

Blood, Water, and the Indus Waters Treaty

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ABSTRACT

The contested and divided province of Jammu and Kashmir, situated on the western side of the Hindu Kush Himalayan Mountains, is one of the most dangerous and heavily militarized places on earth. It is a Muslim-majority borderland harboring contested territorial claims of three nuclear powers—India, Pakistan, and China. Through it flow the headwaters of the six major tributaries that form the massive Indus Basin, the essential fresh water source for Pakistan and for upwards of 300 million Indians and Pakistanis. Since 1960, the unusual Indus Waters Treaty has governed the use of these waters. The treaty forwards a water-division rather than a water-sharing arrangement. Pakistan is assigned the three major western tributaries (the Indus, Jhelum, and Chenab Rivers), and India is assigned the three eastern tributaries (the Ravi, Beas, and Sutlej Rivers). Multiple changes in circumstance, principally due to population growth and climate change, tax the operation of the treaty, which has been praised as one of the world’s most successful transboundary water treaties and perhaps the best example of decades-long cooperation between these two bitter enemies. Recent events, linking Pakistan-based terrorist attacks, Hindu nationalism, and constitutional changes to the status of Indian-controlled Jammu and Kashmir, resulted in India’s announcement of its intention to capture all unutilized water flowing into Pakistan from its eastern tributaries. This hard legalization of the terms of the treaty threatens to take the Indus Waters Treaty to its breaking point while evincing existential anxieties in Pakistan over tightening water supply that already makes it the third most water stressed country in the world. This article reviews the combustible interface of international riparian

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law and international customary law with the geopolitics of one of the most dangerous corners of the world, suggesting that the business as usual approach for the Indus Waters Treaty no longer provides a meaningful solution. Backed into a corner from which no ready pathway for revision prevails, this article argues that the parties can only at best undertake to create much needed domestic breathing space for the Indus Waters Treaty, until that time when an environment for meaningful hydro-diplomacy can take hold.

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I. INTRODUCTION

On February 14, 2019, a member of the Pakistan-based militant group, Jaish-e-Mohammad drove a vehicle laden with 350 kg of explosives into a convoy of Indian paramilitary police in the Pulwama district of India's northern-controlled Himalayan region of Jammu and Kashmir.¹ Forty reservists of India's 76th Battalion died immediately in the blast and many others were badly injured.² Violent protests erupted across India,³ and India promised an array of responses, including severe economic sanctions against Pakistan.⁴ Pakistan Prime Minister Imran Khan disavowed any government responsibility for the attack, which the Indian Foreign Office derided as "an oft-repeated excuse."⁵ In the biggest escalation between the two

1. See *Pulwama Attack 2019, Everything About J&K Terror Attack on CRPF by Terrorist Adil Ahmed Dar, Jaish-e-Mohammad*, INDIA TODAY (Feb. 16, 2019), <https://www.indiatoday.in/india/story/pulwama-attack-2019-everything-about-jammu-and-kashmir-terror-attack-on-crpf-by-terrorist-adil-ahmed-dar-jaish-e-mohammad-1457530-2019-02-16> (detailing the attack and the political fallout). Sometimes the State of Jammu and Kashmir is referred to as Kashmir, which, strictly interpreted, means the Vale of Kashmir and not the other five parts, including Jammu, Ladakh, Baltistan, Poonch, and the Gilgit Agency (Gilgit Baltistan). In general parlance, reference to Jammu and Kashmir relates to territory under Indian control; Pakistani-controlled parts of Jammu and Kashmir are referred to as Azad Kashmir, or Adad Jammu and Kashmir. For historical background, see CHRISTOPHER SNEDDEN, *THE UNTOLD STORY OF THE PEOPLE OF AZAD KASHMIR* (2012).

2. See *Pulwama Attack 2019, Everything About J&K Terror Attack on CRPF by Terrorist Adil Ahmed Dar, Jaish-e-Mohammad*, *supra* note 1 (noting other critically injured persons).

3. See *Curfew in Jammu After Mob Violence Over Pulwama Attack, Army Called in Amid Fears of Communal Backlash*, NEWS18 (Feb. 15, 2019), <https://www.news18.com/news/india/curfew-in-jammu-city-after-protests-over-pulwama-attack-army-asked-to-help-2037687.html> (detailing massive and multiple anti-Pakistan protests).

4. *Pulwama Attack: India Will 'Completely Isolate' Pakistan*, BBC (Feb. 15, 2019), <https://www.bbc.com/news/world-asia-india-47249133> (noting India's pledge to take "all possible diplomatic steps" to cut off Pakistan from the international community"); Ashok Sharma, *Pulwama Terror Attack: India's Response Escalates*, AUSTR. INST. INT'L AFF. (Feb. 27, 2019), <http://www.internationalaffairs.org.au/australianoutlook/pulwama-terror-india-escalates/> (noting India's revocation of Most Favored Nation Status, in place since 1996).

5. Pardeep Dhull, *"Pakistan Nerve Centre of Terrorism": India Rebuts Imran's Claims on Pulwama*, TRIB. (Feb. 19, 2019, 07:28 PM), <https://www.tribuneindia.com/news/nation/pakistan-nerve-centre-of-terrorism-india-rebuts-imran-s-claims-on-pulwama/731498.html>.

countries since their 1971 war involving East Pakistan (now Bangladesh), Indian fighter jets crossed the de facto border Line of Control separating the two countries in the disputed Jammu and Kashmir region, and carried out “non-military, pre-emptive air strikes” against a Jaish-e-Mohammed training camp at Balakot,⁶ *beyond* Pakistan-administered Kashmir.⁷ Pakistan responded with its own air attacks across the Line of Control, resulting in the loss of at least one, perhaps two, Indian MiG-21 fighter planes, Pakistan’s capture of an Indian wing commander, the loss of one Pakistani F-16, and the death of its pilot.⁸

6. Sunil Prabhu, *India Strikes After Pulwama Terror Attack, Hits Biggest Jaish-e-Mohammed Camp in Balakot*, NDTV (Feb. 26, 2019, 09:39 PM), <https://www.ndtv.com/india-news/india-struck-biggest-training-camp-of-jaish-in-balakot-large-number-of-terrorists-eliminated-governm-1999390>. For a discussion on the history of and changes to the Line of Control, originally defined by the Karachi Agreement, which brought the first Indo-Pakistani war to a close in 1949, see Prabhaskar K. Dutta, *Kashmir: How Line of Control Has Changed in 70 Years*, INDIA TODAY (Aug. 9, 2019), <https://www.indiatoday.in/news-analysis/story/kashmir-how-line-of-control-has-changed-in-70-years-1579118-2019-08-09>. The original Line of Control bifurcated Jammu and Kashmir “with India getting control of about 65 percent of the state and Pakistan . . . 35 percent.” *Id.* Currently, India controls about 45 percent of the princely state. *See id.* The Line of Control underwent a revision when Pakistan ceded to China 2,000 sq. miles of northern Kashmir border territory in 1963. In the northeastern part of the state (Aksai Chin), another Line of Control separates territory captured by China in the Sino-Indian War of 1962. The 1965 Indo-Pakistani War resulted in movements of the Line of Control based on both countries gaining and losing ground. However, the negotiated Tashkent Agreement returned both militaries to previous positions. *See id.* The Simla Agreement in July 1972, signed by Prime Minister Indira Gandhi and President Zulfikar Ali Bhutto, promised to “uphold the inviolability of the Line of Control,” which the parties agreed was “a most important [confidence building measure] . . . and a key to a durable peace.” *Simla Agreement July 2, 1972*, MINISTRY OF EXTERNAL AFF. (India), <https://mea.gov.in/in-focus-article.htm?19005/Simla+Agreement+July+2+1972>. The 1984 war changed the Line of Control in the triangulated region of the Siachen Glacier, the largest glacier in the trans-Himalayan region. *See* Dutta, *supra* note 6. The 110 km line dividing current military position in the Siachen Glacier region is technically referred to as the Actual Ground Position Line (AGPL) due to the near impossibility of delineating the actual line based on the inhospitable and high-altitude terrain. *See* Sajad Padder, *Siachen Stalemate*, 4 INT’L J. PEACE & DEV. STUD. 35 (2013) (detailing the AGPL and the “utter uselessness” of maintaining the Kashmir conflict in this region). Another line—the Line of Actual Control (LAC)—refers to the demarcation line separating Indian-controlled and Chinese-controlled territory in Jammu and Kashmir formed after the 1962 Sino-Indian War. *See* Ilan Kelman et al., *Disaster Diplomacy in Jammu and Kashmir*, 31 INT’L J. DIS. RISK RED. 1132, 1133 (2018) (distinguishing the LAC from the Line of Control).

7. Moeed W. Yusuf, *The Pulwama Crisis: Flirting with War in a Nuclear Environment*, ARMS CONTROL ASS’N (May 2019), <https://www.armscontrol.org/act/2019-05/features/pulwama-crisis-flirting-war-nuclear-environment>.

8. *See* David Axe, *Super Strange: Why Did India Send a Really Old Mig-*

Jammu and Kashmir, situated on the western side of the Hindu Kush Himalayan Mountains is one of the most dangerous and heavily militarized places on earth.⁹ It is a Muslim-majority borderland harboring contested territorial claims of three nuclear powers—India, Pakistan, and China.¹⁰ Since 1989, when armed uprising against Indian rule began in Indian-administered Kashmir,¹¹ terror attacks in the region have increased and have claimed more than 70,000 lives, mostly civilian ones.¹² However, the dispute dates to the end of British colonial rule and the partitioning of India in August 1947.¹³ Within 73 days from the announcement to the completion of

21 to Battle an F-16?, NAT'L INT. (June 2, 2019), <https://nationalinterest.org/blog/buzz/super-strange-why-did-india-send-really-old-mig-21-battle-f-16-60632> (discussing the post Pulwama Pakistani retaliation).

9. See Waheguru Pal Singh Sidhu, *Introduction* to KASHMIR: NEW VOICES, NEW APPROACHES 1 (Waheguru Pal Singh Sidhu et al. eds., 2006) (describing Kashmir as “the most dangerous place on earth” with “the most sustained level of violence anywhere in the world since the end of the Cold War”); Haley Duschinski, *Destiny Effects: Militarization, State Power, and Punitive Containment in Kashmir Valley*, 82 ANTHROPOLOGICAL Q. 691, 703 (2009) (noting the troop to civilian ratio in the Kashmir Valley makes it “one of the most heavily militarized areas in the entire world”). With a population of 12.5 million, Jammu and Kashmir has one soldier for every 17 residents. HALEY DUSCHINSKI ET AL., RESISTING OCCUPATION IN KASHMIR 2 (2018).

10. According to the most recent census (15th Indian Census, 2011), Jammu and Kashmir has an official population of 12,541,302. The current population is estimated to be between 14.7 and 14.9 million. Islam is practiced by about 68.31% of the population. Hindu is practiced by about 28.44% of the population, with small but notable concentrations of Sikhs (1.87%), and Buddhists (0.9%). *Jammu and Kashmir Population 2011–2019 Census*, CENSUS 2011, <https://www.census2011.co.in/census/state/jammu+and+kashmir.html>. Statistics calculated from the 2001 Census revealed that 97.16% of the population in the Kashmir Valley identified as Muslim; 65.23% of the population of Jammu identified as Hindu. The people of Ladakh are of Indo-Tibetan origin, and divided among Muslims (47.40%), Hindus (6.22%), Buddhists and other (45.87%). See *Demographics*, JAMMU & KASHMIR OFFICIAL STATE PORTAL, <https://jk.gov.in/jammukashmir/?q=demographics> (citing the 2001 Census). Consideration of China’s involvement in the triad of state relations in this region is beyond the scope of this study. For more on China’s role, see I-WEI JENNIFER CHANG, CHINA’S KASHMIR POLICIES AND CRISIS MANAGEMENT IN SOUTH ASIA (2017).

11. Idris Bhat, *New Delhi’s Demographic Designs in Kashmir*, FOREIGN POL’Y (Aug. 16, 2019), <https://foreignpolicy.com/2019/08/16/new-delhis-demographic-designs-in-kashmir/>.

12. Rebecca Ratcliffe, *India Set to Withdraw Kashmir’s Special Status and Split it in Two*, GUARDIAN (Aug. 5, 2019, 12:07 PM), <https://www.theguardian.com/world/2019/aug/05/india-revoke-disputed-kashmir-special-status>.

13. D.N. PANIGRAHI, JAMMU AND KASHMIR: THE COLD WAR AND THE WEST 1 (2009) (“The Kashmir issue had its genesis in the partition of India.”).

partition, the British dismantled imperial structures 300 years in the making.¹⁴ Partition generated turbulent transfers of power and peoples among incorporated and semi-autonomous regions of the British Indian empire, leaving “roughly 80 million people with a grievance,” according to Sir Cyril Radcliffe, the man who drew the demarcation line.¹⁵

Despite its Muslim-majority population and a failed United Nations (U.N.)-sponsored plebiscite,¹⁶ the Hindu Maharajah of the princely state of Jammu and Kashmir acceded to the Union of India.¹⁷ That contested decision, intended as a temporary

14. ALASTAIR LAMB, *KASHMIR: A DISPUTED LEGACY 1846–1990* 101 (1991). The decision to divide India was announced on June 3, 1947 and India’s formal independence was established on August 15, 1947. JISHA MENON, *THE PERFORMANCE OF NATIONALISM: INDIA, PAKISTAN, AND THE MEMORY OF PARTITION* 7 (2013).

15. EDMUND HEWARD, *THE GREAT AND THE GOOD: A LIFE OF LORD RADCLIFFE* 42 (1994) (quoting Cyril Radcliffe’s 1947 private correspondence to Mark Tennant).

16. S.C. Res. 47 (Apr. 21, 1948) (recommending the restoration of peace and order following violent incursions by tribesmen in October 1947 and the holding of a plebiscite on the accession of Jammu and Kashmir to India or Pakistan).

17. The origins of the dispute over Jammu and Kashmir date to the end of British colonial rule and the partition of India in August 1947. The creation of a Muslim homeland out of India produced one of the most astonishing, imperfect, and violent two-way migrations of the twentieth century. Upwards of 15 million persons were displaced—Hindus and Sikhs moving to India, Muslims moving to Pakistan—with death tolls ranging from 200,000 to two million. See IAN TALBOT & GURHARPAL SINGH, *THE PARTITION OF INDIA* 2–3 (2009) (noting huge numbers of family separations, kidnappings, and victimizations of women). The multiethnic princely state of Jammu and Kashmir, however, maintained a degree of internal autonomy from the indirect rule over the subcontinent by the British Raj, as guaranteed by the Treaty of Amritsar signed in 1846 between Britain and the Maharaja Gulab Singh. See PANIGRAHI, *supra* note 13, at 1 (discussing the British recognition of Jammu and Kashmir as “forever in independent possession to Maharaja Gulab Singh and the heirs male of his body” in exchange for assurances of the Maharaja’s “acknowledge[ment of] the supremacy of the British Government”). Lord Mountbatten, the viceroy of India, encouraged the succeeding Maharajah of Jammu and Kashmir, Hari Singh, to accede to one dominion or the other, although it was “widely believed in Pakistan that [Lord Mountbatten wanted] to tie Kashmir to India.” Avinash Mohaneney, *How Kashmir Was Won from Mountbatten & Jinnah*, *ECON. TIMES* (Aug. 7, 2019), <https://economictimes.indiatimes.com/news/politics-and-nation/how-kashmir-was-won-from-mountbatten-jinnah/articleshow/70560879.cms>. The Maharajah maintained the region’s independence for more than two months, and despite a standstill agreement designed to freeze the status of the region’s mostly Muslim population prior to any future integration, the Maharajah sided with India in October 1947 upon invasion by “large numbers of Pashtun tribesmen from Pakistan’s North-West Frontier.” VICTORIA SCHOFIELD, *KASHMIR IN CONFLICT: INDIA, PAKISTAN AND THE UNENDING WAR* xi (2010). The U.N. Commission on

arrangement,¹⁸ contributed to or produced four major wars,¹⁹ countless border conflicts, recurrent insurgencies and counter-insurgencies,²⁰ and strong and complex ethno-nationalistic brands of Kashmiri, Pakistani, and Indian identity politics.

Within Kashmir, a “deep-rooted sense of alienation,”²¹ culturally embedded in a centuries long resistance to non-Kashmiri rule, resists the “politico-constitutional integration of Indian states”²² when it does not view with ambivalence India’s nationalist project and perceived failure to “nurture Kashmiri ethno-nationalist identity.”²³ From Pakistan’s perspective, the

India and Pakistan (UNCIP) failed to broker an agreement to hold a U.N. Security Council-endorsed plebiscite in August 1948 and again in January 1949. See Musarat Javed Cheema, *Pakistan – India Conflict with Special Reference to Kashmir*, 30 S. ASIAN STUD. 45 (2015) (discussing how the first Indo-Pakistan war broke out until a 1949 ceasefire Line of Control—agreed to by India and Pakistan—became the default dividing line, with India in control of perhaps two-thirds of the disputed territory).

18. Sheikh Mohammad Abdullah, *Kashmir, India and Pakistan*, 43 FOREIGN AFF. 528, 529 (1965).

19. The Indo-Pakistani Wars of 1947, 1965, 1971, and 1999 (also known as the Kargil conflict) directly involved Kashmir. The 1971 Indo-Pakistani War did not directly involve Kashmir at the outset, although it would be difficult to conclude that historical remembrances over Kashmir played no part. Historian Alastair Lamb noted that Indian and Pakistani soldiers battled during the final stages of the 1971 crisis on Kashmiri soil. LAMB, *supra* note 14, at 1; Syed Rifaat Hussain, *Resolving the Kashmir Dispute: Blending Realism with Justice*, 48 PAK. DEV. REV. 1007, 1008 (2010).

