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A treaty under water

In the Indus Basin, and elsewhere, India and Pakistan will have to find ways to manage water better

ASIT K BISWAS AND CECILIA TORTAJADA

ON APRIL 24, Debashree Mukherjee, secretary, Ministry of Jal Shakti, informed her Pakistani counterpart, Syed Ali Murtaza, that the Government of India had sent several notices to the Pakistan government to seek modifications to the Indus Waters Treaty (IWT). This is because fundamental changes have taken place since the treaty was signed some 65 years ago — these changes "require a reassessment of obligations". She went on to point out that "sustained cross-border terrorism by Pakistan... has directly impeded India's full utilisation of rights under the treaty". The Government of India, therefore, decided to keep the treaty in abeyance.

The decision was a result of terrorists killing 26 innocent tourists in Pahalgam. Following the attack, Indian Prime Minister Narendra Modi vowed to "identify, track and punish every terrorist and their backers". The more than three-day-long hostilities between the neighbours ended with a ceasefire on May 17.

There has been much rhetoric in both countries about what may happen to the flows of the Indus, Jhelum, Chenab and their tributaries, which were allocated to Pakistan under the treaty. Rhetoric aside, the simple fact is that if it decides to stop water flowing to Pakistan, India does not have the infrastructure to store the flows for a few days, let alone a long period. Construction of necessary water infrastructure will take at least a decade, if not more.

It's a miracle that the IWT has lasted some 65 years, even though, over the past three decades, there have been increasing signs that the pact was becoming less and less relevant for both countries. During the last decade, it was evident to any objective observer that the treaty needed major modifications to become relevant to both countries.

This is due to many reasons. First, India and Pakistan were very different countries in 1960, compared to now. In 1960, India's population was 445 million. It is now 1.46 billion, an increase of nearly 3.25 times. In 1960, 17.94 per cent of Indians lived in urban areas. Today, urban areas are home to 36 per cent of the population — and this proportion is increasing rapidly.

> The Green Revolution started in Punjab, both in India and Pakistan, after the treaty was signed. While it increased food production significantly, water demands on both sides of the border went up concomitantly. Water tables in both Indian and Pakistani Punjab are declining by over 50 cm per year. In many parts of both the Punjabs, water levels have declined by over one metre. Such unsustainable practices cannot continue, especially as the farm sector accounts for around 85 per cent of India's water requirements, and 90 per cent of Pakistan's.

Similarly, Pakistan's population in 1960 was 45.7 million. It is now 255 million, an increase of nearly 5.5 times. In 1960, well under 20 per cent of Pakistanis lived in urban areas. Now, it is nearly double that figure. In 1960, India's per capita GDP was significantly lower than Pakistan's — $312.78 to $411.16, almost 31 per cent less. Sixty-four years later, in 2024, India's per capita GDP was $2,698, against Pakistan's $1,647, almost 40 per cent higher. India's economic performance during the past 65 years has been significantly better than Pakistan's.

Increases in population, urbanisation and economic activities and improvement in living standards have led to a very significant escalation in water demands. Poor management practices have exacerbated water problems in both countries. Neither country has given much attention to managing demand and maintaining water quality. The main focus has been to increase supply availability.

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Not only in the Indus Basin, but all over India and Pakistan, water and farm practices have to be re-imagined. Water use in the agricultural sector needs to be significantly reduced, but at the same time, food production needs to be substantially increased. China has achieved similar objectives. Between 1975 and 2005, it reduced irrigation water use per hectare by 40 per cent, and increased agricultural production 12 times. During this period, agricultural water use in China declined from 84 per cent of total water use to 61 per cent. Since 2005, it has made more progress. India and Pakistan, too, do not have much choice.

The IWT was signed in 1960, when concerns like climate change, heat waves, glacier melt, and rising sea levels were not recognised. The water management practices of that time have become outdated. There was little understanding of the complex linkages between water, food, energy, and environmental securities.

Himalayan glaciers, which feed the Indus river system, have been melting for several years, leading to increased river flows during spring and summer. This trend could reverse after 2050, with the likely melting of most glaciers. Droughts and floods in the basin are becoming more frequent and intense. Meanwhile, the northern Indian Subcontinent is experiencing unprecedented heat waves. This year, Jaipur has already touched 44 degrees Celsius, while Shaheed Benazirabad in Sindh, Pakistan, recorded 50 degrees Celsius. Extreme temperatures have caused a surge in electricity demand to run air conditioners and fans. Since thermal and nuclear power plants require significant quantities of water for cooling, water demand for electricity generation has also increased. This situation is expected to worsen after 2030, as global warming continues to intensify. The IWT does not include such important considerations.

The treaty was on the sickbed by 2000. Both countries must decide how to negotiate a treaty that should have built-in mechanisms to make adjustments when necessary. Unfortunately, not a single institution in either country is conducting serious research as to how such a living treaty could be negotiated. Now, Pakistan has belatedly indicated that it's open to re-discussing India's concerns about the IWT.

Irrespective of what happens to the treaty, both countries will need to address serious water problems. They have to re-imagine the management of water needs, including in the Indus River Basin.

Biswas is a leading international authority on water. He is a winner of the Stockholm Water Prize. Tortajada is honorary professor at the University of Glasgow. They are visiting research professors at the Centre for Policy Research, New Delhi