

Non Traditional Security Digest

Indus Waters Treaty and Ganga Water
Treaty: Provisions and Recent News

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Indus Waters Treaty 1960

Introduction

The [Indus basin](#) covers an area of 11,65,500 sq.km. It comprises the three Eastern Rivers (Sutlej, Beas and Ravi) and the three Western Rivers (Indus, Jhelum and Chenab). The basin is mostly shared by India and Pakistan, with Afghanistan and China having a relatively small portion.

After Independence in 1947, the Indus Basin waters had become a source of tension between India and Pakistan. Before the Indus Waters Treaty (IWT) was signed in 1960, several proposals had been made under the 'good offices' and facilitation of the World Bank. It has been acknowledged that the IWT became possible because of timely intervention of [the World Bank](#). The IWT was concluded in Karachi on 19 September 1960. The signatures to the Treaty were Jawaharlal Nehru, Prime Minister of India, Ayub Khan, the Chief Martial Law Administrator of Pakistan and Willaim Illif, the Vice-President of the World Bank. The Treaty contains a Preamble, twelve Articles and eight detailed technical Annexures (A to H).

Preamble

The Preamble lays down that the Treaty aims to set and delimit each party's rights and duties in connection to the usage of these waters.

Articles

Article 1: Definition

In this section, various definitions and terms related to the Indus basin have been described.

Article 2: Provisions Regarding Eastern Rivers

The provision allows India for unrestricted use of Eastern rivers.

Article 3: Provisions Regarding Western Rivers

The provision allows Pakistan for unrestricted use of Western rivers but India is under obligation to let flow beyond the permitted uses.

Article 4: Provisions Regarding Eastern Rivers and Western Rivers

This clause consists of various provisions regarding the use of both Eastern and Western rivers

Article 5: Financial Provisions

This provision highlights India's contribution to the cost of building new headworks and canal systems for irrigation in Pakistan.

Article 6: Exchange of Data

This article elaborates the exchange of data between parties to the Treaty. Data shall be transmitted monthly by each Party to the other as soon as the data for a calendar month have been collected and tabulated.

Article 7: Future Cooperation

This section focuses on future collaboration in achieving the best potential development of the Rivers in the Indus Basin.

Article 8: Permanent Indus Commission

This article elaborates the role of the Permanent Indus Commission set up to resolve any disputes that may arise in water sharing, with a mechanism for arbitration to resolve conflicts amicably.

Article 9: Settlement of difference and disputes

This article deals with the settlement of differences and disputes. It describes various provisions regarding the Neutral Expert and the establishment of a Court of Arbitration at the request of either party.

Article 10: Emergency Provisions

This article describes, in consultation with India, large-scale international hostilities arising out of causes beyond the control of Pakistan, prior to 31st March 1965, that would enable Pakistan to obtain from abroad the materials and equipment necessary for the completion, by 31st March 1973, of the 'replacement element'.

Article 11: General Provisions

This article showcases some general provisions regarding rights and obligations of each Party in relation to the other with respect only to the use of the waters of the Rivers.

Article 12: Final Provisions

This article provides for the provisions of the Treaty to continue in force until terminated by a duly ratified treaty between the two Governments.

Annexures***Annexures A:***

It is about the exchange of notes between the parties: India and Pakistan.

Annexures B

This annexures deals with agricultural uses by Pakistan from certain tributaries of the Ravi.

Annexures C:

It deals with agricultural uses by India from the western rivers.

Annexures D:

This annexure focuses on generation of hydro-electric power by India on the Western rivers.

Annexures E:

This annexure calls for storage of waters by India on the Western rivers.

Annexures F:

This annexure deals with the role of a neutral expert during any settlement of differences and disputes.

Annexures G:

This annexure focuses on establishment of a court of arbitration at the request of either Party to the other in accordance with the provisions of Article IX (5) (b) or (c).

Annexures H:

It deals with Transitional arrangements mentioned in article 2 (5) regarding storage and use of the Indus basin.

The text of the IWT can be accessed [here](#).

Ganga Water Treaty**Introduction**

[The Ganga basin](#) covers a total area of 10,86,000 sq.km and spreads across India, Tibet (China), Nepal and Bangladesh. The major part of the geographical area of the Ganga basin lies in India. The basin is surrounded by the Himalayas on the North,

by the Aravalli on the west, by the Vindhyas and Chota Nagpur plateau on the South and by the Brahmaputra Ridge on the East. The Ganga waters had been a contested for almost 35 years between India and Bangladesh. On 12 December 1996, a comprehensive bilateral treaty was concluded by the Indian Prime Minister H. D. Deve Gowda and Bangladesh Prime Minister Sheikh Hasina in New Delhi. The treaty contains twelve articles.