20. Although military conflict between the two countries tends to conflate in terms of severity and frequency, bilateral relations have been complicated by coups in Pakistan in 1958, 1977, and 1998. India and Pakistan also have fought repeatedly over control of the Siachen Glacier since 1984, which is sometimes referred to as a *Krieg-permenenz*, or undeclared but standing war. See generally Raspal S. Khosa, *The Siachen Glacier Dispute: Imbroglia on the Roof of the World*, 8 CONTEMP. S. ASIA 187 (1999). Forward bases have been established at altitudes of 22,000 feet above sea level, producing casualties directly related to “climate, terrain, and altitude.” Ishtiaq Ahmad, *Siachen: A By-Product of the Kashmir Dispute and a Catalyst for its Resolution*, 27 PAK. J. HIST. & CULTURE 87, 89 (2006); see generally Asad Hashim, *Timeline: India-Pakistan Relations*, ALJAZEERA (Mar. 1, 2019), <https://www.aljazeera.com/indepth/spotlight/kashmirtheforgottenconflict/2011/06/2011615113058224115.html>.

21. Rekha Chowdhary, *Kashmir in the Indian Project of Nationalism*, in THE PARCHMENT OF KASHMIR: HISTORY, SOCIETY, AND POLITY 151, 152 (Nyla Ali Khan ed., 2012).

22. Gull Mohammad Wani, *Political Assertion of Kashmiri Identity*, in THE PARCHMENT OF KASHMIR: HISTORY, SOCIETY, AND POLITY 125 (Nyla Ali Khan ed., 2012).

23. Chowdhary, *supra* note 21, at 154; Stephen Philip Cohen, *India, Pakistan and Kashmir*, in INDIA AS AN EMERGING POWER 32, 47–48 (Sumit Ganguly ed., 2003) (discussing Kashmiri self-determination and resentment toward New Delhi governance).

absorption by India of a democratic and secular Muslim-majority state is an “anathema to Pakistan’s *raison d’être*,”²⁴ with troublesome reminders of Pakistan’s disastrous 1971 war with India during East Pakistan’s India-aided secession.²⁵ That war shattered the idea of a religiously cohesive Pakistani national identity with the emergence of Muslim Bangladesh as an independent, secular state.²⁶ From India’s perspective, pluralistic accommodation of the region’s historical status as a princely state during the period of the British Raj, as represented in its post-colonial form by India’s asymmetrical federal model of administration,²⁷ evidenced a progressive

24. Pakistan was founded on ideological principles of the “Two Nations Theory,” articulated in a famous 1940 Lahore speech by the founder of Pakistan, Muhammad Ali Jinnah. Its “foundations have been laid on Islamic ideology based on the Quaranic teachings and Sunnah,” and holds that Muslims and Hindus are separate nations by all definitions and should have separate homelands. Abdul Majid et al., *Genesis of the Two Nations Theory and the Quaid-e-Azam*, 15 PAK. VISION 180, 181 (2014); Aakriti Bachhawat & Prattek Joshi, *Kashmir: The Piece of Territory India and Pakistan Could Start a Nuclear War over*, NAT’L INT. (Sept. 25, 2019), <https://nationalinterest.org/blog/buzz/kashmir-piece-territory-india-and-pakistan-could-start-nuclear-war-over-83256>.

25. Although the 1971 India-Pakistani War was not fought over Kashmir but rather the establishment of independence for East Pakistan, Ashoka University historian Srinath Raghavan canvassed interpretations of the war that regarded it as a “continuation and decisive resolution of the long-standing military rivalry between the two countries,” which contested “India’s secular nationalism and Pakistan’s [Two Nations Theory] that posited Hindus and Muslims as separate nations” and formed “the ideological underpinning of the Pakistani nation-state.” SRINATH RAGHAVAN, 1971: A GLOBAL HISTORY OF THE CREATION OF BANGLADESH 6–7 (2013). Raghavan also linked current problems in Jammu and Kashmir, including the establishment of the Line of Control, conflicts on the Siachen Glacier and in the Kargil district in the Ladakh region of Kashmir, and the insurgency problem in Kashmir to the establishment of Bangladesh and the memory of Pakistan’s quick, localized, and geopolitically significant humiliation in the 1971 war. *See id.* at 4.

26. Sanjay K. Khardway, *Contesting Identities in Bangladesh: A Study of Secular and Religious Frontiers* 3 (LSE Asia Research Ctr., Working Paper No. 36, 2009).

27. British crown rule over India replaced the English East India Company. It commenced in 1858 and ended in 1947. Although referred to as the British *Raj*, a Hindi term meaning ‘to rule’, over 500 principalities, or approximately two-fifths of the sub-continent’s area and one-fifth of its population, remained outside the direct control of the crown. *See* Waltraud Ernst & Biswamoy Pati, *People, Princes and Colonialism, in INDIA’S PRINCELY STATES: PEOPLE, PRINCES AND COLONIALISM* 1 (Waltraud Ernst & Biswamoy Pati eds., 2007) (discussing the varied nature of the princely states and the complicated relationship between princely and colonial rule). The princely state of Jammu and Kashmir maintained a degree of internal autonomy from the indirect rule over the subcontinent by the British Raj, as guaranteed by the Treaty of

compact of integrative autonomy that Kashmiris have long underappreciated.²⁸ At the same time, Kashmir's special historical status is also held up as a trope by the strong Hindu nationalist ideology (Hindutva) of the ruling Rashtriya Swayamsevak Sangh (RSS)-Bharatiya Janata Party (BJP), which harbors a "deep-rooted Islamophobia" that delegitimizes Kashmiri autonomy as a disguised form of terrorism support.²⁹

Perhaps the events since the Pulwama bombing present a kind of mortal dramaturgy that informed commentators have come to expect.³⁰ Violent confrontations in the disputed Kashmir

Amritsar signed in 1846 between Britain and the Maharaja Gulab Singh. See PANIGRAHI, *supra* note 13, at 1 (discussing the British recognition of Jammu and Kashmir as "forever in independent possession to Maharaja Gulab Singh and the heirs male of his body" in exchange for assurances of the Maharaja's "acknowledge[ment of] the supremacy of the British Government"). The special status of princely states specifically carried over into the 1949 Indian Constitution. Article 370 provided the basis for Jammu and Kashmir's accession to the Indian Union by providing special exemptions, allowing it to make its own laws on all matters not related to finance, defense, foreign affairs, or communications. Article 35A was introduced by presidential order in 1954 to enable local Indian-administered Kashmir to implement Article 370 exemptions (repealed in August 2019). See generally NYLA ALI KHAN, *THE PARCHMENT OF KASHMIR: HISTORY, SOCIETY, AND POLITY* (2012). Read together, these two articles granted Jammu and Kashmir residents separate laws, including laws preventing demographic changes to the area by defining the classes of persons who shall be permanent residents of Jammu and Kashmir, laws regulating governing employment, and laws regulating the acquisition of immovable property. See Ashish Srivastava, *Article 35A: Its Existence and Controversies*, 2 J. CONST. L. & JURIS. 1 (2019).

28. See Sadanand Dhume, *The Dueling Narratives of India's Kashmir Crackdown*, ATLANTIC (Sept. 5, 2019), <https://www.theatlantic.com/international/archive/2019/09/the-dueling-narratives-of-indias-kashmir-crackdown/597457/> (noting Prime Minister Modi's complaint that India's constitutional arrangement with Kashmir has "given nothing but secessionism, terrorism, nepotism and widespread corruption on a large scale"); *Kashmir Special Status Explained: What are Articles 370 and 35A?*, ALJAZEERA (Aug. 5, 2019), <https://www.aljazeera.com/news/2019/08/kashmir-special-status-explained-articles-370-35a-190805054643431.html> (discussing the claim that Kashmiris have refused to accept India's generosity and benefaction given Kashmir's special status).

29. Fareeha Shamim, *The Kashmir Quagmire, Rising Islamophobia and Hindu Nationalism*, DIPLOMAT (Oct. 17, 2019), <https://thediplomat.com/2019/10/the-kashmir-quagmire-rising-islamophobia-and-hindu-nationalism/>.

30. See S.A. Aiyar, *Stick to Political Theatre, It is Safer than Risking War with Pak*, TIMES INDIA (Feb. 24, 2019), <https://timesofindia.indiatimes.com/blogs/Swaminomics/stick-to-political-theatre-it-is-safer-than-risking-war-with-pak/> (discussing the "clever political theatre" and "surgical" dramatics of the Pulwama attack, according to one of India's leading economic journalists); see also Statement of Former Ambassador to the U.S., Husain Haqqani, *Morning Addition*, NPR (Feb. 28, 2019) (transcript), <https://www.npr.org/2019/02/28/698863848/understanding-the-latest-flare-up-between-india-and-pakistan> ("I

region erupt regularly. Reprisals elide into a constant stream of violence, now seven decades long. In 2003, India and Pakistan negotiated an unwritten ceasefire agreement in Kashmir,³¹ which they violated nearly two thousand times between 2011 and 2017.³² By August 2018, the number of ceasefire violations registered in India had already risen higher than the total number in 2017, and 2017 had marked the highest number of violations since 2003.³³ Although these violations occur against a backdrop of mutual suspicion along the 460-mile-long de facto border Line of Control,³⁴ they encase performative expectation,³⁵ notwithstanding U.N. documented accounts of chronic impunity by security forces,³⁶ and apocalyptic warnings about the dangers of the current situation.³⁷

don't think [the military confrontation between Pakistan and India following the Pulwama blast] is worse [than the typical confrontation between India and Pakistan.]); *see generally* MENON, *supra* note 14 (exploring the centrality of performance and mimesis as tactics of political power in Indian-Pakistani relations).

31. *See* Saeed Ahmed Rid, *India and Pakistan: Formalizing the 2003 Ceasefire Agreement*, E-INT'L REL. (Feb. 8, 2018), <https://www.e-ir.info/2018/02/07/the-veil-as-a-political-act/> (arguing for the need to formalize the 2003 ceasefire agreement to fortify the peace process).

32. *See* HAPPYMON JACOB, CEASEFIRE VIOLATIONS IN JAMMU AND KASHMIR: A LINE OF FIRE 5 (noting 1,922 reported infractions by Pakistani defense, National Assembly, and Inter Services agencies and 1,996 reported violations by Indian ministries of Defense and Home Affairs).

33. Christophe Jaffrelot, *Ceasefire Violations in Kashmir: A War by Other Means?*, CARNEGIE ENDOWMENT FOR INT'L PEACE (Oct. 24, 2018), <https://carnegieendowment.org/2018/10/24/ceasefire-violations-in-kashmir-war-by-other-means-pub-77573>.

34. *See Factbox-Line of Control Between India and Pakistan*, REUTERS (Oct. 20, 2008), <https://in.reuters.com/article/kashmir-border/factbox-line-of-control-between-india-and-pakistan-idINDEL18181520081020> (presenting basic facts about the Line of Control).

35. *See* Sanjeev Miglani & Drazen Jorgic, *INSIGHT-India, Pakistan Threatened to Unleash Missiles at Each Other-Sources*, REUTERS (Mar. 17, 2019), <https://in.reuters.com/article/india-kashmir-crisis/insight-india-pakistan-threatened-to-unleash-missiles-at-each-other-sources-idINL3N2150XD> (quoting Johns Hopkins scholar Joshua White's concern that "Indian and Pakistani leaders have long evinced confidence that they can understand each other's deterrence signals and can de-escalate at will"); Yusuf, *supra* note 7 (noting India's retaliation may have intentionally targeted a relatively barren area "to ensure that escalation remain controllable").

36. *See Report on the Situation of Human Rights in Kashmir*, U.N. HIGH COMM'R FOR HUM. RTS. (June 14, 2018), <https://www.ohchr.org/Documents/Countries/IN/DevelopmentsInKashmirJune2016ToApril2018.pdf> (documenting wide-scale abuse in its first human rights assessment of violations in Kashmir).

37. *See* Julian Borger, *Imran Khan Warns UN of Potential Nuclear War in*

The conflagration potential of the region as a “nuclear flashpoint” is rhetorically well rehearsed,³⁸ as is the warning of unpredictable reactions or mistakes due to low-grade belligerent provocations.³⁹ While this rhetoric and tit-for-tat behavior do not dispel the ever-present danger,⁴⁰ Jammu and Kashmir is also regarded as an intractable, frozen conflict that feeds domestic spoiler agendas.⁴¹ These agendas promote stalemate over solution and evoke schema of mirror-imaging, Othering, and victimization.⁴² These adversary images satisfy domestic

Kashmir, GUARDIAN (Sept. 26, 2019), <https://www.theguardian.com/world/2019/sep/26/imran-khan-warns-un-of-potential-nuclear-war-in-kashmir> (quoting Pakistan’s prime minister Khan’s fear that India’s current military buildup and crackdown in its controlled portion of the region will destabilize the peace and create “a potential disaster of proportions that no one here realises”).

38. See ROBERT G. WIRSING, *KASHMIR IN THE SHADOW OF WAR: REGIONAL RIVALRIES IN A NUCLEAR AGE* 4 (2003); Robert G. Wirsing & Christopher Jaspardo, *River Rivalry: Water Disputes, Resource Insecurity, and Diplomatic Deadlock in South Asia*, 9 WATER POLY 231, 244 (2007) (discussing “compulsive and ritualistic” complaint about water infractions involving the Indus Waters Treaty).

39. See, e.g., “Everyone Lives in Fear:” *Patterns of Impunity in Jammu and Kashmir*, HUM. RTS. WATCH (Sept. 12, 2006), <https://www.hrw.org/report/2006/09/11/everyone-lives-fear/patterns-impunity-jammu-and-kashmir> (noting “not uncommon” mistakes and errors of judgment that have “greatly inflame[d] public passions in Jammu and Kashmir”).

40. JEFF NESBIT, *THIS IS THE WAY THE WORLD ENDS: HOW DROUGHTS AND DIE-OFFS, HEAT WAVES AND HURRICANES ARE CONVERGING ON AMERICA* (2018) (profiling coming water problems with the Indus River); see Joshua T. White, *Why America Can’t Escape its Role in the Conflict Between India and Pakistan*, BROOKINGS (Mar. 6, 2019), <https://www.brookings.edu/blog/order-from-chaos/2019/03/06/why-america-cant-escape-its-role-in-the-conflict-between-india-and-pakistan> (reminding that, with the exception of the Korean peninsula, India and Pakistan “represent the world’s most likely venue for nuclear conflict”).

41. See Sumit Ganguly et al., *India, Pakistan, and the Kashmir Dispute: Unpacking the Dynamics of a South Asian Frozen Conflict*, 17 ASIA EUR. J. 129, 130 (2019) (citing scholars supporting “popular accounts” that characterize “quite frequently” the Kashmir conflict as “frozen”); Julia Thompson, *The Dynamics of Violence along the Kashmir Divide, 2003–2005*, STIMPSON <https://www.stimson.org/wp-content/files/dynamics-violence-kashmir-divide.pdf> (defining but discounting the ‘spoiler’ thesis in terms of ceasefire violations as “planned provocations by sub-state or non-state actors” to “slow forward momentum on . . . normal bilateral relations”).

42. See Misria Ali, *Pulwama Attack Aftermath: Othering, Civilising Processes and Life as an Indian Muslim Today*, FIRSTPOST (Mar. 9, 2019), <https://www.firstpost.com/india/pulwama-attacks-aftermath-othering-civilising-processes-and-life-as-an-indian-muslim-today-6223831.html> (discussing the accentuation of India-Pakistan enmity as a messaging device to reconstitute what the BJP lacks as a party); Sanjay Chaturvedi, *Process of Othering in the Case of India and Pakistan*, WILEY ONLINE LIBR., <https://onlinelibrary.wiley.com/doi/pdf/10.1111/1467-9663.00191> (noting the discourse of otherness and othering in Indian-Pakistan relations).

constituencies in what has become “the oldest conflict inscribed in the body of U.N. resolutions.”⁴³ Stasis in enemy imagery is the default position, which summarizes Jammu and Kashmir’s predicament.⁴⁴

Despite the stalemate, performative theatrics, and enervating violence, former Pakistani ambassador to the United States, Husain Haqqani, sensed that the immediate aftermath of the Pulwama bombing propelled the countries into “uncharted waters.”⁴⁵ In a troubling move despite well-announced election promises,⁴⁶ and without consulting Kashmiris,⁴⁷ Indian Prime Minister Narendra Modi announced on August 5, 2019 the unilateral and immediate abrogation of Articles 370 (and its enabling clause, 35-A) of the Indian Constitution.⁴⁸

Articles 370 specifically protected the “temporary” special status of the princely state,⁴⁹ which carried over into the Indian constitutions of 1949 and 1954 and provided the quid pro quo for Jammu and Kashmir’s accession to the Indian Union.⁵⁰ The

43. Cohen, *supra* note 23, at 48.

44. See Janice Gross Stein, *Psychological Explanations of International Conflict*, in *HANDBOOK OF INTERNATIONAL RELATIONS* 292, 295 (Walter Carlsnaes et al. eds., 2003) (discussing stasis and enemy imagery).

45. See Soutik Biswas, *India and Pakistan in ‘Uncharted Waters’*, BBC (Feb. 27, 2019), <https://www.bbc.com/news/world-asia-india-47382949> (quoting former Pakistani Ambassador to the U.S. and advisor to three Pakistani prime ministers, Husain Haqqani). Likewise, Gautam Chikermane of the New Delhi-based Observer Research Foundation noted that post-Pulwama “doors have suddenly broken open . . . [marking] [a] new will rising in India.” Gautam Chikermane, *5 Ways India’s Foreign Policy Has Changed Post-Balakot*, OBSERVER RES. FOUND. (Mar. 8, 2019).

46. Leela Jacinto, *Modi’s Shock Kashmir Move Threatens India’s Standing on World’s Stage*, FRANCE24 (Aug. 11, 2019), <https://www.france24.com/en/20190811-india-kashmir-pakistan-diplomatic-standing-violations>; Devjyot Ghoshal & Manoj Kumar, *Ahead of Indian Election, Modi’s Party Vows to Strip Kashmir of Special Rights*, REUTERS (Apr. 8, 2019), <https://www.reuters.com/article/us-india-election-kashmir/ahead-of-indian-election-modis-party-vows-to-strip-kashmir-of-special-rights-idUSKCN1RK0JX>.

