

BOOK REVIEW

Water, Peace & War: Confronting the Global Water Crisis By - Brahma Chellaney.

Oxford University Press, New Delhi, 2014, pp.432, Price: Rs.595, Paperback, ISBN -9780198099192.

I would like to open this book review with the following three lines:

*Too much water,
Too little to drink,
And, too little for meeting the ends.*

This pioneering study on 'hydropolitics' considers the profound impact of the growing global water crunch across the continents of the world. The author informs the readers on range of issues - depleting ground water levels, drying up of freshwater sources and lakes in Asia, Europe and Africa. Chellaney warns that exhaustion of fossil water and aquifers in the Middle East will be the major sources of conflict in this non-drinkable water rich and alarming drinkable water scenario of the planet Earth. Chellaney warns the reader that 'Water Wars' will severely impact international peace and security as well as possible ways to mitigate the crisis in the near future.

'Water War' as a concept, may not mesh with the conventional construct of warfare, especially for those who wars with tanks, combat planes, and attack submarines as weapons. Yet, armies do not necessarily have to march to battle to seize or defend water resources. Water wars - in a political, diplomatic, or economic sense - are the disguised wars waged between the riparian neighbours in many parts of the world; fuelling cycles of bitter recrimination, exacerbating water challenges, and fostering mistrust that impedes broader regional cooperation and integration. The danger,

according to Chellaney is - water wars could escalate to armed conflict or further limit already stretched food and energy production.

in a direct, nontechnical, and engaging style from numerous sources, references and reports, Chellaney draws on a wide range of research from scientific and policy fields to examine the different global linkages between water and peace. The text offers a holistic picture and integrated solutions for water scenario in the world. His book provides useful insights on the most precious natural resource of this century and how we must

initiate/plan/discuss to secure humankind's water future.

Message of the text: Brahma Chellaney conveyed the readers that even though water is of fundamental importance to humans; since the dawn of civilizations, humankind has undervalued it. Therefore, policy makers, governments and human greed have failed to create institutional mechanisms at the international level to ensure its prudent use. Chellaney warns the readers of both - the scientific and political implications of water use.

Although water is essential to sustaining life and livelihoods, geo-strategist Brahma Chellaney argues that it remains the world's most underappreciated and undervalued resource. One sobering fact is that the retail price of bottled water is already higher than the international spot price of crude oil. But unlike oil, water has no substitute, raising the spectre of water becoming the next flashpoint for conflict.

Depth of the text: The above mentioned arguments are lucidly explained in the five chapters of this text from different geographies of the Earth. Brahma Chellaney notes the geopolitical impacts of water shortages on the frequently bellicose behaviour of Israel and its neighbours and the depleting water scenarios in northern Africa and the

Middle East. Water feuds have become intensive in Asia, Middle East and Africa.

Many nations have confronted on ensuring adequate supply of clean water. Brahma Chellaney cites a report mentioning that Sanaa, the capital city of Yemen will be the first nation of zero water source availability of the world by 2020. Though, two-third of the planet is covered with water, only two percent of the total availability of water can be used for farming and domestic purposes. Half of the population of today has been already in 'water stressed' scenario. Brahma Chellaney opined that two-third of the world's population will experience 'water stressed' by 2020.

"Tomorrow's water sources in the western part of United States of America are used during today", writes Chellaney. This is the scenario of water scarcity in the Western part of United States of America. The golden state of San Francisco and the state of Las Vegas in United States of America have faced drying up of water sources to meet the needs for their glitzy inhabitants. "Please do not waste water greening your lawns", that is the message Chellaney writes against the excessive use of water among the American citizens.

Brahma Chellaney reminded the readers that the medieval city of *Fatehpur Sikri* in Uttar Pradesh in India was abandoned by the *Mughal* ruler, Akbar

due to the depleting ground water sources. "Who knows? After a couple of decades, these states in United States and Sanaa in Yemen may be the next *Fatehpur Sikri* of the age of Globalisation", that is my message on reviewing this well research text.

