot maintain the pipes, which means they are wasting water. At the same time, Amman is growing very fast, with the poor moving from the countryside to the periphery of the city. In these unplanned areas, there is no electricity and no water and no sewage. Poor people pay three or four times more [for water] than someone living a hundred metres away. Things would get better with a privatized delivery system. A private company under government license would have the means to fix those leaky pipes and provide service to those people on the periphery. The poor would benefit.

**Professor Biswas:** I see the matter somewhat differently. I believe it's a myth that the private sector is inherently more efficient than the public sector. The two most efficient urban water systems in the world, Singapore and Tokyo, belong to the public sector. Their current water losses are 6 and 7 percent respectively. Not a single private sector company, anywhere in the world, can boast a loss of less than 10 percent. However, the fact remains that most public sector companies are managed inefficiently. In my view, the future solution will lie in public-private sector partnership.

**Should religious officials play a prominent role in Islamic countries in promoting wise water use?**

**Professor Biswas:** Imams are more capable of reaching the public than water professionals, and their words are taken more seriously. Imams in some Islamic countries like Saudi Arabia have already preached the importance of water for human survival, and of water conservation in arid countries. The Vice-Minister of Islamic Affairs of Saudi Arabia, H.E. Ahmad Al-Sabban, is more knowledgeable in water issues than many water ministers I have met. This is a good sign.

**Are there any examples where religious officials have had a positive impact on water issues?**

**Dr Bino:** In one of the villages in Pakistan, there was a shortage of water, and people who were living downstream were not getting enough water. They had not been able to solve the problem of people upstream using too much water. So the Imam in the Mosque would preach about this on Friday, not just once but on many occasions. He concentrated on [messages] of 'like for your brother as you like for yourself' and 'use less water so that your neighbour downstream can get some water.' It was very effective, and the problem was solved through that approach.

## **Is the world facing a crisis as demand for water increases?**

**Professor Biswas:** The main crisis facing the world in the next two decades will not be due to scarcity of water, as is the overwhelming consensus at present, but the continuing deterioration of water quality. The global statistics published by international organizations grossly underestimate the present water quality situation. Our Centre conducted a study on the state of the world's waters, supported by the Nippon Foundation in Japan. It indicated that only about six percent of wastewater generated in Latin America is properly treated. The situation is similar in other Asian and African countries. Almost all water bodies near urban centres in developing countries are now seriously contaminated. This, plus the huge investments needed on water supply and wastewater services, are likely to precipitate the water crisis.

## **Is there also a need to address supply and demand issues?**

**Dr Bino:** In Jordan, the amount of available water is, on average, only 200 cubic metres per person per year. That is not far from the 50 cubic metres per capita per year, which the WHO says is the minimum water requirement for human wellbeing and hygiene. It is getting to the point where we have to limit the demand for water, partly by limiting population growth. We also have to improve efficiency and recycle water so it can be used more than once. I'm hopeful about some prospects on the horizon. The cost of producing fresh water from sea water or brackish water is falling each year. We also need new agricultural and industrial policy: instead of the population working in agriculture, which is water intensive, maybe they can be trained to work in more profitable areas. But these are not easy solutions, and it is going to take a lot of work.

**Professor Biswas:** I agree that desalination will become a cost-effective solution, particularly in the Middle East. It is already possible to desalinate sea water. My prediction is that water management practices will change more in the next 20 years than they have in the past 2,000 years. The water profession thus far has basically ignored this change, much of which will stem from outside the water sector.