47. Mirza Waheed, *India’s Illegal Power Grab is Turning Kashmir into a Colony*, GUARDIAN (Aug. 14, 2019), <https://www.theguardian.com/comment/isfree/2019/aug/14/narendra-modi-kashmir-hindu-first-india-autonomy>.

48. Press Trust of India, *Text of President’s Notification on Article 370*, BUS. STANDARD (Aug. 5, 2019), https://www.business-standard.com/article/pti-stories/text-of-president-s-notification-on-article-370-119080500853_1.html.

49. Kamran Khalid, *India Revokes Kashmir’s Autonomy, Risking Yet Another War with Pakistan*, CONVERSATION (Aug. 6, 2019), <https://theconversation.com/india-revokes-kashmir-autonomy-risking-yet-another-war-with-pakistan-121485>.

50. Amjed Jaaved, *Article 370 and 35-A: Rigmarole to Becloud UN Charter and Resolutions*, MODERN DIPLOMACY (Sept. 6, 2019), <https://modern>

article, together with 35-A, provided special exemptions that allowed Jammu and Kashmir to make its own laws on all matters not related to finance, defense, foreign affairs, or communications.⁵¹ In practice, these geographically-specific protections prevented demographic changes to the state by defining the classes of persons who shall be permanent residents of Jammu and Kashmir, and regulating laws governing employment and the acquisition of immovable property.⁵² This exemption provision notably conflicted with the Indian Constitution's article 14 that guarantees equality before the law, article 19's freedoms of association and movement guarantees, and long-held nationalistic desires to amend the 1954 Constitution to bring the region under majoritarian rule.⁵³

The dissolution of these articles now allows Indians to work and own land in Kashmir, altering the course of dealing that served as the basis for this compact since accession in 1947.⁵⁴ Prime Minister Modi's announcement effectively subsumed Muslim-majority Kashmir into India's federal government and converted the border state into Union Territory.⁵⁵ His October 31, 2019 reorganization plan also bifurcated the state by

diplomacy.eu/2019/09/06/article-370-and-35-a-rigmarole-to-becloud-un-charter-and-resolutions/.

51. See VICTORIA SCHOFIELD, *KASHMIR IN CONFLICT: INDIA, PAKISTAN AND THE UNENDING WAR* 73 (2003) (noting that the instrument of accession forming the basis of Kashmir's future relationship with India "only extended to external affairs, defence and communications" and that "[i]t was anticipated that the accession would be confirmed by reference to the people, under the auspices of the United Nations," although that was never ascertained); see also LAMB, *supra* note 14, at 193 (discussing the "temporary" special status indicated by Article 370 within the disputed significance of what accession to the Indian Constitution really meant by the respective parties).

52. See Ashish Srivastava, *Article 35A: Its Existence and Controversies*, 2 J. CONST. L. & JURIS. 1 (2019).

53. See Kanad Bagchi, *Subterfuge and the 'Integration' of Kashmir*, VERFASSUNGBLOG (Aug. 8, 2019), <https://verfassungsblog.de/of-constitutional-subterfuge-and-the-integration-of-kashmir/>.

54. See Waheed, *supra* note 47 (noting the consequences of abrogating the constitutional provisions).

55. See Utkarsh Anand, *Not Just Article 370, New Presidential Order Negates 1954 Order on Article 25A as Well*, NEWS18 (Aug. 5, 2019) <https://www.news18.com/news/india/not-just-article-370-new-presidential-order-negates-1954-order-on-article-35a-as-well-2258781.html> (announcing the nullification of the 1954 presidential order and noting the reorganization of Jammu and Kashmir). Union Territories are controlled by Lieutenant Governors who answer directly to the federal government. See *President's Rule Revoked in J&K, 2 Union Territories Created*, ECON. TIMES (Oct. 31, 2019) <https://economictimes.indiatimes.com/news/politics-and-nation/jk-ceases-to-be-a-state-two-new-uts-come-into-being/articleshow/71829144.cms>.

creating another Union Territory out of the sparsely populated, mostly Buddhist region of Ladakh.⁵⁶ The move followed his party's landslide April 2019 election victory.⁵⁷ It stands as a repudiation of the bilateral negotiated settlement discourse developed over the course of 47 years, as nurtured by the Simla Agreement (1972),⁵⁸ the Lahore Declaration (1999),⁵⁹ and the Islamabad Declaration (2004).⁶⁰

On notice of the decree, law and order matters for Union Territories transferred to the federal republic from the state legislature in Srinagar, the capital of Indian-controlled Jammu and Kashmir.⁶¹ Tens of thousands of Indian troops deployed to the region,⁶² adding to the hundreds of thousands of troops

56. Known as the Jammu and Kashmir Reorganization Act 2019. See Kamaljit Kaur Sandhu, *Jammu and Kashmir Bifurcation: Preparations Underway for Swearing-In of LGs of J&K, Ladakh*, INDIA TODAY (Oct. 29, 2019), <https://www.indiatoday.in/india/story/jammu-and-kashmir-bifurcation-preparations-underway-for-swearing-in-of-lgs-of-j-k-ladakh-1613898-2019-10-29> (discussing the dissolution plan and the preparations for the swearing-in of two newly-appointed Lieutenant Governors in Srinagar and Leh).

57. See *'India Wins Yet Again', Says PM Modi as BJP Heads for Historic Win*, TIMES INDIA (May 23, 2019), <https://timesofindia.indiatimes.com/india/india-wins-yet-again-says-pm-modi-as-bjp-heads-for-historic-win/article-show/69462242.cms> (reporting Modi's BJP and its NDA allies leading in 354 of the 542 parliamentary seats with 272 seats required to form a coalition government); Michael Safi, *India Election Results 2019: Modi Claims Landslide Victory*, GUARDIAN (May 23, 2019), <https://www.theguardian.com/world/2019/may/23/india-election-results-narendra-modi-bjp-victory> (marking Modi's victory as one of the biggest in Indian history and making "the Hindu nationalist leader the country's most formidable politician in decades").

58. *Simla Agreement*, MINISTRY OF EXTERNAL AFF. (INDIA) (July 2, 1972), <https://mea.gov.in/in-focus-article.htm?19005/Simla+Agreement+July+2+1972> (holding that "[b]oth governments agree . . . to discuss further the modalities and arrangements for the establishment of durable peace . . . , including the question of . . . a final settlement of Jammu and Kashmir").

59. *Lahore Declaration*, MINISTRY OF EXTERNAL AFF. (INDIA) (Feb. 2, 1999), <https://mea.gov.in/in-focus-article.htm?18997/Lahore+Declaration+February+1999> ("Reiterating the determination . . . to implementing the Shimla Agreement in letter and spirit" and agreeing to intensify efforts to resolve the issue of Jammu and Kashmir).

60. *Islamabad Declaration*, MINISTRY OF EXTERNAL AFF. (INDIA) (Jan. 6, 2004), <https://mea.gov.in/bilateral-documents.htm?dtl/7398/Islamabad+Declaration> (reaffirming the pledge to "promote good neighborly relations" while recognizing "the importance of informal political consultations in promoting mutual understanding and reinforcing confidence building" processes).

61. The Print, *What Narendra Modi is Saying to Kashmiris, People in Rest of India, Pakistan & the World*, YOUTUBE (Aug. 8, 2019) <https://www.youtube.com/watch?v=DPx9PO1hSPU>.

62. See *Article 370: India Strips Disputed Kashmir of Special Status*, BBC (Aug. 5, 2019), <https://www.bbc.com/news/world-asia-india-49231619> (noting India's deployment of "tens of thousands of Indian troops" ahead of the article

already stationed there.⁶³ Internet and mobile phone services shut down, government-ordered curfews of more than eight million Kashmiris followed, and an estimated 4,000 arrests, including the detention of political leaders, ensued.⁶⁴ The constitutionality of Modi's revocation of Jammu and Kashmir's special status is now before a five-bench panel of India's Supreme Court.⁶⁵ A former judge of the High Court of Jammu and Kashmir and current parliamentarian from south Kashmir labeled Delhi's decision a "massive assault on the identity and autonomy of the state."⁶⁶ Human rights advocates link the move to India's nationality campaign in its northeastern state of Assam, where a 2019 National Register of Citizens census discounted nearly two million mostly Muslim residents, who now face mass deportation and the prospect of statelessness.⁶⁷ Pakistan's Prime Minister called the revocation a "historic blunder," took the issue to the U.N.,⁶⁸ downgraded diplomatic

370 repeal). The action evokes invocation and criticism of India's hardline Doval Doctrine, named after National Security Advisor Ajit Doval, to maintain a hardline stance against terrorism and Kashmiri liberation movements. See Muhammad Feyyaz, *Contextualizing the Pulwama Attack in Kashmir—A Perspective from Pakistan*, 13 PERSP. ON TERRORISM 69, 70 (2019).

63. See Khan Warns of 'Bloodbath' in India-Held Kashmir, NEWSWEEK (PAK.) (Sept. 28, 2019), <https://www.newsweekpakistan.com/khan-warns-of-bloodbath-in-india-held-kashmir/> (quoting the Pakistani Prime Minister's claim of 900,000 Indian troops stationed in Kashmir, although acknowledging that India has not made public the number).

64. *Kashmir Leaders Under House Arrest As Unrest Grows*, BBC (Aug. 5, 2019), <https://www.bbc.com/news/world-asia-india-49230883> (detailing the crackdown); *About 4,000 People Arrested in Kashmir since August 5: Govt Sources to AFP*, HINDU (Aug. 18, 2019), <https://www.thehindu.com/news/national/about-4000-people-arrested-in-kashmir-since-august-5-govt-sources-to-afp/article29126566.ece> (estimating the number of arrests under India's Public Safety Act for up to two years without charge).

65. See *5-Judge Supreme Court Bench to Hear Multiple Pleas on Article 370, Kashmir Lockdown Today*, INDIA TODAY (Oct. 1, 2019), <https://www.indiatoday.in/india/story/supreme-court-to-hear-pleas-challenging-abrogation-of-article-370-from-today-1604974-2019-10-01>.

66. Hannah Ellis-Petersen, *India Strips Kashmir of Special Status and Divides it in Two*, GUARDIAN (Oct. 31, 2019), <https://www.theguardian.com/world/2019/oct/31/india-strips-kashmir-of-special-status-and-divides-it-in-two> (quoting former Judge Hasnain Masoodi).

67. See, e.g., *125 Civil Society Organizations Condemn the Exclusion of 1.9 Million People from the Assam NRC*, AMNESTY INT'L INDIA (Sept. 6, 2019, 12:04 PM), <https://amnesty.org.in/news-update/amnesty-india-joint-statement-to-condemn-the-exclusion-of-1-9-million-people-from-the-assam-nrc/>.

68. Imtiaz Ahmad, *India's Jammu and Kashmir Move Historic Blunder: Imran Khan*, HINDUSTAN (2019), <https://www.hindustantimes.com/india-news/india-s-jammu-and-kashmir-move-historic-blunder-imran-khan/story-eybC50yNQvZDOtCKQJ117H.html> (quoting Pakistan Prime Minister Khan).

ties with New Delhi, and expelled the Indian High Commissioner.⁶⁹ U.N. High Commissioner for Human Rights expressed “deep concern for Kashmiris” about the lockdown.⁷⁰ U.N. Secretary-General António Guterres urged “maximum restraint,”⁷¹ and the U.N. Security Council convened a closed consultative session, its first meeting on Kashmir in 50 years.⁷²

Amid the political turmoil leading to the constitutional questions associated with the legal status of Jammu and Kashmir, India’s water resources minister, Nitin Gadkari tweeted a subtle yet potentially more significant alteration of the status quo—the Modi government announced it would implement a promise to dam up waters flowing into Pakistan and divert the water to projects in Indian-controlled Kashmir and in the Indian state of Punjab.⁷³ The tweet implicated the 60 year old Indus Waters Treaty between India and Pakistan,⁷⁴ which regulates the massive Indus River Basin that irrigates 80 percent of Pakistan’s agriculture⁷⁵ and supports water needs of

69. *Any Attempt by India to Divert Water Flow Would be Considered ‘Act of Aggression’: Pakistan*, ECON. TIMES (Oct. 17, 2019), <https://economictimes.indiatimes.com/news/international/world-news/any-attempt-by-india-to-divert-water-flow-would-be-considered-act-of-aggressionpakistan/articleshow/71633035.cms?from=mdr>.

70. Michelle Bachelet, U.N. High Comm’r for Human Rights, Opening Statement at the Global Update of the 42nd Session of the Human Rights Council (Sept. 9, 2019), <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24956&LangID=E>.

71. Press Release, Office of the Spokesperson for the U.N. Secretary-General, Statement Attributable to the Spokesman for the Secretary-General on the Situation in Jammu and Kashmir (Aug. 8, 2019), <https://www.un.org/sg/en/content/sg/statement/2019-08-08/statement-attributable-the-spokesman-for-the-secretary-general-the-situation-jammu-and-kashmir> (noting Secretary-General António Guterres’ appeal for maximum restraint).

72. Anita Joshua, *Kashmir at the United Nations after Half a Century*, TELEGRAPH INDIA (Aug. 17, 2019), <https://www.telegraphindia.com/india/kashmir-at-the-united-nations-after-half-a-century/cid/1698277> (reporting on the closed-door Security Council meeting).

73. NDTV, *Centre Will Stop India’s Share of Water That Flowed to Pak: Nitin Gadkari*, YOUTUBE (Feb. 21, 2019), <https://www.youtube.com/watch?v=lxnNDWsHxos> (showing screen shot of Gadkari’s tweet); *River Waters to be Stopped from Going Waste in Pakistan: PM Modi on Indus Water Treaty*, TIMES INDIA (Nov. 25, 2016), <https://timesofindia.indiatimes.com/india/River-waters-to-be-stopped-from-going-waste-in-Pakistan-PM-Modi-on-Indus-Water-Treaty/articleshow/55621280.cms> (detailing Modi’s 2016 pledge to stop the flow).

74. Indus Waters Treaty pmb., Sept. 19, 1960, 419 U.N.T.S. 126 [hereinafter Indus Waters Treaty].

75. Mehr Nadeem et al., *Pakistan, India Spar over Using Water as a Weapon in Kashmir Dispute*, REUTERS (Aug. 19, 2019), <https://www.>

215–300 million people.⁷⁶ Gadkari targeted water projects from three eastern rivers of the Indus River system involving the Shapurkandi dam, the multipurpose storage project on the Ujh tributary of the Ravi—both intended for irrigation and power generation in Jammu and Kashmir—and a tunnel barrage link between the Ravi and Beas.⁷⁷ Currently, India uses about 95 percent of its quota of Indus Basin waters.⁷⁸ Now it intends to utilize fully its share, leaving none to enter into Pakistan.

Modi once said: “Blood and water cannot flow together.”⁷⁹ Apparently, he now seeks to make good on his observation, which formed in a September 2016 national security meeting following a terror attack in the Jammu and Kashmir town of Uri.⁸⁰ “For the last 70 years, the waters that belonged to India

reuters.com/article/us-india-kashmir-pakistan-water/pakistan-india-spar-over-using-water-as-a-weapon-in-kashmir-dispute-idUSKCN1V91B9. A river basin includes the river’s entire catchment and drainage basin. See James Kraska, *Sustainable Development Is Security: The Role of Transboundary River Agreements as a Confidence Building Measure (CBM) in South Asia*, 28 YALE J. INT’L L. 465, 466 n. 3 (2003) (referencing James L Wescoat, Jr.).

76. Fazilda Nabeel, *How India and Pakistan are Competing over the Mighty Indus River*, CONVERSATION (June 1, 2017), <https://theconversation.com/how-india-and-pakistan-are-competing-over-the-mighty-indus-river-77737> (estimating 215 million people); *Connecting the Drops: An Indus Basin Roadmap for Cross-Border Water Research and Policy Coordination*, STIMSON, <https://www.stimson.org/2013/connecting-drops-indus-basin-roadmap-cross-border-water-research-and-policy-coordination1/> (estimating 300 million); see also *In the Matter of the Indus Waters Kishenganga Arbitration*, (Pakistan v. India), Partial Award (Arb. Trib. Feb. 18, 2013) ¶ 358, <https://pca.cases.com/web/sendAttach/1681> [hereinafter Partial Award] (noting the treaty is “critical to the life and well-being of hundreds of millions of people of India and Pakistan”).

77. *Three Projects can Stop India’s Share of Water Going to Pakistan*, BUS. STANDARD (Feb. 22, 2019), https://www.business-standard.com/article/news-ians/three-projects-can-stop-india-s-share-of-water-going-to-pakistan-119022201182_1.html. The Shapurkandi project also is intended to irrigate and power parts of Punjab. See Press Release, *Indus Waters Treaty 1960: Present Status of Development in India*, GOV’T. OF INDIA - MINISTRY OF WATER RESOURCES, RIVER DEV. AND GANGA REJUVENATION (Feb. 22, 2019, 10:46 AM), <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1565906> [hereinafter Indus Waters Treaty 1960 Press Release].

78. Indus Waters Treaty 1960 Press Release, *supra* note 77.

79. Indrani Bagchi & Vishwa Mohan, *Blood and Water Can’t Flow Together: PM Narendra Modi gets Tough on Indus Treaty*, TIMES INDIA (Sept. 27, 2016), <https://timesofindia.indiatimes.com/india/Blood-and-water-cant-flow-together-PM-Narendra-Modi-gets-tough-on-Industreaty/articleshow/54534135.cms>.