Articles

Article 1: This provision focuses on the quantum of waters agreed to be released by India to Bangladesh at Farakka.

Article 2: This article describes the availability and flow of water at Farakka.

Article 3: This Section emphasizes on the release of water to Bangladesh at Farakka.

Article 4: This article focuses on the work of a Joint Committee, constituted to observe and record the daily flow.

Article 5: This section emphasizes on the Joint Committee's procedure and method of functioning.

Article 6: This article calls for the Joint committee to submit a yearly report to both the governments (India and Bangladesh).

Article 7: It describes the working of the Joint Committee regarding the implementation and examining of the various provisions of this treaty.

Article 8: It focuses on long-term cooperation between parties on Ganga waters.

Article 9: This article calls for equity principle, fairness and no harm to either

party. Further it calls upon Governments to conclude water sharing Treaties with regard to other common rivers as well.

Article 10: It emphasizes that several provisions under the Treaty shall be reviewed by the two Governments at five years interval or earlier.

Article 11: This section focuses on various provisions to be carried out in the absence of mutual agreement on adjustments following reviews as mentioned in Article 10.

Article 12: This article mentions that the Treaty shall remain in force for a period of thirty years and it shall be renewable on the basis of mutual consent.

The text of the Ganga Treaty can be accessed [here](#).

Recent News

New IPCC report indicates water level rise in Ganga, Brahmaputra, Indus by 2050.

The Indus, Ganga and Brahmaputra river basins, the major source of water to the South Asia region, would witness significant increase in river 'runoff' by 2050 and 2100. These are the latest projections made by the Intergovernmental Panel on Climate Change (IPCC) in its [Sixth Assessment Report](#) on Impacts, Adaptation and Vulnerability, that was released on 28 February, 2022.

Pakistan's objection on Kiru Project

Pakistan had raised objections to the design of the [run-of-the-river Kiru project](#). The concrete gravity Kiru project is located in Kishtwar district of J&K. The Rs. 4,287 crore

(at 2018 level) project by the Chenab Valley Power Projects Ltd, is a joint venture between National Hydroelectric Power Corporation (NHPC) and Jammu and Kashmir State Power Development Corporation (JKSPDC).

The Diamer Bhasha Dam Project Trail

Pakistan has completed a 267 meter long temporary [cable way bridge](#) that will speed up the transit of heavy machinery and building materials over the Indus River. It will benefit the Diamer Bhasha Dam Project. Moreover, it will be used to transfer materials from the left side to the right bank of the river in order to expedite the project's development.

Agenda for Indus Commission Meeting

A 10-member Indian team will visit Pakistan for the annual meeting of the [Permanent Indus Commission](#) on March 1-3, 2022. The meeting's agenda would likely include a discussion on Pakistan's objections to Indian hydroelectric projects such as Pakal Dul (1,000 MW), Lower Kalnai (48 MW), and Kiru (624 MW) in the Chenab basin in Jammu and Kashmir, as well as a few small hydroelectric projects in Ladakh.

Glacier melting impacting Indus Basin

Various institutions like the Geological Survey of India (GSI) and the National Institute of Hydrology (NIH) have reported that the rapid melting of Himalayan glaciers is severely impacting the Indus basin. [The mean retreat rate of Hindu Kush Himalayan glaciers](#) is 14.9 ± 15.1 meter/annum; which varies from 12.7 ± 13.2 meter/annum in the Indus.

Latest Publications

Books

Anirudh Kala, 'Two and a Half Rivers', Niyogi Books Pvt. Ltd., 2021, 236pp.

Mridula Ramesh, 'Watershed: How We Destroyed India's Water and How We Can Save It', Hachette India, 2021, 432pp.

Uttam Kumar Sinha, 'Indus Basin Uninterrupted: A History of Territory and Politics from Alexander to Nehru', Penguin Random House India, 2021, 352pp.

Journal Articles

Ashwani Kumar Tiwari, Abhay Kumar Singh, Binita Phartiyal & Anupam Sharma (2021), 'Hydrogeochemical characteristics of the Indus river water system', *Chemistry and Ecology*, 37:9-10, 780-808, DOI: 10.1080/02757540.2021.1999425.

Ankit Gupta, Ruhi Maheshwari, Nibedita Guru, Sweta, B. Simhadri Rao, P. Venkat Raju & V. Venkateshwar Rao (2021), 'Quantitative prioritization of potentially critical glacial Lakes in the Indus River basin using satellite derived parameters', *Geocarto International*, DOI: 10.1080/10106049.2021.1975831.