How the Dragon (Mao's Chins) Make Placid Ponds: Brahma Chellaney provides a credible account of the ways in which China has become an unprecedented water *hegemon* during the past three decades. Hegemony is a term first used by Antonio Gramsci in his celebrated text "Notes from the Prison Dairy", which simply means an authoritative oppressor. Later the term was picked by Perry Anderson in his text, "Indian Ideology".

Any reader of this text will learn that China's unabated dam building spree, was resulted due to the necessary power requirements for the Chinese industrial sector. So far, China has not signed any water agreements or treaties with the neighbouring nations. China at its own will control the headwaters of several international rivers (most of the Eurasian rivers originated from the Tibetan plateau) and manipulate their cross-border flows. For instance, China started building massive hydro electric projects in the Chinese part of Brahmaputra River, which creates

uneasiness in the riparian parts of Brahmaputra in India. Therefore, concerted external pressure is needed to get Beijing to accept some form of institutionalized water cooperation.

Since its independence on 1948, China has been built more than twenty thousand medium size and seventy thousand large dams to run hydroelectric projects. In other words, China is on dam building spree and 'completing at an average of four dams every day, since 1948'. In today's world, ninety percent of the world's energy is from water. There will be a instant where, humankind will ignore the notion, "water is a renewable source of energy, simply because of the water stress conditions popping up in many regions of the world."

Brahma Chellaney claimed that water shortages transform the peaceful competition between nations into violence. He disseminates this notion with relevance to Middle East nations in Asia and river basin sharing nations in Asia and Africa. In such nations, the common threat is the declining level of per cubic metre water availability. Water rich nations are the nations which have per cubic meter water availability above 1700 cubic meters per year. Many nations of the world have fallen below 1000 cubic meters per year. Water stress is the uncomfortable step toward water scarcity. For instance - Lebanon, Jordan, Cyprus,

Kenya, Lesotho and many more countries in northern Africa are the cases in point.

Water and Humanity: Humankind has initiated the worst form of human activity during 1960s. Humans have altered the natural flow of hydrological cycle by over consumption, over farming and over extraction of water. Hydrological cycle is increasingly disrupted due to unprecedented growth and population and over dependence on water related activities. Developed nations remains as the largest energy consumer and 'largest water consumers'. United State's water consumption per person checks in with 550 litres of water; whereas, the water consumption per person of Ethiopia is a meagre 15 litres of water.

Brahma Chellaney pointed out that there is a co-relationship with more diets, more water consumption, farming and food production. At an average, countries all over the world consume seventy percent of its water for food production, nineteen percent for industrial uses and eleven percent for its municipal usages. Northern parts of Africa, Middle East, Central Asia and sizeable parts of South Africa have already consumed forty percent of their total renewable water resources for agriculture. The increasing trend will be the widening gulf and higher trading of water between water rich nations and water poor nations.

Brahma Chellaney concludes that in order to prevent water-based conflicts, a set of international rules, cooperative institutional mechanisms, and environmentally sustainable water management solutions will be needed. Brahma Chellaney welcomes newer policy orientation on water between all nations of the world so as to put forward effective measures and innovations to solve future crises over water shortages. Brahma Chellaney believes that regulation of water sharing between countries is one effective step towards future 'Water Wars'.

Weak sides of the text: In order to provide a lucid account of the nexuses between water security and world peace, Brahma Chellaney's attempts to draw causal connections between water and actual problems, this aspect can be questioned in this text. For instance, rising individual obesity level and per person water consumption in a nation, sounds a bit odd. This text has repetitive instances across the third and the fourth chapter. Due to this, the structure of the book and references are often juxtaposed. Also, every chapter lacks introductory and conclusion sections. Graphs and tables in this text need a more thicker description. The immense data highlighted in the text is not presented toward a fuller and meaningful representation.

Summing up: Highly recommended at all readership levels. I would like to end this book review with a quote from the former United Nations Organisation's General Secretary- Kofi Atta Annan's statement on the essence of water, "In twenty first century, if we are not careful, future wars were going to be about water, not about oil".

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