80. *Indus Treaty: Blood and Water Cannot Flow Together, Says PM Modi After Meeting*, INDIA TODAY (Sept. 26, 2016), <https://www.indiatoday.in/india/story/indus-waters-treaty-meeting-narendra-modi-pakistan-343297-2016-09-26> (detailing Modi’s high-level meeting with National Security Advisor Ajit

. . . were going to Pakistan . . . [the Prime Minister promised to] stop it and bring it to [Indian] households.”⁸¹ Although oblique as to exactly what else might be done to actually capture this unutilized water, the treaty allows India to store up to 3.6 million-acre-feet (MAF) of western rivers and “there is practically no storage capacity developed in Jammu and Kashmir;” alternatively India could complete another project, the massive Indira Gandhi canal, which could consume much of the “water that India currently lets flow for its quota in the Sutlej and the Ravi” to Pakistan.⁸²

Gadkari’s announcement linked water security—Pakistan’s Achilles’ Heel—to the fate of Jammu and Kashmir. While “public debate has always focused on [Kashmiri] issues of terrorism, human rights and the legality of accession,” Gadkari touched on a subject of primordial concern for Indo-Pakistani relations: the rivers of Jammu and Kashmir have long held the “key” to conflict.⁸³ One of Pakistan’s most distinguished diplomats agreed: “The dispute over Kashmir and the distribution of the Indus waters are inseparable.”⁸⁴

India claims the stoppage would not violate the Indus

Doval, Foreign Secretary S. Jaishankar, and Water Resource Secretary Shashi Shekar after Uri terror attack).

81. Prabhaskar K. Dutta, *PM Modi’s Water Threat to Pakistan: What India Can Do Under Indus Waters Treaty*, INDIA TODAY (Oct. 16, 2019), <https://www.indiatoday.in/india/story/pm-modi-s-water-threat-to-pakistan-what-india-can-do-under-indus-waters-treaty-1609883-2019-10-16> (quoting Modi’s speech in Charkhi Dadri, Haryana). Diplomatic sources and water experts have reported that India never captured its total share of water due to internal storage problems and internal disputes as to how the water would be allocated among Indian states Jammu and Kashmir, Punjab, and Haryana. Indeed, it took 40 years before Jammu and Kashmir and Punjab signed a 2018 agreement on the implementation of the Shahpurkandi dam project. Coloring this announcement in terms of a strong retaliation against terrorism belies recognition of unrelated internal dynamics that provide cover for those in India who advocate the abrogation of the Indus Waters Treaty. See Maya Mirchandani, *Indus Treaty: Why India Cannot Afford to Fight Fire with Water*, OBSERVER RES. FOUND. (Feb. 25, 2019), <https://www.orfonline.org/research/indus-treaty-why-india-cannot-afford-to-fight-fire-with-water-48487/>.

82. Dutta, *supra* note 81.

83. STEPHAN FARIS, *THE CONSEQUENCES OF CLIMATE CHANGE, FROM THE AMAZON TO THE ARTIC, FROM DARFUR TO NAPA VALLEY* 200 (2009).

84. INST. OF STRATEGIC STUDIES ISLAMABAD, *REPORT SEMINAR: INDUS WATER TREATY: ISSUES AND RECOMMENDATIONS* 6 (Aug. 29, 2017), <http://issi.org.pk/report-seminar-on-indus-water-treaty-issues-and-recommendations/> (welcoming comments of Ambassador Khalid Mahmood) [hereinafter REPORT SEMINAR].

Waters Treaty,⁸⁵ making for a rare and supportable defense of the Harmon Doctrine, the “most notorious theory in all of international natural resources law.”⁸⁶ Although discredited, the Harmon Doctrine articulated a theory of sovereignty over international rivers that granted the upper riparian absolute rights to water flowing through its territory.⁸⁷ Pakistan, as the lower riparian, has complained that India incrementally has been bottling up and storing water, essentially impeding the fall of the water in violation of the treaty, and causing water shortages in Sindh province, where some Indus River tributaries and distributaries have slowed to a trickle.⁸⁸ When not diverting water, Pakistan has alleged that India weaponizes water by releasing torrents without notice, causing floods downstream.⁸⁹ Pakistan also has expressed concerns about India’s disruption to the flow of the Jhelum,⁹⁰ the construction of the Baglihar Dam

85. Dipanjan Roy Chaudhury, *India to Stop its Water Share from Flowing into Pakistan*, *ECON. TIMES* (Feb. 22, 2019), <https://economictimes.india.com/news/politics-and-nation/india-to-stop-its-water-share-from-flowing-into-pakistan/articleshow/68105098.cms> (noting Indian officials’ clarification “that this move does not violate the Indus Waters Treaty”).

86. Stephen C. McCaffrey, *The Harmon Doctrine One Hundred Years Later: Buried, Not Praised*, 36 *NAT. RESOURCES J.* 965 (1996).

87. 21 OFFICIAL OPINIONS OF THE ATTORNEY-GENERAL OF THE UNITED STATES ADVISING THE PRESIDENT AND HEADS OF DEPARTMENTS IN RELATION TO THEIR OFFICIAL DUTIES 281–82 (E.C. Brandenburg ed., 1898). The doctrine is named after U.S. Attorney General Judson Harmon, who asserted the absolute standard in an 1894 water dispute with Mexico over upper Rio Grande trench and canal diversions by Colorado and New Mexico farmers. The diversions created a crisis for 20,000 downstream Mexican inhabitants around El Paso Del Norte when the river ran dry.

88. See Andrew Buncombe & Omar Waraich, *India is Stealing Water of Life, Says Pakistan*, *INDEPENDENT* (Mar. 26, 2009), <https://www.independent.co.uk/news/world/asia/india-is-stealing-water-of-life-says-pakistan-1654291.html> (noting particular concerns over upstream management of the Chenab River in Indian-administered Kashmir and water storage to fuel the hydro-electric Bahlihar dam). *But cf.* Maliha Khan, *The Political Ecology of Irrigation in Upper Sindh: People, Water and Land Degradation* (2007) (Ph.D. dissertation, State University of New York at Binghamton) (on file with ProQuest Information and Learning Company) (discussing the agrarian structure of rural Sindh and the hierarchical social relations between landlord (Wadera) and tenant (Hari) as impacting negatively water use and management).

89. See Nadeem et al., *supra* note 75 (noting Islamabad’s complaint of India’s unexpected release of water into the River Sutlej ahead of monsoon season).

90. Pakistan contested inter-tributary diversions of waters resulting from India’s Kishenganga Hydro-Electric Project (KHEP). See *In the Matter of the Indus Waters Kishenganga Arbitration* (Pakistan v. India), Final Award (Arb. Trib. Dec. 20, 2013), <https://pcacases.com/web/sendAttach/48>.

on the Chenab,⁹¹ and periodic proposals to divert water from the Chenab to the Ravi by constructing a canal.⁹² From Pakistan's perspective, water diversion amounts to a "fifth-generational" form of warfare.⁹³ It congers up former Tennessee Valley Authority chair, David Lilienthal's first-hand account of alarm among Lahore residents following India's cutting-off of canal feeders following partition: "No army, with bombs and shellfire, could devastate a land as thoroughly as Pakistan could be devastated by the simple expedient of India's permanently shutting off the sources of water that keep the fields and people of Pakistan alive."⁹⁴

Water management in the region is well understood as a potential flash point of controversy.⁹⁵ Yet the Indus Waters Treaty serves as one of the world's "most successful" transboundary water treaties.⁹⁶ It is an important barometer of social power relations integral to internal and external state building,⁹⁷ and one of a few examples of decades-long

91. Muhammad Saleh Zaafir, *Violating IWT India starts Ratle Dam's Construction*, NEWS (Dec. 15, 2019), <https://www.thenews.com.pk/print/583790-violating-iwt-india-starts-ratle-dam-s-construction>.

92. Kraska *supra* note 75, at 485.

93. *Id.* (implying water wars as the next generation of warfare, beyond the commingling of combatants and civilians, terror tactics, and non-state actors associated with fourth generation warfare). On the generational theory of warfare, see WILLIAM S. LIND & LT. COL. GREGORY A. THIELE, 4TH GENERATION WARFARE HANDBOOK (Vox Day ed., 2015).

94. Reese Erlich, *Foreign Correspondent: What's Really Going on in Kashmir?*, PROGRESSIVE (Mar. 7 2019), <https://progressive.org/dispatches/foreign-correspondent-whats-going-on-in-kashmir-erlich-190307/>. In an early display of decentralized water politics, East Punjab engineers on the Indian side of partition shut off the water without approval of the central government, causing worryment for India's Prime Minister, Jawaharlal Nehru. See SUNIL S. AMRITH, UNRULY WATERS: HOW RAINS, RIVERS, COASTS, AND SEAS HAVE SHAPED ASIA'S HISTORY 184–85 (2018) (quoting Nehru's concern that "this act will injure us greatly in the world's eyes").

95. See generally Keith Johnson, *Are India and Pakistan on the Verge of a Water War?* FOREIGN POL'Y (Feb. 25, 2019), <https://foreignpolicy.com/2019/02/25/are-india-and-pakistan-on-the-verge-of-a-water-war-pulwama-kashmir-ravi-indus/> (detailing water retaliation in the region as a possible prelude to war).

96. Mara Tignino, *Le fleuve Indus et Ses Usages: L'arbitrage Relative aux Eaux de Fleuve Kishenganga*, 60 ANNUAIRE FRANÇAIS DE DROIT INTERNATIONAL 2014, at 520 (2014) (holding "Ce traité est en effet un exemple emblématique de coopération sur un cours d'eau international."); *Fact Sheet: The Indus Waters Treaty 1960 and the Role of the World Bank*, WORLD BANK (June 11, 2018), <https://www.worldbank.org/en/region/sar/brief/fact-sheet-the-indus-waters-treaty-1960-and-the-world-bank> [hereinafter *World Bank Fact Sheet*].

97. See *Kashmir and the Politics of Water*, ALJAZEERA (Aug. 1, 2011) <https://www.aljazeera.com/indepth/spotlight/kashmirtheforgottenconflict/2011/>

cooperation between the two countries.⁹⁸ Attacks against its integrity undercut more than its elaborate dispute settlement mechanism.⁹⁹ They erode an epistemic basis for information exchange and technocratic internationalism, upset detailed systems of irrigation and hydropower generation, and weaken cooperation requirements¹⁰⁰ and confidence building measures embedded in a successful riparian border management regime.¹⁰¹ Propagandizing the treaty's integrity and sensitive water issues subsidizes a major objective of terrorist groups, such as Lashkar-e-Taiba (LET),¹⁰² unwittingly adding a troubling component to the tendentious political rhetoric of riparian politics. More disturbing, it may amount to a politically-motivated form of "hydro-hegemony,"¹⁰³ where the witting but hidden intention is to take the Indus Waters Treaty to its breaking point by holding it up against the fine line separating legality from the "sometimes volatile, environment surrounding the Indus River Basin's transboundary water institutions."¹⁰⁴

This article argues that exposing the Indus River Treaty to the letter of its law, without considering Pakistan's existential

07/20117812154478992.html (detailing the control of water flows as an important internal sovereignty measure of India and Pakistan).

98. Ali Raza Kalair et al., *Water, Energy and Food Nexus of Indus Water Treaty: Water Governance*, 2 WATER-ENERGY NEXUS 10 (2019).

99. The treaty establishes a Permanent Indus Commission to handle "questions," with a commissioner appointed from each country. Indus Waters Treaty, *supra* note 74, arts. VIII, IX. Neutral Experts handle "differences." *Id.* art. IX. A seven-member Court of Arbitration handles "disputes." *Id.* art. IX § 5. The World Bank facilitates the procedural handling of differences and disputes.

100. *See id.* art. VIII § 4 (establishing and maintaining cooperative arrangements).

101. *See* Kraska, *supra* note 75, at 486 (regarding the Indus Waters Treaty as "a stabilizing mechanism between the two competitors").

102. *See Crucible in Kashmir: India and Pakistan's Struggle over Water*, CIRCLE OF BLUE (Oct. 23, 2016), <https://www.circleofblue.org/2016/asia/rivers-run-michael-kugelman-discusses-kashmir-conflict/> (interviewing Woodrow Wilson Center scholar, Michael Kugelman, who stated: LeT "has always used water issues as [a] key propaganda item in its anti-India rhetoric"); Ashley J. Tellis, *The Menace That Is Lashkar-e-Taiba*, CARNEGIE ENDOWMENT INT'L PEACE (Mar. 13, 2012), <https://carnegieendowment.org/2012/03/13/menace-that-is-lashkar-e-taiba-pub-47512> (providing background information on the global intentions of LeT, the organization that coordinated multiple attacks in Mumbai, including a four-day siege of the Taj Mahal Palace and Tower Hotel).

103. Waseem Ahmad Qureshi, *Dispute Resolution Mechanisms: An Analysis of the Indus Waters Treaty*, 18 PEPP. DISP. RESOL. L. J. 75, 79 (2018).

104. Erum Sattar et al., *Evolution of Water Institutions in the Indus River Basin: Reflections from the Law of the Colorado River*, 51 U. MICH. J. L. REFORM 715, 718 (2018).

water anxieties, erodes the credibility established by a general course of dealing that has neither fully leveraged nor firmly realized the commitments of the treaty. Changing circumstances, brought on by climate change, population growth, deforestation,¹⁰⁵ and now a resurgent Hindu nationalism, may work in favor of the hard legalization of its terms, particularly in light of emerging fresh water demands of Afghanistan and China—states that are hydrologically linked to the Indus Basin.¹⁰⁶ However, this strategic calculus may shake relative power relations between the two rivals that over time have ritualized the political discourse over Jammu and Kashmir while dangerously discounting the changing dynamics of access to fresh water protected by the treaty and general international law.¹⁰⁷ States are assumed to seek maximum gains from compacts.¹⁰⁸ Yet pursuit of hard legalization, in this

105. See David Michael, *Managing the Indus in a Warming World: The Potential for Transboundary Cooperation in Coping with Climate Change*, in IMAGINING INDUSTAN: OVERCOMING WATER INSECURITY IN THE INDUS BASIN 91, 91–92 (Zafar Adeel & Robert G. Wirsing 2017) (concluding that “[g]lobal climate change will significantly impact resources across the Indus Basin” while “rapid urbanization” will drive rising water demands) [hereinafter IMAGINING INDUSTAN]. The geological fragility of the Hindu Kush Himalaya region and the 1.65 billion people who inhabit its river basins downstream face disturbing projections of climate change and uneven glacial snowmelt that will present major consequences regionally and globally. Eklabya Sharma et al., *Introduction to the Hindu Kush Himalaya Assessment*, in THE HINDU KUSH HIMALAYA ASSESSMENT: MOUNTAINS, CLIMATE CHANGE, SUSTAINABILITY AND PEOPLE 1, 5 (Philippus Wester et al. eds., 2019); Nabeel, *supra* note 76 (noting deforestation).

106. Zafar Adeel & Robert G. Wirsing, *Introduction*, in IMAGINING INDUSTAN, *supra* note 105, at 5. China’s “unparalleled dominance” over cross-border river flows, mostly in the water-rich Tibetan Plateau, but also in part involving the Indus Basin, has “publicly asserted absolute territorial sovereignty over upstream river waters, regardless of the downstream impacts. It thus has not signed a water-sharing treaty with any of its 13 downstream neighbors.” Brahma Chellaney, *Rivers of Conflict Between India and Pakistan*, NIKKEI ASIAN (Aug. 19, 2016), <https://asia.nikkei.com/Politics/Brahma-Chellaney-Rivers-of-conflict-between-India-and-Pakistan>. The fast-emerging consequence of China’s annexation of Tibet in 1950 is China’s control over much of Asia’s freshwater: “From the Tibetan Plateau flow the Brahmaputra (known in Tibet as the Yarlung Tsangpo), the Salween, the Mekong, and also the Yangzi.” AMRITH, *supra* note 94, at 188.

107. See Indus Waters Treaty, *supra* note 74, pmbl. (recognizing the need of “attaining the most complete and satisfactory utilization of the waters . . . in a spirit of goodwill and friendship”); G.A. Res. 64/292, at 1 (Aug. 3, 2010) (regarding the human right to water and sanitation).

108. For presentations on benefits to legalization, see generally Kenneth W. Abbott, *Modern International Relations Theory: A Prospectus for International Lawyers*, 14 YALE J. INT’L L. 335 (1989); Kenneth Abbott & Duncan Snidal,

circumstance, may work against functional perspectives that seek to enhance cooperation and compliance through binding commitments.

Part II of this article discusses the geography of the Indus River Basin that contributed to the existential and structural anxiety reproduced by a sovereign division of its waters. Part III focuses on the primary legal instrument of that unusual division, the Indus Waters Treaty. Part IV discusses the inter-temporal pressures that contribute to questions about the fitfulness of the treaty to deal with contemporary and changing circumstances relating to climate and population against ever-present political uncertainties. Part V offers suggestions and conclusions about a more appropriate means of securing the treaty against its hard legalization.

II. THE GEOGRAPHY OF THE INDUS RIVER BASIN

The Indus is the twelfth largest river system in the world,¹⁰⁹ with a flow twice the amount of the Nile River and over ten times that of the Colorado River.¹¹⁰ It originates on the Kailash Parbat mountain in the southwestern Tibet Autonomous Region of China and flows for 3,200 km through the disputed Kashmir region before entering Pakistan and debouching into the Arabian Sea near the port city of Karachi.¹¹¹ The Indus River Basin covers 1.12 million km² and fans out among four countries: Pakistan (47%), India (39%), China (8%), and Afghanistan (6%).¹¹² Nearly two-thirds of the river flows through Pakistan.¹¹³ Between its two major riparians, the basin covers 65% of

Hard and Soft Law in International Governance, 54 INT'L ORG. 421 (2000); Sandeep Gopalan, *India-Pakistan Relations: Legalization and Agreement Design*, 40 VAND. J. TRANSN'L L. 687 (2007).

109. Elizabeth Ojeh, Hydrology of the Indus Basin (Pakistan) 3 (2006) (GIS in Water Resources Term Project) (on file with the University of Texas).

110. ANDREW GOUDIE, GREAT WARM DESERTS OF THE WORLD: LANDSCAPES AND EVOLUTION 261 (2002).

111. See *Indus River Map*, MAPSOFINDIA, <https://www.mapsofindia.com/maps/rivers/indus.html> (last visited Feb. 14, 2019). With this total area, the Indus Basin ranks about 21st in size among the world's river drainage systems. See Adeel & Wirsing, *supra* note 106, at 6.

112. *Indus River Basin*, FOOD & AGRIC. ORG. UNITED NATIONS: AQUASTAT 1 (2011), http://www.fao.org/nr/water/aquastat/basins/indus/indus-CP_eng.pdf.