Ayaz Ul Haq & Said Muhammad (2021), 'Spatial distribution of heavy metals contamination and risk indices evaluation in sediments of Indus River and its tributaries', Pakistan, *Geocarto International*, DOI: 10.1080/10106049.2021.2019835.

Debarati Nag, Binita Phartiyal, Pankaj Kumar, Priyanka Joshi & Randheer Singh (2022), 'Geomorphological and sedimentological evidences of palaeo-

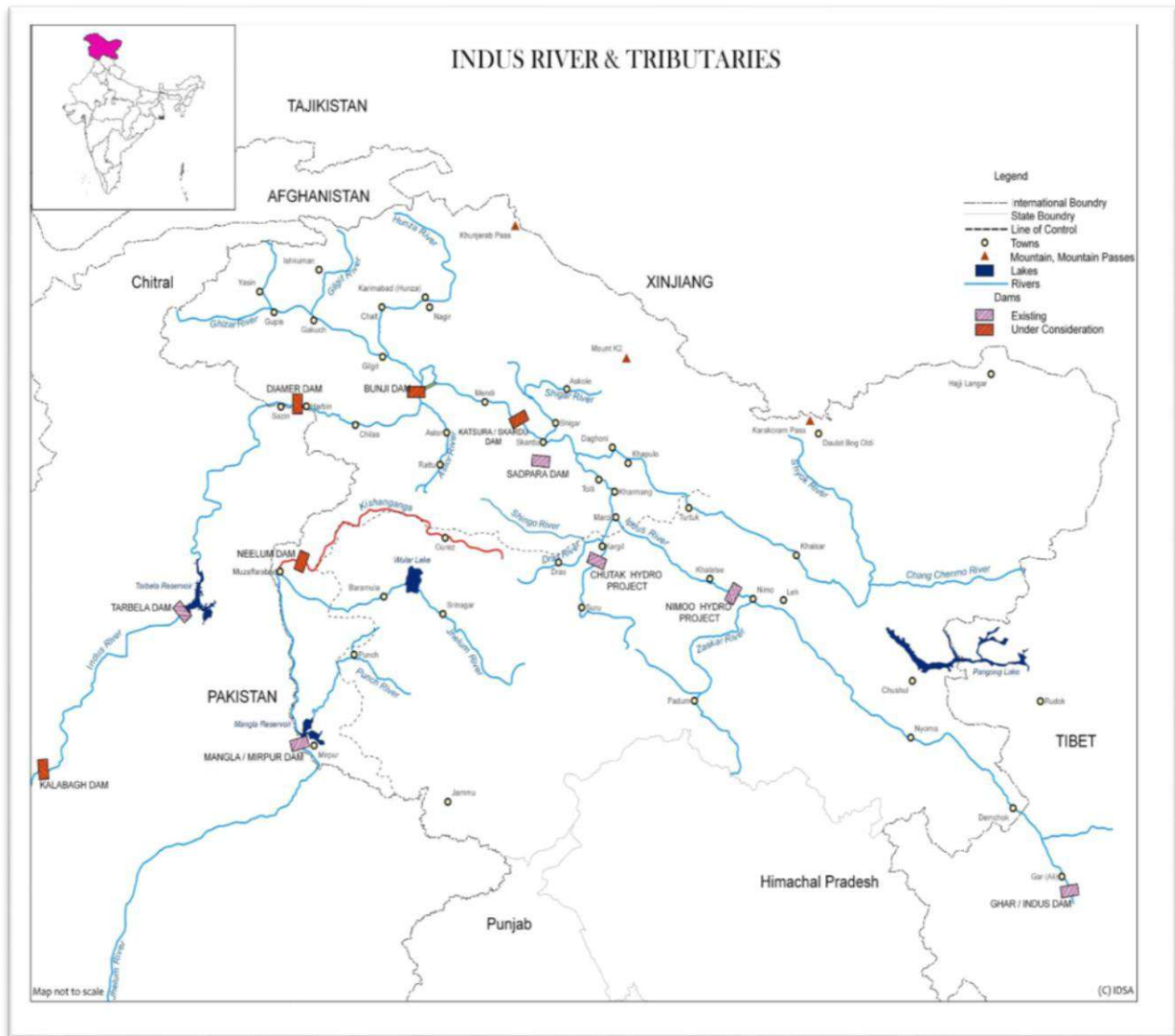
outburst flood events from TanglangLa-Gya catchment of River Indus, Ladakh, India’, *Physical Geography*, DOI: 10.1080/02723646.2021.2022339.