113. See *Indus River Map*, *supra* note 111. Pakistan has about 60% of the catchment area, India 20%, Afghanistan 5%, and Tibet 15%. *Kashmir and the Politics of Water*, ALJAZEERA (Aug. 1, 2011), <http://www.aljazeera.com/indepth/spotlight/kashmirtheforgottenconflict/2011/07/20117812154478992.html>.

Pakistan and nearly 14% of India.¹¹⁴ Six major tributaries feed into the Indus system. Four tributaries arise in India—the Jhelum, the Chenab, the Ravi, and the Beas.¹¹⁵ A fifth tributary, the Sutlej, like the Indus itself, arises in China's Tibetan Plateau. The Punjab, which means “five waters” in Hindi, derives its name from the convergence of these five northern and eastern tributary rivers, which flow into the Indus.¹¹⁶ Taken together, parts or all of these six rivers of the Indus system flow from upstream India into downstream Pakistan.¹¹⁷ (Another western tributary, the Kabul River, arises in Afghanistan from Hindu Kush snowmelt).¹¹⁸

India's control over much of the headwaters of the Indus River Basin—critical components of which flow through or originate in Jammu and Kashmir¹¹⁹—creates existential anxiety for Pakistan and its canal network.¹²⁰ Pakistan is “fast approaching [its] absolute [water] scarcity level,” ranks as the third most water-stressed country in the world, has the fourth highest rate of water use, and has a heavily water-dependent agricultural and textile-based economy.¹²¹ Because much of Pakistan's groundwater supply is brackish, Pakistan's reliance on freshwater for drinking and irrigation purposes from the Indus Basin, the world's largest contiguous irrigation system, is critical.¹²² Water-related anxiety prompted Pakistan's original deployment of military forces to Kashmir in May 1948, following

114. *Indus River Basin*, *supra* note 112.

115. See *Himachal Pradesh Rivers Profile*, SANDRP (Apr. 9, 2017), <https://sandrp.in/2017/04/09/himachal-pradesh-rivers-profile/>.

116. See *Which State in India is Called the “Land of Five Rivers”?*, MAPSOFINDIA (June 27, 2018), <https://www.mapsofindia.com/answers/india/state-india-called-land-five-rivers/>.

117. *Indus River Basin*, *supra* note 112, at 4.

118. Andreas Wilde, *Kabul River*, ENCYCLOPAEDIA IRANICA, www.iranicaonline.org/articles/kabul-river (last accessed Apr. 4, 2020).

119. Waseem Ahmad Qureshi, *The Indus Basin: Water Cooperation, International Law and the Indus Waters Treaty*, 26 MICH. ST. INT'L L. REV. 43, 56 (2017).

120. See *id.* at 50–51 (discussing Indian regional water hegemony and Pakistan's accusations of unjustified utilization); see also ANATOL LIEVEN, PAKISTAN: A HARD COUNTRY 30–31 (2011) (describing the entire fate of the Pakistan in terms of its dependence on the Indus, “the greatest source of long-term danger to Pakistan”). The Government of Pakistan declared the flow of waters of the western rivers a matter of “existential importance.” See Partial Award, *supra* note 76, ¶ 170 (referencing Pakistan's Memorial ¶ 5.7).

121. SEMINAR REPORT, *supra* note 84, at 7.

122. Jeroen H.J. Ensink et al., *Linkages Between Irrigation and Drinking Water in Pakistan*, 1 INT'L WATER MGMT. 46 (2002).

India's cutting off of water supply to the Bari Doab and Dibalpur canals of West Pakistan, which irrigated 1.6 million acres, or 5.5 percent, of Pakistan's total irrigated land.¹²³

Anxieties surround the Indus Waters Treaty and only intensify with bids to maximize its allowances. Acting to safeguard the treaty from full recourse to its own provisions, World Bank Group President Jim Yong Kim once paused separate treaty-specified dispute settlement processes involving the appointment of a Neutral Expert and a Chair of the Court of Arbitration because merely processing these requests threatened to make "the treaty unworkable over time."¹²⁴ Using the Indus Waters Treaty to pressure Pakistan to clamp down on terror groups operating within the disputed region of Jammu and Kashmir embeds a form of hydro-diplomacy¹²⁵ that contributes to water-war rhetoric that can threaten the diplomatic space created by the treaty to deescalate tensions over increasingly scarce freshwater resources.¹²⁶

A. COLONIAL VESTIGES

The British empire created the modern irrigation system for what is now India and Pakistan. Cambridge University economic historian W.J. Macpherson referred to it as one of the "greatest monuments of British rule" on the subcontinent, proudly cataloging it alongside British exports to India of law, railroads, and bureaucracy.¹²⁷

123. See Amer Rizwan Khattak, *World Bank Neutral Expert's Determination on Baglihar Dam: Implications for India-Pakistan Relations*, 61 PAK. HORIZON 89, 90 (2008) (noting the effects of the cut off).

124. *World Bank Declares Pause to Protect Indus Waters Treaty*, WORLD BANK (Dec. 12, 2016), <https://www.worldbank.org/en/news/press-release/2016/12/12/world-bank-declares-pause-protect-indus-water-treaty> (halting the World Bank's appointment of a Neutral Expert and a Court of Arbitration Chair for concurrent disputes regarding India's construction of two hydro-electric power plants, respectively, on the Kishenganga and Chenab Rivers, which created a risk of contradictory outcomes potentially endangering the treaty).

125. U.N. Deputy Secretary-General, Remarks at the High-Level Panel on Water Diplomacy (Aug. 27, 2018), <https://www.un.org/sg/en/content/dsg/state-ment/2018-08-27/deputy-secretary-generals-remarks-high-level-panel-water-diplomacy>.

126. Jan Eliasson, *The Rising Pressure of Global Water Shortages*, 517 NATURE 6 (2015).

127. W.J. Macpherson, *Economic Development in India under the British Crown, 1858-1947*, in *ECONOMIC DEVELOPMENT IN THE LONG RUN* 126, 146 (A.J. Youngson ed., 1972).

British canal-building activity began in 1817 and initially centered on plains regions to the north of Delhi and delta regions of Madras.¹²⁸ Following the Second Anglo-Sikh War (1848–1849) and the defeat of the Sikh empire, Britain annexed Punjab and gained complete control over the Indo-Gangetic plains, a fertile alluvium landscape covering over 255 million hectares (including India, Pakistan, Nepal, and Bangladesh).¹²⁹ The Indus Basin comprises a part of this massive water system. By the time Britain relinquished control of its colonies in 1947, it had turned 28 million acres within the Indus Basin into irrigated land, which at that time created the “largest integrated state-controlled irrigation system in the world.”¹³⁰

B. HYDROLOGIC SIMILARITIES TO *UTI POSSIDETIS*

However, this canal system predated the creation of frontiers drawn to partition the subcontinent.¹³¹ The hydrologic unity of the expansive Indus Basin, conceived of in terms of an extensive canal system developed over 130 years of imperial rule, ended with partition.¹³² This division acutely affected Punjab, which by 1947 and through canal irrigation “served as the premier breadbasket of South Asia, if not all Asia.”¹³³ Partition created ready-made problems of administration and ownership after metropolitan rule, analogous to the problematic application of *uti possidetis* to define postcolonial borders in Latin America and Africa.¹³⁴ *Uti possidetis* mandated that newly

128. IAN STONE, CANAL IRRIGATION IN BRITISH INDIA: PERSPECTIVES ON TECHNOLOGICAL CHANGE IN A PEASANT ECONOMY 13 (1984).

129. See generally GARIMA TANEJA ET AL., FARMERS' PREFERENCES FOR CLIMATE-SMART AGRICULTURE: AN ASSESSMENT IN THE INDO-GANGETIC PLAIN 2 (Int'l Food Pol'y Res. Ins. Discussion Paper 01337, 2014).

130. DAVID GILMARTIN, BLOOD AND WATER: THE INDUS RIVER BASIN IN MODERN HISTORY 1 (2015); see also SHAISTA TABASSUM, RIVER WATER SHARING PROBLEM BETWEEN INDIA AND PAKISTAN: CASE STUDY OF THE INDUS WATERS TREATY 3 (2004).

131. See Jagat S. Mehta, *The Indus Water Treaty: A Case Study in the Resolution of an International River Basin Conflict*, 12 NAT. RESOURCES F. 69 (1988).

132. *Id.* at 70–71.

133. Majed Akhter, *The Geopolitics of Infrastructure: Development, Expertise, and Nation on the Indus Rivers* 27 (unpublished PhD dissertation, University of Arizona, 2013).

134. On the complicated history of *uti possidetis* in Latin America and Africa, see GIUSEPPE NESI, L'UTI POSSIDETIS IURIS NEL DIRITTO INTERNAZIONALE pts. 1 & 2 (1996). On the “air of mystery” surrounding the line-drawing partition of India and Pakistan, hampered indelibly by Sir Cyril

established national borders coincide with former colonial borders to avoid conflicts over territorial claims.¹³⁵ Application of the principle drew heavy criticism¹³⁶ because its effects supported quieting territorial disputes over border demarcations more than considering the human consequences and social disruptions associated with separating peoples, cultures, and historically-informed migratory patterns. It also accounts in large measure for South Asia's lack of a "carefully crafted integrated water resource development strategy,"¹³⁷ as well as myriad problems for India and Bangladesh, which share 54 rivers,¹³⁸ principally the Ganges¹³⁹ and the Brahmaputra.¹⁴⁰

A 1947 Punjab Boundary Commission set up to divide the province into East and West Punjab encountered the impossibility of dividing into two self-contained units—an

Radcliffe's (the chairman of the boundary commission) decision to destroy almost all papers relating to his private deliberations on the boundary line, see LUCY P. CHESTER, *BORDERS AND CONFLICT IN SOUTH ASIA: THE RADCLIFFE BOUNDARY COMMISSION AND THE PARTITION OF PUNJAB* 73 (2009). It appears from testimony of Radcliffe's personal secretary that the primary factor weighing on his final decision comported with the idea of *uti possidetis* in the sense that his final decision was based on "the separation of 'contiguous majority areas' with a mind toward 'Punjab's life-giving irrigation systems.'" *Id.* at 74. Radcliffe expressed unease about his decision and about the practicality of his mission without some form of joint control exercised by Pakistan and India. See *supra* note 182 and accompanying text.

135. Nesi, *supra* note 134.

136. Chester, *supra* note 134.

137. Michael, *supra* note 105, at 37–38. The International legal movement on regionalized joint management and conservation of freshwater ecosystems began to take shape in 1992 in Europe and neighboring countries, including Central Asia, with the U.N. Economic Commission for Europe's adoption of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE Water Convention); see also *Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, U.N. ECON. COMM. FOR EUR. (2013), https://www.unece.org/fileadmin/DAM/env/water/publications/WAT_Text/ECE_MP.WAT_41.pdf.

138. Qureshi, *supra* note 119, at 50. For more on the Ganges River problem, see PRANAB KUMAR PARUA, *THE GANGA: WATER USE IN THE INDIAN SUBCONTINENT* (2009).

139. See Agreement on Sharing of the Ganges Waters at Farakka and on Augmenting Its Flows, Bangl.-India, Nov. 5, 1977, 1066 U.N.T.S. 3,103 (1978).

140. Srikanth Kondapalli, *The Indus Basin: The Potential for Basin-Wide Management Between China and Its Himalayan Neighbours India and Pakistan*, in *IMAGINING INDUSTAN*, *supra* note 105, at 159, 163 (noting concerns about water diversion on the Brahmaputra among lower riparians India and Bangladesh vis-à-vis China); Sumit Vij et al., *Non-Decisions are also Decisions: Power Interplay Between Bangladesh and India over the Brahmaputra River*, *WATER INT'L* 1, 2 (2019) (discussing persistent conflicts between India and Bangladesh regarding the Brahmaputra).

irrigation and canalization system devised as a unitary whole.¹⁴¹ The irrigation and infrastructure systems of Punjab, as well as Bengal, “had been built to function under a single administration. They were never intended to be divided. No partition line . . . would have allowed Pakistan and India to operate their infrastructure separately, without cross-border interference.”¹⁴² Indian lawyers “advised that the provisions of international law were ill-suited” to the division of a unitary domain.¹⁴³ Disputes broke out almost immediately,¹⁴⁴ as two important headworks, at Madhopur on the Ravi, and at Ferozpur on the Sutlej, lay on the Indian side and yet fed two important irrigation canals in West Punjab, on the Pakistani side.¹⁴⁵ Moreover, Sindh and Punjab, as well as Bahawalpur and Bikaner provinces particularly had long disputed water access claims to the Sutlej, before partition separated the two provinces.¹⁴⁶ They remain heavily dependent on irrigated agriculture and are primary sources of income for Pakistan.¹⁴⁷

Despite Britain’s imaginary plans for a rational and integrated system, the provinces developed these large scale irrigation works independent of the other “despite their reliance upon the same sources of water, principally the Sutlej River.”¹⁴⁸ Indian and Pakistani perspectives on water rights were “virtually irreconcilable” at the outset of partition, with India

141. Asit K. Biswas, *Indus Water Treaty: The Negotiating Process*, 17 WATER INT'L 201, 203 (1992).

142. CHESTER, *supra* note 134, at 81.

143. AMRITH, *supra* note 94, at 185.

144. India stopped the supply of Sutlej water from East Punjab to West Punjab on April 1, 1948 in an act that “technically” started the Indus dispute. SALMAN M.A. SALMAN & KISHOR UPRETY, CONFLICT AND COOPERATION ON SOUTH ASIA’S INTERNATIONAL RIVERS: A LEGAL PERSPECTIVE 41 n. 11 (2002). The countries negotiated an Inter-Dominion Agreement on May 4, 1948, which required India to release waters in return for payment, but the temporary arrangement broke down. See Inter-Dominion Agreement Between the Government of India and the Government of Pakistan, On the Canal Water Dispute Between East and West Punjab, India- Pak. (May 4, 1948), reprinted at INT'L WATER LAW PROJ., <https://www.internationalwaterlaw.org/documents/regionaldocs/punjab-canal.html>.

145. Ashutosh Misra, *Bridge over Troubled Waters: The Indus Waters Treaty*, in INDIA-PAKISTAN: COMING TO TERMS 57, 58 (2010).

146. SALMAN, *supra* note 144, 38–41 (detailing inter-state differences regarding the Sutlej long before independence).

147. Undala Z. Alam, *Questioning the Water Wars Rationale: A Case Study of the Indus Waters Treaty*, 168 GEOGRAPHICAL J. 341–42 (2002).

148. Undala Z. Alam, *Water Rationality: Mediating the Indus Waters Treaty* 125 (PhD dissertation, University of Durham, 1998).

claiming full ownership over every river flowing through Indian territory and Pakistan canals subject to “a dangerous level” of Indian control.¹⁴⁹ Thus, the division of one water domain into colonial, then partitioned units, sparked a confrontation over one canal system that metastasized into an intractable dispute involving the entire Indus Basin.¹⁵⁰

A Standstill Agreement meant to extend time to negotiate a solution lapsed, and further turmoil produced World Bank-supported negotiations beginning in 1952, which eventually led to the conclusion of the Indus Waters Treaty in 1960.¹⁵¹ Political necessity sacrificed the rational and integrated system of canal linkages envisioned earlier by British hydrographers. By 1954, the World Bank had abandoned the idea of negotiating or funding a joint management scheme patterned after the Tennessee Valley Authority,¹⁵² or some other solution that would preserve the integrated unity of the basin.¹⁵³ Aside from the anachronistic image of this transformation as a “selfless and beneficent gift to the people” due to British colonial rule, the implementation of large-scale and bifurcated irrigation systems embedded a “Faustian bargain” with nature, human geography, and international law.¹⁵⁴

III. THE INDUS WATERS TREATY

On September 19, 1960, the World Bank, with the personal and direct engagement of its President Eugene Black,¹⁵⁵ brokered a water agreement between India and Pakistan, the

149. HAINES, *supra* note 91, at 1.

150. *See id.* at 6.

151. *See* Mehta, *supra* note 131, at 69; SALMAN & UPRETY, *supra* note 144, at 57 (categorizing it as the “first dispute regarding water use in which an international organization played a successful mediating role in resolution”); Salman M.A. Salman, *The Baglihar Difference and its Resolution Process—A Triumph for the Indus Waters Treaty?* 10 WATER POLY 105–06 (2008) (It is “the only international water treaty co-signed by a third party”).

152. The Tennessee Valley Authority was a multipurpose development project initiated in the 1930s to harness the power of the Tennessee River for the benefit of those in the region. It emerged as a model for development in terms of U.S. engagement with the Third World. *See* David Ekbladh, “Mr. TVA”: *Grass-Roots Development, David Lilienthal, and the Rise and Fall of the Tennessee Valley Authority as a Symbol for U.S. Overseas Development, 1933–1973*, 26 DIPL. HIST. 335, 336–37 (2002).

153. *See* Mehta, *supra* note 131, at 73.

154. GILMARTIN, *supra* note 130, at 3–4.

155. Salman, *supra* note 151, at 108.

Indus Waters Treaty.¹⁵⁶ Despite its brevity—12 articles and eight annexes—the treaty is dense, prolix, and technical.¹⁵⁷ The treaty divided the use of the rivers and canals between the two countries. Pakistan obtained exclusive rights to the three western rivers, the Indus, Jehlum, and Chenab, “except for uses essential to India where those rivers flowed through that country,”¹⁵⁸ and India retained rights to the three eastern rivers, namely Ravi, Beas, and Sutlej.¹⁵⁹ Rather than apportioning the volume of water in each of the six rivers, the agreement created a geographic division based on sovereign line-drawing, thus assigning “the entire flow of three of the rivers” to each party.¹⁶⁰ “[I]t is a partitioning and not a water-sharing treaty.”¹⁶¹ Although unusual if not unique,¹⁶² the Indus, Jhelum, and Chenab all flow through Kashmir before entering Punjab’s plains.¹⁶³ This transboundary assignment of sovereign water rights to Pakistan that actually flow from India took place during the incipient stage of the U.N.’s four decades-long evolution of the international law defining watercourses and before principles of equitable utilization, watercourse

156. The treaty was signed by Indian Prime Minister Jawaharial Nehru and Pakistan President Ayub Khan. *See* Indus Waters Treaty, *supra* note 74.

157. SALMAN, *supra* note 144, at 47. Ramaswamy R. Iyer, *Indus Treaty: A Different View*, 40 ECON. & POL. WKLY. 3140, 3142 (2005) (characterizing the treaty, specifically its annexures and appendices, as a treaty between sets of engineers rather than governments, providing “a happy hunting ground for technical disagreements”).

158. MISRA, *supra* note 145, at 67.

159. India has since utilized the waters of the eastern rivers allocated for its exclusive use, constructing major dams on the Satluj (Bhakra dam), Pong and Pandoh Dam on the Beas, and Thein (Ranjitsagar) on the Ravi. *See* Indus Waters Treaty, *supra* note 74, arts. I § 5, II § 1, I §§ 6, 3, 1.

160. ARIEL DINAR ET AL., BRIDGES OVER WATER: UNDERSTANDING TRANSBOUNDARY WATER CONFLICT, NEGOTIATION AND COOPERATION 166–67 (2007).

161. IJAZ HUSSAIN, INDUS WATERS TREATY: POLITICAL AND LEGAL DIMENSIONS 188 (2017).

162. Akhter, *supra* note 133, at 179 (referring to the Indus Waters Treaty as unique in this respect).

163. *Kashmir and the Politics of Water*, *supra* note 97.

integrity,¹⁶⁴ sustainable development,¹⁶⁵ and transboundary environmental assessment¹⁶⁶ began to crystallize. Moreover, the Jhelum and Chenab spring from India, while the fount of the Indus is in Tibet (Senge Khabab).¹⁶⁷ Common praise for the sustaining vitality of the Indus Waters Treaty, created ultimately by application of the same blunt instrument of partition that birthed intractable problems between the two countries, rubs against fundamental customary norms moderating international shared rivers—creating a problematic double-pull of international law in this context as part poison,

164. The Dubrovnik Conference in 1956 promulgated a first report of the American Branch of the International Law Association on the uses of the waters of international rivers. The 48th Conference of the International Law Association forwarded four agreed principles and ten recommendations on waters of international rivers in 1958. See *Indus Basin Dispute – International Law – Correspondence 01*, WORLD BANK GROUP [WBG] ARCHIVES (Aug. 5, 2014), <http://pubdocs.worldbank.org/en/596731412179179020/wbg-archives-1787921.pdf>. The U.N. took up the question of defining a watercourse in 1959. However, it moved more directly toward questions of utilization of international rivers. See G.A. Res. 1401 (XIV), at 55 (Nov. 21, 1959). The General Assembly tasked the International Law Commission (ILC) with codifying the law on non-navigational uses of international watercourses in 1970. See G.A. Res. 2669 (XXV), at 127 (Dec. 8, 1970). The ILC adopted its first set of draft articles in 1991. See *Summary Records of the Meetings of the Forty-Third Session*, [1991] 1 Y.B. Int'l L. Comm'n 140, U.N. Doc. A/CN.4/L.458. The draft articles then underwent study and revision in the General Assembly's Sixth (Legal) Committee in 1994. See Stephen C. McCaffrey, *Convention on the Law of the Non-Navigational Uses of International Watercourses*, U.N. AUDIOVISUAL LIBR. INT'L L. (1988) at 1–2. The General Assembly adopted the U.N. Convention on the Law of the Non-Navigational Uses of International Watercourses on May 21, 1997. G.A. Res. 51/229 (July 8, 1997). However, the treaty did not obtain the requisite number of signatures to bring it into effect until August 17, 2014 due to lengthy discussions reconciling the issue of equitable utilization on preserving watercourse integrity. See Christopher R. Rossi, *The Transboundary Dispute Over the Waters of the Silala/Siloli: Legal Vandalism and Goffmanian Metaphor*, 53 STAN. J. INT'L L. 55, 74–75 (2017).

165. Rep. of the World Comm'n on Env't and Dev.: Our Common Future, ch. 2, ¶ 1, U.N. Doc. A/42/427 (1987) (advancing the commonly accepted definition of sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”).

166. Note the introduction of transboundary environmental assessment introduced by the 1972 Stockholm Declaration on Human Development, updated by the 1992 Rio Declaration on Environment and Development (1992), and formally codified by the UNECE Convention on Environmental Impact Assessment in a Transboundary Context (1991) [Espoo Convention]. See HUSSAIN, *supra* note 161, at 189.

167. *Basin Details: Indus Basin Organisation*, CENT. WATER COMM'N, <http://cwc.gov.in/ibo/about-basins> (last visited Apr. 3, 2020); *Indus River*, NEW WORLD ENCYCLOPEDIA, https://www.newworldencyclopedia.org/entry/Indus_River (last visited Apr. 3, 2020).

part cure.

To avoid cutting off any multilateral developments in riparian law in the making (which nevertheless took decades to codify), the treaty disclaimed that it “in any way” established “any general principle of law or any precedent.”¹⁶⁸ However, this simplistic parting of waters and disavowal of precedent nevertheless laid the basis for future complaints regarding the emerging principle of equitable utilization, as applied to fundamental considerations of human geography or as interpreted within the scientific and engineering confines of hydrology.

A. HYDROLOGIC DIVORCE

In terms of actual flow, this “hydrologic ‘divorce’”¹⁶⁹ granted to Pakistan control of about 135 MAF from its three western rivers and to India control over approximately 33 MAF from its three eastern rivers.¹⁷⁰ This division reflected second best solutions. From some Indian perspectives, India’s MAF allocation itself violated the idea of equitable utilization, given the disproportionate share assigned to Pakistan. Pakistan, almost completely dependent on the Indus Basin, feared “appreciable harm” from headland uses of the water and from a loss of access to eastern river flows.¹⁷¹ Many Pakistanis remained unsatisfied “that they were allocated ‘only’ 75 percent of the water when they had 90 percent of the irrigated land.”¹⁷² In partial compensation for Pakistan’s greater MAF control, the treaty granted India run-of-the-river use of the western waters for four purposes: domestic use, non-consumptive use (such as navigation, timber transport, flood protection, and fish farming),

168. Indus Waters Treaty, *supra* note 74, art. XI, cl. 2.

169. Undala Alam, India and Pakistan’s Truculent Co-Operation—Is 50 Years Enough? *at* the STEPS Centre Water Seminar (Nov. 16, 2010).

170. Indus Waters Treaty 1960 Press Release, *supra* note 77. An acre-foot is defined as the volume of water needed to cover the surface area of one acre to a depth of one foot (equivalent to 325,851 gallons). JOHN M. SHARP, JR., A GLOSSARY OF HYDROGEOLOGICAL TERMS 3 (2007), <http://www.geo.utexas.edu/faculty/jmsharp/sharp-glossary.pdf>.

171. Azhar Ahmad, *Indus Waters Treaty: A Dispassionate Analysis*, 8 POLY PERSP. 73, 75, 77 (2011).

172. John Briscoe & Usman Qamar, *Pakistan’s Water Economy: Running Dry*, WORLD BANK GRP. 1, 9 (2018), <http://documents.worldbank.org/curated/en/989891468059352743/pdf/443750PUB0PK0W1Box0327398B01PUBLIC1.pdf>.

agricultural use, and hydro-electric power generation, otherwise requiring that India “let flow all the waters of the [w]estern rivers.”¹⁷³ To remedy “water deficits in land previously irrigated by the eastern rivers,” international sources supplied \$850 million (\$6.8 billion in 2016 dollars) in funding for low-head barrages, tube wells, and storage reservoir dams (principally the Tarbela Dam on the Indus and the Mangla Dam on the Jhelum in Azad Kashmir) to provide water to Pakistan to offset losses from the rivers assigned to India’s exclusive use.¹⁷⁴ The treaty also accommodated a transition period to enable Pakistan to upgrade and construct other replacement projects on its western rivers.¹⁷⁵ Countering the hydrologic trend to treat water systems holistically, the treaty separated the riparian units to accommodate political partition—creating in effect a riparian “coda to the partitioning of the land”¹⁷⁶—that fed complaints about international law’s contested encounter with changing circumstances.

B. CREEPING *FAIT ACCOMPLI*?

India has exercised its right to “limited hydropower generation” upstream from western tributaries allotted to Pakistan, provoking protests¹⁷⁷ and a major arbitration

173. Indus Waters Treaty, *supra* note 74, art. III, cl. 2. Run-of-river hydropower projects use a river’s natural flow and elevation drop to produce electricity, foregoing construction of a dam reservoir. *Types of Hydropower*, INT’L HYDROPOWER ASS’N (2019), <https://www.hydropower.org/types-of-hydropower>.

174. Daniel Haines, *Why Kashmir is at the Heart of Indus Waters Treaty Dispute*, DAILY O (Jan. 23, 2017), <https://www.dailyo.in/politics/kashmir-indus-waters-treaty-pakistan-chenab-nehru-ayub-khan-bjp-modijammu/story/1/15250.html>.

175. The transition period allowed for a ten-year period, with a possible extension. *See Indus Waters Treaty, supra* note 74, art. II, cls. 5, 6, 9.

176. Iyer, *supra* note 157, at 3144.

177. *See Pakistan Objects to India’s Move to Fill Nimoo-Bazgo Dam in J&K*, ECON. TIMES (Aug. 12, 2012), <https://economictimes.indiatimes.com/news/politics-and-nation/pakistan-objects-to-indias-move-to-fill-nimoo-bazgo-dam-in-jk/articleshow/15460888.cms> (complaining of downstream effects of the Indus River power project in Ladakh on Islamabad). Other disputes have involved the Salal hydro-electric project and the Bagliar [Baghliar] hydro-electric power project on the Chenab River, the Wuller Barrage and the Kishenganga hydro-electric project on the Jhelum, the Chenab River Dul Hasti hydro-electric plant in Kishtwar district of Jammu, and the Bursar Dam in Jammu and Kashmir. *See Ahmad, supra* note 171, at 78–79.

regarding the Kishanganga dam on the Jhelum River.¹⁷⁸ Pakistan's concern is that "even though these proposed dams may individually abide by the technical letter of the treaty, their effects will add up downstream."¹⁷⁹ Pakistan's concern about incremental diminutions to its water life-line creates conditions for a creeping *fait accompli*, which India interprets as costly and time-consuming obstructionism, which impedes its realization of legitimate interests as guaranteed by the treaty.¹⁸⁰

Much of the locus of concern involves Jammu and Kashmir. Although the treaty artfully avoided the problem of sovereignty over Kashmir,¹⁸¹ concessionary elements essentially altered the control of water by Pakistan into Azad Kashmir (the western, Pakistani-controlled region of disputed Jammu and Kashmir) via the Mangla Dam in exchange for an increase in the India's sovereignty in the basin's eastern part.¹⁸² The treaty specifically maintained that no other rights emanated from the treaty other than those specified rights pertaining to the flows of the six rivers and their tributaries.¹⁸³ However, building the Mangla Dam in Azad Kashmir resulted in a debate between the Pakistan government and the public over the meaning of sovereignty in

178. In the first stage of the Kishenganga Arbitration, the arbitral tribunal found for India on the question of an inter-tributary transfer of water feeding the Jhelum done as "necessary to generate hydro-electric power." Partial Award, *supra* note 76. However, the tribunal interpreted the relevant annexure D (dealing with hydro-electric power generation) as requiring that inter-tributary Kishenganga diversions be permitted "only to the extent that the then existing Agricultural Use or hydro-electric use by Pakistan . . . not be adversely affected." Indus Waters Treaty, *supra* note 74, Annexure D. ¶ 15(iii), *quoted in* Partial Award, ¶ 400. Pakistan had argued for an ambulatory interpretation of the "then existing use" language in ¶ 15(iii); India argued for a static interpretation, freezing the language to a pinpointed moment. *See id.*, ¶¶ 419 (Pak.), 425 (Ind.). The Tribunal construed the language in terms of a "critical period" "tempered" by Pakistan's right to a minimum flow. *Id.*, ¶ 429 (critical period), ¶ 446 (tempered).

179. Nabeel, *supra* note 76.

180. *See* HUSSAIN, *supra* note 161, at 191 (discussing mutual suspicions of gamesmanship, deceit, and frivolous time-consuming complaints in order to implement or stop Indus River Basin projects).

181. *See* Indus Waters Treaty, *supra* note 74, arts. IV(15) ("[N]othing in this Treaty shall be construed as affecting existing territorial rights over the waters of any of the Rivers or the beds or banks thereof"); *id.* XI(1)(b) ("[N]othing contained in . . . and nothing arising out of the execution [of this Treaty] shall be construed as constituting a recognition or waiver . . . of any rights or claims.").

182. Haines, *supra* note 174.

183. *See* Indus Waters Treaty, *supra* note 74, art. XI.

Azad Kashmir.¹⁸⁴ Likewise, the treaty's annexures C and D avoided the sovereignty question over Kashmir, yet recognized limited Indian agricultural uses of the Ranbir and Pratap canals in Indian-controlled Jammu and Kashmir, and other hydro-electric power construction projects in the same area.¹⁸⁵

The treaty incompletely circumvented the sovereignty questions its progenitors professed it avoided.¹⁸⁶ The treaty 'acted' as if Jammu and Kashmir's legal status was completely beyond its terms.¹⁸⁷ This legal fiction served an important purpose in the period between partition and the establishment of the treaty. However, the treaty partially cemented territorial designs in the disputed region, leaving for the indeterminate future the difficult process of quieting title. Decades before, the chair of the Punjab Boundary Commission essentially recognized the need of the countries to arrive at a *pactum de contrahendo* or *pactum de negotiando*.¹⁸⁸ He concluded it was not "possible to preserve undivided the irrigation system" by means of a satisfactory demarcation of the boundary unless "accompanied by some arrangement for joint control."¹⁸⁹ Moreover, the treaty remained silent on transboundary aquifers that now unveil alarming groundwater depletion, foretelling of major sovereignty disputes in addition to current calls for comprehensive joint-country study and management.¹⁹⁰ The Indus Waters Treaty also lacked any effective mechanism to deal with environmental flows (including pollution, run off, and sedimentation), ecosystem services, or demand management of

184. See Elisabeth Leake & Daniel Haines, *Lines of (In)Convenience: Sovereignty and Border-Making in Postcolonial South Asia, 1947-1965*, 76 J. ASIAN STUD. 963 (2017) (noting the construction of the dam in Pakistani-administered Azad Kashmir amounted to a de facto form of sovereign control).

185. See *id.*

186. MISRA, *supra* note 145, at 79 (Describing how even supporters of the proposition that the treaty successfully bypassed the Kashmir dispute note that the Kashmir dispute had to have "some bearing" on the treaty negotiations given that the three western rivers—the Indus, the Jhelum, and the Chenab—all flow through Jammu and Kashmir).

187. *Id.*

188. See generally Hisashi Owada, *Pactum de Contrahendo, Pactum de Negotiando*, in MAX PLANCK ENCYC. OF PUB. INT'L L. 18 (2008) ("A *pactum de contrahendo* or *pactum de negotiando* is a binding agreement whereby parties agree to conclude or negotiate future agreements.")

189. Pak. Inst. of Int'l Aff., *Documents*, 56 PAK. HORIZON 203, 216 (2003).

190. Abdul Rauf Iqbal, *Hydro-Politics in India and its Impact on Pakistan*, 6 ISSRA PAPERS 118 (2014); MAHMOOD, *supra* note 172, at 207 (noting the immediate need to map transboundary aquifers to regulate the over-mining of waters).

the Indus,¹⁹¹ making it only thinly supportive of an integrated or joint development document for river management.¹⁹² Changing circumstances have outpaced the relevance of the treaty in important ways,¹⁹³ save for its value as an essential means of keeping an uneasy peace.

C. CAPTURING UNUTILIZED WATERS

However, the treaty's current political value appears to have less to do with upholding its water allocation, cooperation, and dispute resolution mechanisms, and more to do with allowing for the capture of unutilized waters from eastern rivers to offset Pakistan's water interests in Azad Kashmir. From India's perspective, this allowance allays historical and simmering Kashmiri perceptions of inequitable water treatment by New Delhi while supplying the region with newfound freshwater resources to accommodate Modi's absorption of the region into Union Territory. These latter two points are particularly sensitive policy issues in India. Frustration with the Indus Waters Treaty has long been a topic of concern in Jammu and Kashmir, given flooding problems and restrictions the treaty puts on storage volumes affecting the energy-poor region.¹⁹⁴ In 2003, Jammu and Kashmir's Legislative Assembly unanimously passed a resolution to review the treaty with an aim of terminating the treaty.¹⁹⁵ Satisfying, or appearing to satisfy, Kashmiri water complaints offset (or is meant to offset) Modi's stinging rebuke of Kashmiri autonomy,¹⁹⁶ while providing

191. See generally Hamid Sarfraz, *Revisiting the 1960 Indus Waters Treaty*, 38 WATER INT'L. 204 (2013) (analyzing weaknesses in light of contemporary environmental standards).

192. Wirsing & Jaspardo, *supra* note 38, at 244.

193. See Manav Bhatnagar, *Reconsidering the Indus Waters Treaty*, 22 TUL. ENVTL. L. J. 271, 313 (2009) (concluding the treaty has grown outdated).

194. Iftikhar A. Drabu, *Indus Water Treaty: Beyond the Rhetoric*, OBSERVER RES. FOUND. (Mar. 30, 2019), <https://www.orfonline.org/expert-speak/indus-water-treaty-beyond-the-rhetoric-49396/>; *Kashmir and the Politics of Water*, *supra* note 97 ("The region of Kashmir sees itself losing considerably from the Indus Water Treaty because it is not allowed to fully exploit the hydropower potential of its own rivers.").