S. Bera and R. Maiti (2021), ‘Assessment of Water Availability with SWAT Model: A Study on Ganga River’, *Journal Geological*

Society of India, Vol. 97, pp. 781–788, DOI: <https://doi.org/10.1007/s12594-021-1760-9>

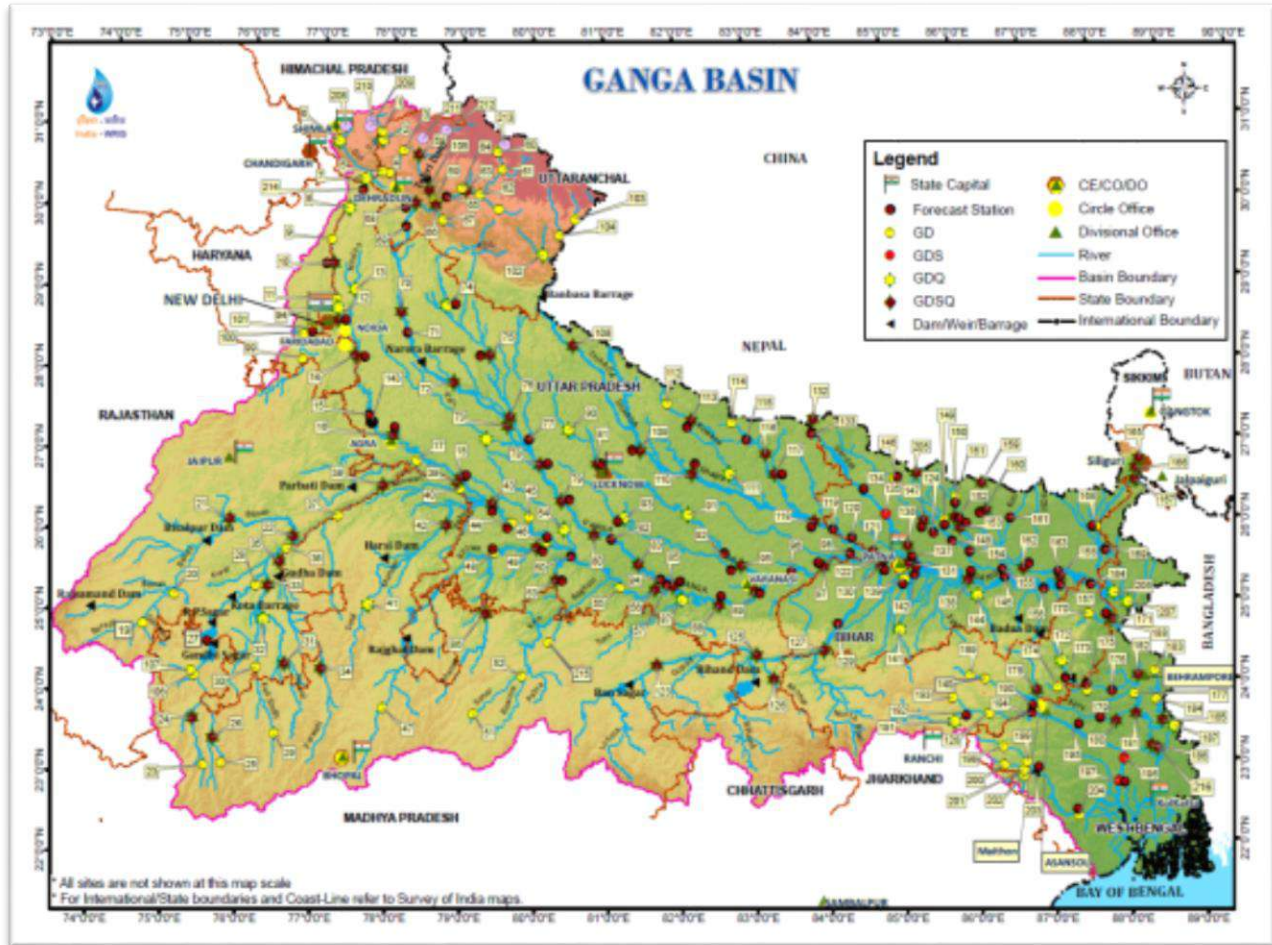
V. P. Haran (2021), ‘Water and hydropower cooperation in BBIN countries: policies and way forward’, *International Journal of Water Resources Development*, 37:3, 424-438, DOI: 10.1080/07900627.2018.1503076

MAP 1: THE INDUS BASIN



Source: GIS, MP-IDSA (New Delhi)

MAP 2: THE GANGA BASIN



Source: Ministry of Water Resources

Non-Traditional Security Centre

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