195. Uttam Kumar Sinha et al., *Will the Indus Water Treaty Survive?* 36 STRATEGIC ANALYSIS 735, 746 (2012).

196. See Michael Kugelman, *India's Sudden Kashmir Move Could Backfire Badly*, FOREIGN POLY (Aug. 5, 2019, 4:47 PM), <https://foreignpolicy.com/2019/08/05/indias-sudden-kashmir-move-could-backfire-badly/> (assessing possible unanticipated consequences for India's "disproportionate" crackdown

political cover for migratory changes and demographic absorption of the historically independent princely state into the Union Territory. Pakistan has long viewed Indian hydroelectric projects along western river headworks as “useful tools that New Delhi uses to win the political support of energy-deficit Kashmiris, and to drive a wedge between Kashmiris and Pakistanis.”¹⁹⁷

Indian leaders periodically and dramatically suggest rescinding the Indus Waters Treaty.¹⁹⁸ Such theatrics may placate domestic constituencies. However, their appeal presents little more allure than does a cinematic MacGuffin.¹⁹⁹ They distract attention while unveiling no workable political option. Such calls suggest an assertion of Indian hegemonic control over the headwaters of the system, which in turn suggest possible interruptions to the flow of western waters into Pakistan. Yet any such interruption would require hydrological stoppages that would take decades to construct, billions of dollars to complete,²⁰⁰ and implacable political will to sustain. The catastrophic downstream consequences of Indus water disruption present human, environmental, and international political problems that likely would serve as a *casus belli* for Pakistan.²⁰¹

in Jammu and Kashmir).

197. Wirsing & Jaspardo, *supra* note 38, at 243.

198. See, e.g., Michael Kugelman, *Why the India-Pakistan War Over Water Is So Dangerous*, FOREIGN POL’Y (Sept. 30, 2016, 2:13 PM), <https://foreignpolicy.com/2016/09/30/why-the-india-pakistan-war-over-water-is-so-dangerous-indus-waters-treaty/> (noting former Indian Foreign Minister Vikas Swarup’s veiled inference about revoking the Indus Waters Treaty). Geostrategist Brahma Chellaney, Professor of Strategic Studies at the New Delhi-based Center for Policy Research is one of the leading scholar critics of the treaty. See also Brahma Chellaney, *Shed the Indus Albatross: Indus Waters Treaty Offers One-Sided Benefits to Pakistan, World Bank Too Is Partisan*, TIMES INDIA (Mar. 20, 2017, 2:00 AM), <https://timesofindia.indiatimes.com/blogs/toi-edit-page/shed-the-indus-albatross-indus-waters-treaty-offers-one-sided-benefits-to-pakistan-world-bank-too-is-partisan/>. The Indus Waters Treaty contains no suspension provision and “shall continue in force until terminated by a duly ratified treaty concluded for that purpose between the two Governments.” Indus Waters Treaty, *supra* note 74, art. XII(4).

199. A MacGuffin, commonly employed in cinema, is a plot device that drives the narrative but misdirects attention and ultimately is not important to the story. See Andrew Fitzsimons, *The MacGuffin: ‘Small Details’ in Hitchcock’s “Vertigo” and Neil Jordan’s “The Crying Game”*, 32 J. IRISH STUD. 43, 45 (2017).

200. Drabu, *supra* note 194 (noting, from a civil engineer’s perspective, the “preposterous” options to divert the flow of western waters).

201. See Robert G. Wirsing, *Rivers in Contention: Is There a Water War in South Asia’s Future?* 8 (Heidelberg Papers in S. Asian and Comparative Politics,

Another plan, the so-called Chenab formula, proposed a division of Jammu and Kashmir along the Chenab River, granting Pakistan control over the Kashmir Valley, Ladakh and enough of Jammu “to give it command of the Chenab.”²⁰² Former Pakistani President General Pervez Musharraf advanced the proposal in 1999 as a means to end Pakistan’s water insecurity.²⁰³ With no mention of Kashmiri self-determination, however, and the substantial loss of Indian-controlled territory, this plan to move beyond the Indus Treaty failed to gain traction.²⁰⁴

Indian journalist B.G. Verghese once suggested an Indus-II revision to the treaty to construct cooperative drainage arrangements on the upper catchments of the western rivers flowing into Pakistan.²⁰⁵ The mutual rewards associated with additional storage, flood moderation, and hydropower generation of benefit to both countries never materialized, in part, because the objects and purposes of the treaty, notwithstanding references in its preamble to promoting goodwill, friendship, and cooperation, aimed to force a permanent division of resources, which is the opposite outcome intended by the Indus-II integrated development or coparcener proposal. While the treaty eschewed the establishment of any territorial rights other than water rights pertaining to the six rivers, it cemented territorial claims on both sides of the Line of Control—which was established over a 70-year course of dealing—that created for the treaty a reality now difficult to undo.

India’s downstream relations with Pakistan may also create upstream precedents for Pakistan’s ally, China. As the upstream riparian to major rivers flowing into India from Tibet (the Sutlej and Indus), with “meltwater from the Tibetan plateau contribut[ing] 35 to 40 percent of the total flow into the Indus

Working Paper No. 41, 2008).

202. Wirsing & Jasparro, *supra* note 38, at 245.

203. See generally Shaheen Sehbai, *Musharraf Convinced Chenab Formula Is the Only Acceptable Solution of Kashmir*, SOUTH ASIA TRIB. (Mar. 10, 2005), https://www.antisystemic.org/satribune/www.satribune.com/archives/200503/P1_book1.htm.

204. See *The Future of Kashmir? Scenario Seven: The Chenab Formula*, BBC NEWS, http://news.bbc.co.uk/2/shared/spl/hi/south_asia/03/kashmir_future/html/7.stm (last visited Apr. 4, 2020).

205. See B.G. Verghese, *Political Fuss Over the Indus*, B.G. VERGHESE WRITINGS AND COMMENTARIES (May 24–25, 2005), <http://www.bgverghese.com/Indus.htm> (promoting an Indus-II cooperative revision to the treaty).

Basin,” diverting flow into Pakistan could be held opposable to India should China seek to model riparian policy on India’s prior practice.²⁰⁶ Although China has been described as Pakistan’s “all-weather friend,” the limits to their friendly water relations already may have been reached.²⁰⁷ In the Autonomous Region of Tibet, China constructed a dam on the Indus at Senge-Ali, Tibet, without informing Pakistan, materially affecting downstream flow.²⁰⁸ India riparian relations extend beyond China and Pakistan. Its 1996 treaty with Nepal (the Mahakali Treaty) aims at an integrated management of the shared Mahakali River on the basis of equal partnership,²⁰⁹ whereas its 1996 Ganges Treaty with Bangladesh has been criticized for dividing water flow without sharing the value and uses between the two countries, except “in [the] most primitive sense.”²¹⁰

D. INTRA-NATIONAL COMPLICATIONS

Water management in India is “virtually unregulated” at the federal level,²¹¹ making water conflicts in the region and throughout South Asia “intra-national at least as much as international” problems.²¹² The landmark Eighth Amendment to the 1973 Pakistan Constitution (1985) also granted greater

206. Sayanangshu Modak, *India Needs to Keep the Indus Waters Treaty Intact*, DIPLOMAT (Mar. 20, 2019), <https://thediplomat.com/2019/03/india-needs-to-keep-the-indus-waters-treaty-intact/>.

207. *Id.*

208. See Mazhar Abbas, *China Builds Dam on Indus in Tibet, Keeps Pakistan Uninformed*, NEWS INT’L (Mar. 19, 2009), <https://www.the-news.com.pk/archive/print/166517-china-builds-dam-on-indus-in-tibetkeeps-pakistan-uninformed> (discussing impediments to the flow of the Indus caused by China’s dam activity in Tibet).

209. Mahakali Treaty pmbl., India-Nepal, Feb. 12, 1996, 36 I.L.M. 531.

210. Paula Hanasz, *Sharing Waters vs. Sharing Rivers: The 1996 Ganges Treaty*, GLOBAL WATER F. (July 28, 2014), <http://www.globalwaterforum.org/2014/07/28/sharing-waters-vs-sharing-rivers-the-1996-ganges-treaty/>.

211. Somya Rajawat, *Water Insecurity in India Paints an Uncertain Future for Agriculture*, FUTURE DIRECTIONS INT’L (Mar. 30, 2016), <http://www.futuredirections.org.au/publication/water-insecurity-india-paints-uncertain-future-agriculture/>; see also Vijayta Lalwani, *As the Water Crisis Deepens, Can India Afford to Leave Groundwater Unregulated?*, SCROLL.IN (July 11, 2019, 9:00 AM), <https://scroll.in/article/929433/as-the-water-crisis-deepens-can-india-afford-to-leave-groundwater-unregulated> (“The government has simply failed to regulate groundwater use.”).

212. Johnson, *supra* note 95 (quoting Harvard University South Asian specialist, Sunil Amrith).

autonomy to provinces,²¹³ adding to calls that provincial authorities need to “demonstrate greater responsibility and resolve in managing the country’s water resources.”²¹⁴ Decentralized constitutional delegations to constituent states regionalize decision-making authority, sometimes exacerbating interprovincial tensions and complicating passage of international water sharing agreements. The most notable example of India’s ‘Center-State’ (federal) water sensitivity involves West Bengal’s Chief Minister, Mamata Banerjee. She forcefully impeded the Teesta River water sharing pact between New Delhi and Dhaka since 2011, protesting that negotiations made changes to the draft agreement without her approval.²¹⁵ She has not since budged in her opposition to the pact.²¹⁶ India’s rising demand for water concentrates short-term attention on the domestic geopolitics of water security, elevating interest in securing complete utilization of the bonus water flowing to Pakistan over questions about the Indus Waters Treaty’s long-term effectiveness or international implications associated with domestic water politics. Upholding the letter of its law is now the subtly divisive means of promoting a water war in Jammu and Kashmir—an ironic twist to the creation of the Indus Waters Treaty, which rhetorically aimed to delink the dispute from the problematic sovereignty issue in the region.

IV. THE PROBLEM OF INTER-TEMPORALITY

Proposals to rescind, revise, or reshape the Indus Waters Treaty fail for above-mentioned reasons. Yet fully implementing the terms of the treaty reveals a fundamental problem of inter-

213. See ZUBAIR FAISAL ABBASI, FEDERALISM, PROVINCIAL AUTONOMY, AND CONFLICTS 23 (2010) (establishing parliamentary democracy and “greater powers to the smaller provinces in the matters of decision-making”). Many provisions of the 1973 Constitution were changed due to military rule but restored in April 2010 when Pakistan adopted comprehensive reforms of the Eighteenth Amendment. See Jayshree Bajoria, *Pakistan’s Constitution*, COUNCIL ON FOREIGN REL., <https://www.cfr.org/backgrounder/pakistans-constitution> (last updated Apr. 21, 2010).

214. See REPORT SEMINAR, *supra* note 84, at 8.

215. GAURI NOOLKAR-OAK, GEOPOLITICS OF WATER CONFLICTS IN THE TEESTA RIVER BASIN 19 (2017).

216. See *generally Would Have Shared Teesta Water with Bangladesh If Situation Was Favourable: Mamata Banerjee*, TIMES INDIA (July 2, 2019, 6:23 PM), <https://timesofindia.indiatimes.com/india/would-have-shared-teesta-water-with-bangladesh-if-situation-was-favourable-mamatabanerjee/articleshow/70042543.cms>.

temporality for India and Pakistan. Obligations between servient and dominant riparian countries have had a “sadly shattered” historical relationship.²¹⁷ International legal movement toward acceptance of principles of hydrological interconnectedness developed in fits and starts, particularly with riparian law’s complicated and piecemeal association with the idea of international servitudes, which at best represented negative or passive obligations when they did not directly conflict with principles of sovereignty and state responsibility.²¹⁸ Even here, the idea of interconnectivity pertained to an emerging “community of interest” between upstream and downstream riparians.²¹⁹ Only slowly did the idea of interconnectivity seep into the ground to link surface water regimes with ground water regimes.²²⁰ The treaty forwarded a division of waters before the International Law Association’s (ILA) body of experts, who undertook to study the customary international law of transboundary water resources,²²¹ resulting in the 1966 Helsinki Rules on the Uses of the Waters of International Rivers.²²² The Helsinki Rules framed international drainage basins in terms of indivisible hydrological units, incorporating surface and groundwater regimes that were to be governed by principles of equitable utilization and avoidance of significant harm, which together suggested a restrictive rule of sovereignty.²²³ Connecting surface and subsurface water sources to the key principle of equitable utilization carried over into the International Law Commission’s

217. Pittman B. Potter, *The Doctrine of Servitudes in International Law*, 9 AM. J. INT’L L. 627, 627 (1915).

218. See CHRISTINA LEB, COOPERATION IN THE LAW OF TRANSBOUNDARY WATER RESOURCES 42 (2013) (discussing the history of hydrologic interconnectivity).

219. Territorial Jurisdiction of the International Commission of the River Oder (U.K. v. Pol.), Judgment, 1929 P.C.I.J. (ser. A) Nos. 16, 23, at 27 (Sept. 10).

220. See Gabriel E. Eckstein, *Managing Buried Treasure Across Frontiers: The International Law of Transboundary Aquifers*, 36 WATER INT’L 573, 574 (2011) (discussing the largely ignored significance of transboundary aquifers as a coming source of interstate friction).

221. See Joseph Dellapenna, *The Customary International Law of Transboundary Fresh Waters*, 1 INT’L J. GLOBAL ENVTL. ISSUES 264, 273 (2001) (discussing the ILA’s undertaking).

222. Int’l Law Ass’n, *Helsinki Rules on the Uses of the Waters of International Rivers* (Aug. 1966).

223. See *id.* arts. II, IV–VIII (defining an international drainage basin and detailing equitable utilization).

(ILC) draft articles on transboundary aquifers,²²⁴ and the Watercourses Convention,²²⁵ and is understood to incorporate standards of use and cooperation to develop relevant protections and promote reasonable utilization.²²⁶

Although created before these linkages could congeal, the Indus Waters Treaty indirectly supported concerns of hydrologic connectivity and changing circumstance through an emphasis on cooperation and information exchange between the parties. Here, the treaty sets out important monthly data exchanges to monitor gauge and discharge, reservoir release, and withdrawals from headworks and canals. It also requires prior notification of construction and engineering projects affecting any of the rivers, including inspection tours and more formal means of dispute inquiry and settlement.²²⁷ Such induced cooperation contributed to the green revolutions in the respective states in the 1960s and 1970s,²²⁸ and continues to create a temporal space for both countries to more judiciously utilize uncaptured or mismanaged freshwater.²²⁹ Facilitating

224. See Int'l Law Comm'n, *Draft Articles on the Law of Transboundary Aquifers*, art. 4 (2008).

225. Convention on the Law of the Non-Navigational Uses of International Watercourses, May 21, 1997, 36 I.L.M. 700 [hereinafter *Watercourses Convention*].

226. Within the meaning of the Watercourses Convention, equitable and reasonable utilization includes relevant factors such as factors of a natural character (pertaining to geographic, hydrographic, hydrological, climatic, ecological and other factors), social and economic needs of states concerned, dependent populations, effects on other watercourse states, existing and potential uses, conservation, and the availability of alternatives. See *id.* art. 6.

227. See *Indus Waters Treaty*, *supra* note 74, arts. VI–VII, IX.

228. See generally Robert E. Evenson, *The Green Revolution and Gene Revolution in Pakistan: Policy Implications*, 44 PAK. DEV. REV. 359 (2005) (discussing achievements and challenges of the green Revolution in Pakistan); Govindan Parayil, *The Green Revolution in India: A Case Study of Technological Change*, 33 TECH. & CUL. 737 (1992) (discussing the introduction of high-yielding cereal production using improved agricultural and water practices in India during the 1960s and 1970s); Erum Sattar et al., *Evolution of Waters Institutions in the Indus River Basin: Reflections from the Law of the Colorado River*, 51 U. MICH. J. L. REFORM 715, 741 (2018) (discussing the challenges the Water and Power Development Authority of Pakistan faced in delivering fixed quantities of water from the Indus Basin).

229. See Ahmad, *supra* note 171, at 81–82. Water mismanagement has been identified as a particularly acute problem for Pakistan, which, due to inefficient storage facilities, allows much of the Chenab's water to flow untapped to the sea. Pakistan's "Kharif" [autumn] crops depend on early inundation from the Chenab and Jhelum, a circumstance that could seriously impact the sowing season and carry over into the "Rabi" [winter] harvests, if impeded. See generally Muhammad Rizwan et al., *Evaluation of the Impact of the Water*

means to protect this treaty-created space is better accomplished not by turning to a hard legalization of the treaty's 1960-created terms, but by addressing the major infrastructural and financial challenges that impede Pakistan's water security notwithstanding its abundant water endowment.²³⁰

Neither India nor Pakistan is party to the Watercourses Convention.²³¹ Other notable South Asian countries are also not parties,²³² indicating that the region has strongly linked transboundary water management to geopolitical context and intra-regional power relations.²³³ Provisions in the treaty anticipated "future co-operation" with an aim toward the optimum development of the rivers,²³⁴ as well as modifications of its terms,²³⁵ suggesting a need to square the unusual features of the treaty with emerging practice. However, Indus Waters Treaty case law informs of the problem of diversion and the application of customary international law, starting with the Kishenganga Arbitration and indirectly supported by determinations of a Neutral Expert in a dispute over the Baglihar Dam.

A. THE KISHENGANGA ARBITRATION

In the *Indus Waters Kishenganga Arbitration*, downstream Pakistan contested India's proposal to build the Kishenganga Hydro-Electric Plant (KHEP) on the Kishenganga tributary of the Jhelum River in India-controlled Jammu and Kashmir.²³⁶

Management Technologies on Water Savings in the Lower Chenab Canal Command Areas, Indus River Basin, 10 WATER 681 (2018) (analyzing the impact Pakistan's water-stressed state has on farming in Kharif and in Rabi).

230. William J. Young et al., *Pakistan: Getting More from Water*, WORLD BANK GRP. [WBG] XV (2019) (linking Pakistan's water (in)security to poor water resource management).

231. For signatories to the convention, see *Convention on the Law of the Non-Navigational uses of International Watercourses*, UNITED NATIONS TREATY COLLECTION 1, <https://treaties.un.org/doc/Publication/MTDSG/Volume%20II/Chapter%20XXVII/XXVII-12.en.pdf>.

232. India, China, and Pakistan did not sign the convention; Bangladesh and Nepal signed, but have not ratified the convention. *See id.*

233. See Shawahiq Siddiqui, *UN Watercourses Convention is Good for South Asia*, THETHIRDPOL.NET (Aug. 18, 2014), <https://www.thethirdpole.net/en/2014/08/18/un-watercourses-convention-is-good-for-south-asia/>.

234. Indus Waters Treaty, *supra* note 74, art. VII.

235. *Id.* art. XII.

236. Pakistan refers to the river as the Neelum before it joins the Jhelum. Partial Award, *supra* note 76, ¶¶ 7, 29.

India's use of the water contemplated a diversion through a tunnel to an electric power station and then a return of the water to a lower tributary of the Jhelum.²³⁷ Pakistan had contemplated its own hydro-electric plant, the Neelum-Jhelum Hydro-Electric Project (NJHEP), and sought arbitration in May 2010, as "the operation of the KHEP would to some extent affect the power-generating capacity of the NJHEP."²³⁸ Pakistan claimed the inter-tributary transfer violated India's obligation to "let flow" the waters and that the power generated would be supplied to India's electrical grid beyond the terms of the "drainage basin thereof."²³⁹ Pakistan also contested India's depletion of a reservoir level of the run-of-river KHEP plant below the "dead storage level" using sediment control, which Pakistan claimed was impermissible other than for an unforeseen emergency.²⁴⁰

The Partial Award allowed India to proceed on the first count, provided India did not permanently alter the full flow of the river to its natural channel. Furthermore, Paragraph 15(iii) of the treaty (Annexure D²⁴¹) embedded the premise that Pakistan's existing uses needed to be "taken into account" as a "guiding principle."²⁴² Moreover, the award held that customary international law, including principles of international environmental law, constrained India's right to divert the waters and that India, accordingly, was under an obligation to construct and operate the KHEP in such a way as to maintain a minimum flow at a rate to be determined by a subsequent (final) award.²⁴³ The Final Award required India to "mitigate adverse effects to Pakistan's agricultural and hydro-electric uses . . . while preserving India's right to operate the KHEP" and maintain its right of priority (because KHEP preceded NJHEP).²⁴⁴ Due regard again emphasized "the customary international law

237. *Id.* ¶¶ 155, 162–63.

238. *Id.* ¶ 160. Although the Kishenganga water diversion ultimately returned the water to Pakistan, (although not via the Jhelum), it bypassed Pakistan's downstream NJHEP, making the water unavailable to Pakistan.

239. *Id.* ¶¶ 165–66.

240. *Id.* ¶ 267.

241. *Id.* ¶ 381. "[W]here a Plant is located on a Tributary of The Jhelum on which Pakistan has any Agricultural use of hydro-electric use, the water released below the Plant may be delivered, if necessary, into another Tributary but only to the extent that the then existing Agricultural Use or hydro-electric use by Pakistan on the former Tributary would not be adversely affected."

242. *Id.* ¶ 436.

243. *Id.* ¶¶ 445, 455.

244. *In re Indus Waters Kishenganga Arbitration (Pak v. India)*, PCA Case Repository, Final Award, ¶ 87 (Perm. Ct. Arb. 2013) [hereinafter Final Award].

requirements of avoiding or mitigating trans-boundary harm and of reconciling economic development with the protection of the environment.”²⁴⁵ The award also emphasized “a holistic assessment of the interaction of a range of environmental indicators.”²⁴⁶

Interestingly, the Partial Award emphasized the ambulatory application of customary international law,²⁴⁷ emphasizing that it was “incumbent upon [the Court of Arbitration] to interpret and apply this 1960 Treaty in light of the customary international principles for the protection of the environment in force today.”²⁴⁸ Pakistan argued in favor of this “dynamic assessment,” whereas India’s competing approach emphasized the “comparatively static” critical date that established the “then existing use” of the water, which had the effect of freezing in time the particular set of facts affecting the use.²⁴⁹ This same inter-temporality, in line with the *Iron Rhine Arbitration* and the International Court of Justice decision in *Gabčíkovo-Nagymaros Project*, applied specifically to principles of international environmental law, “must be taken into account even when (unlike the present case) interpreting treaties concluded before the development of that body of law.”²⁵⁰

In the Final Award, however, the Court limited its authority to mitigating significant harm,²⁵¹ eschewing adoption of “a precautionary approach [as] policymaker in determining the balance between acceptable environmental change and other priorities, or to permit environmental considerations to override the balance of other rights and obligations expressly identified in the Treaty.”²⁵² Distinguishing the *Iron Rhine Arbitration* and the *Gabčíkovo-Nagymaros Project*, the Court of Arbitration held that the treaty, in this case, “expressly limits the extent to which the Court may have recourse to, and apply, sources of law beyond the Treaty itself.”²⁵³ Further, “[i]f customary international law

245. *Id.*

246. *Id.* ¶ 97.

247. Partial Award, *supra* note 76, ¶ 405.

248. *Id.* ¶ 452.

249. *Id.* ¶¶ 425–26.

250. *Id.* ¶ 452 (quoting also the dictum in *Gabčíkovo-Nagymaros* (Hung. v. Slov.), 1997 ICJ Rep. 7, 78 (Sep. 1997) that whenever necessary for the application of a treaty, “new norms have to be taken into consideration, and . . . new standards given proper weight”).

251. Final Award, *supra* note 244, ¶ 112.

252. *Id.*

253. *Id.* ¶ 111.

were applied not to circumscribe, but to negate rights expressly granted in the Treaty, this would no longer be '*interpretation or application*' of the Treaty but the substitution of customary law *in place* of the Treaty."²⁵⁴

B. NEUTRAL EXPERT DETERMINATION ON BAGLIHAR DAM

The countries had previously argued for their respective Kishenganga positions regarding international law's ambulatory application in another longstanding dispute in 2005. This dispute resulted in Pakistan's formal objection to a 900 MW gravity dam and storage lake hydropower project on the Chenab River in Indian-controlled Kashmir, approximately 110 kilometers east of the Pakistan border.²⁵⁵ India had conceived of the project in the 1950s but only formally shared information about its intentions with Pakistan in 1992.²⁵⁶ The dam's construction began in 1999; however, Pakistan complained about three design flaws, which essentially allowed for inappropriate Indian control over the western rivers' flow into Pakistan: the height of the dam, the location of its power intakes and gated spillway, and excessive poundage and storage features, all of which would impede the flow of water into Pakistan that Pakistan claimed the treaty protected for its exclusive use.²⁵⁷ Two formal rounds of bilateral negotiations failed to reconcile the positions, and the World Bank agreed that a "difference" had arisen between the parties under Article IX (2) of the treaty, and acceded to Pakistan's request to appoint a Neutral Expert.²⁵⁸

The Neutral Expert, a Swiss engineer, assessed the technicalities of the complaint, which in large measure depended on design constraint specifications in Paragraph 8 of Annexure D of the treaty.²⁵⁹ The Neutral Expert "relied on the rules of the

254. *Id.* ¶ 112. (emphasis in original)

255. Wirsing & Jasparro, *supra* note 38, at 242.

256. Akhter, *supra* note 133, at 180.

257. See Khattak, *supra* note 123, at 92–93. Pakistan specifically alleged that the Baglihar plant did not conform to criteria contained in Annexure D, ¶ 8(a), (c), (e), and (f). See Baglihar Hydroelectric Plant, Expert Determination, at 4 (Feb. 12, 2007), <http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1171996340255/BagliharSummary.pdf> [hereinafter Baglihar Executive Summary].

258. Baglihar Executive Summary, *supra* note 257, at 1.

259. See Akhter, *supra* note 133, at 180–82 (detailing the controversy regarding the maximum design flood footprint, which served as a gauge for the

Vienna Convention on the Law of Treaties which reflect customary international law with regard to ordinary methods of treaty interpretation.”²⁶⁰ However, his determination noted that the parties’ entitlements “should be read in the light of new technical norms and new standards as provided for by the Treaty;”²⁶¹ and that:

those who drafted the Treaty aimed for predictability and legal certainty in its drafting . . . [and that the] interpretation of the Treaty must be guided by the principle of integration and the principle of effectiveness . . . to attain the most complete and satisfactory utilization of the waters of the Indus systems rivers . . . taking into account the best and latest practices in the field of construction and operation of hydro-electric plants.²⁶²

Newer technical norms militated in favor of sluice and spillway placements at lower levels to facilitate “better maintenance and therefore a longer life for the dam,” even though these design feature could bring into conflict the

contested height of the dam and placement of sluice spillways to control water flow and sediment).

260. Baglihar Executive Summary, *supra* note 257, at 5. India is not a signatory and Pakistan has not ratified the Vienna Convention on the Law of Treaties. However, the Supreme Court of India in *Ram Jethmalani v. Union of India*, 8 SCC 1, subsequently recognized that the Vienna Convention’s general rule of interpretation (art. 31) “contains many principles of customary international law” and “provides a broad guideline as to what could be an appropriate manner of interpreting a treaty in the Indian context also.” *Ram Jethmalani v. Union of India*, (2011) 8 SCC 1, ¶ 60 (India). The International Court of Justice shed a glimmer of light on general provisions of the Vienna Convention on the Law of Treaties as applied to India and Pakistan in a dispute involving interpretation of the Vienna Convention on Consular Relations, and mutual allegations of espionage and terrorism by India (in Balochistan) and Pakistan (in Kashmir). In the recent *Jadhve Case* (Ind. v. Pak.) Judgment 2019 I.C.J. 1 (17 July 2019), the Court interpreted the Consular Relations Convention according to the customary rules of treaty interpretation (recognizing that India was not party to the Vienna Convention on the Law of Treaties and Pakistan had not ratified it). *Jadhve Case* (Ind. v. Pak.), Judgment, 2019 I.C.J. 1, ¶ 71 (17 July). The Court seemingly affirmed that the codified rule of treaty interpretation (art. 31) was a rule of customary international law and, consequently, that the Consular Relations Convention “must be interpreted in good faith in accordance with the ordinary meaning to be given to the terms in their context and in light of the objects and purpose of the Convention.” *Id.*

261. Baglihar Executive Summary, *supra* note 257, at 5.

262. *Id.*, at 5, 10.

geopolitical and development effects of the dam.²⁶³

The Neutral Expert's application of the inter-temporality of customary international law sterilized the political implications and promoted the economic logic as opposed to the territorial logic, rendering "invisible crucial geopolitical aspects of the downstream geographical relation."²⁶⁴ The World Bank crafted the basis for this economic application of customary development, which may have actually imparted "some sort of consensual agreement" between the "disputing parties [that was] not necessarily true."²⁶⁵ The Neutral Expert then claimed the decision rendered was not a decision "against one or the other Party,"²⁶⁶ but on the basis of "economical" and efficiency arguments,²⁶⁷ as opposed to territorial logic or its implications.²⁶⁸

"Pakistan seemed to have viewed the difference as largely a legal one, involving the interpretation of the Treaty, while India seemed to have viewed it mainly as an engineering one, regarding hydropower plant."²⁶⁹ Here, India benefitted from the ambulatory appeal of customary international law—as applied to technical developments in the field of hydrology—whereas Pakistan defended the comparatively static position that the treaty's application pertained to understandings present at the creation of the treaty.

The Neutral Expert applied "the technical standards for hydropower plants as they have developed in the first decade of the twenty-first century, and not as perceived and thought of in the 1950s when the Treaty was negotiated."²⁷⁰ He concluded that the rights and obligations of both India and Pakistan "should be read in the light of new technical norms and new standards as provided for by the Treaty."²⁷¹ The Neutral Expert found that "[i]n 1960, when the Treaty was signed, the phenomenon of reservoir sedimentation was not recognized everywhere to its

263. Akhter, *supra* note 133, at 184.

264. *Id.* at 187.

265. *Id.*

266. Baglihar Executive Summary, *supra* note 257, at 20.

267. Indus Waters Treaty, *supra* note 74, Annexure D, ¶ 8(e) ("[T]he bottom level of the gates in normal closed position shall be located at the highest level consistent with sound and economical design and satisfactory construction and operation of the works.").

268. Akhter, *supra* note 133, at 187.

269. Salman, *supra* note 151, at 115.

270. *Id.*

271. Baglihar Executive Summary, *supra* note 257, at 5.

full degree of significance.”²⁷² Only 20 years later did “the concept of an integrated reservoir sedimentation management [begin] to be clear and coherent.”²⁷³ The Neutral Expert applied the treaty in light of these new technical standards, finding mostly for India with regard to the technical characteristics of the dam design and placement of intakes and sluices to control water flow and sedimentation. This technological limitation placed on the ambulatory significance of customary international law prompted a leading international water law expert to conclude that “[t]his manner of interpretation will most likely influence the future interpretation of the Treaty, as well as other international water treaties.”²⁷⁴

Despite periodic World Bank-moderated discussions to facilitate better understanding about upstream allowances of eastern water flows into Pakistan,²⁷⁵ other ambitious projects to harness the waters of the Indus Basin appear mired in controversy,²⁷⁶ making likely future consideration of customary international law’s temporal applicability.

V. CONCLUSION

One oddity of the Indus Waters Treaty stems from the superlatives that attach to the utility of a separation agreement created out of deep and continuing distrust. Despite numerous wars and ongoing tensions between India and Pakistan, the treaty is upheld as a durable example of international law’s ability to remediate tension and promote cooperation. However, the reverberations of colonial rule and partition resulted in a

272. *Id.* at 12.

273. *Id.*

274. Salman, *supra* note 151, at 115 (writing in his personal capacity and not in his professional capacity as lead counsel, legal vice presidency of the World Bank).

275. *See World Bank Fact Sheet, supra* note 96 (noting “dozens of high-level meetings”).

276. *See, e.g.,* Arteev Sharma, *Uncertainty Looms Over Ratle Project*, TRIBUNE (INDIA), (Mar. 2, 2019), <https://www.tribuneindia.com/news/archive/uncertainty-looms-over-ratle-project-736644> (discussing the stalled 850-MW Ratle hydro-electric project in Kistwar district of Indian-controlled Jammu and Kashmir, slated for construction on the Chenab since 2014). Other contentious projects involve Miyar Nallah, Lower Kalnai, and Pakal Dul. *See Indus Hydropower Projects Being Built Despite Pakistan’s Objections: Govt*, ECON. TIMES (Mar. 29, 2017), <https://economictimes.indiatimes.com/news/politics-and-nation/indus-hydropower-projects-being-built-despite-pakistans-objections-govt/articleshow/57895335.cms?from=mdr>.

blunt division of a water system now critical to the needs of hundreds of millions of people. International law can only imperfectly achieve a separation of natural watercourses covering such a gigantic basin. Unlike the political stasis that characterizes India-Pakistan relations, water systems remain forever in flux.

Hydrologic studies on impacts of climate change to the Indus Basin generally assume a condition of hydrologic stationarity, however, where “future water supplies . . . conform to the statistics of the historical record.”²⁷⁷ Such a condition of stationarity, also attributable to international legal analysis of the Indus Waters Treaty, must now be read in light of dramatic population increases and concomitant demands for fresh water.²⁷⁸ Hydrologists who incorporate such human geographic information into Indus water supply analysis register “clear causes for concern that the stationary assumptions will not hold.”²⁷⁹ Perhaps international lawyers should take note of hydrologists’ concern. The International Monetary Fund (IMF) projects that Pakistan’s water demand will reach 274 MAF by 2025, “while supply is expected to remain stagnant at 191 MAF”²⁸⁰ In other words, Pakistan’s 83 MAF unmet annual demand for fresh water will soon grow large enough to submerge 83 million acres in one foot of water. Pakistan’s per capita water availability at the time of independence measured above 5,200 cubic meters; today it has dropped below 1,000, the minimum threshold for classification as a water-scarce country.²⁸¹

277. Yi-Chen Ethan Yang et al., *Water Governance and Adaptation to Climate Change in the Indus River Basin*, 519 J. HYDROLOGY 2527, 2528 (2014).

278. Consider only Pakistan’s population growth. Pakistan’s population in 1960, when the Indus Waters Treaty took effect, stood at 45 million. With a growth rate of 2.04%, Pakistan’s current population of 218 million will increase beyond 300 million by 2040, with an end-of-century projection topping 400 million. *Pakistan Population 2019*, WORLD POPULATION REV. (2019), <http://worldpopulationreview.com/countries/pakistan-population/>. India’s and Pakistan’s population has increased from 480 million to 1.4 billion since 1960. Alizeh Maqbool, *The Indus Waters Treaty: Pakistan’s Case for a Revision*, 47 ENVIRON POL’Y & L. 78, 79 (2017).

279. Yang et al., *supra* note 277, at 2528.

280. IMF, *Issues in Managing Water Challenges and Policy Instruments: Regional Perspectives and Case Studies*, at 12 (June 2015) [hereinafter IMF Report].

281. PAKISTAN WATER CHARTER, available at MINISTRY OF WATER RESOURCES, NATIONAL WATER POLICY 2018 44 (Apr. 2018), <http://mowr.gov.pk/wp-content/uploads/2018/06/National-Water-policy-2018-2.pdf>. World Bank calculations fixed Pakistan’s per capita water availability at 865 cubic meters in 2018. WORLD BANK GRP., SUB-NATIONAL WATER DIALOGUE

Moreover, the Indus Basin's holistic hydrological complexity is not well understood in the age of climate change. Underexplored connections regarding Indus Basin surface and groundwater regimes, and the health and quality of its transboundary aquifers, impact assessments of ecosystem vulnerability to climate change.²⁸² Changing patterns of glacial and High Himalayan snowpack melt, weak and powerful summer monsoons (which caused country-wide drought in Pakistan in 2009 and catastrophic flooding in 2010), and variability in "the distribution and timing of snowfall . . . and snowmelt" present waterlogging and salinity challenges to the basin and its agricultural produce.²⁸³ Viewing the Indus Waters Treaty as a success in light of these changing circumstances masks concerns regarding the longevity of the treaty, and tests the water rationality thesis that implies prudent water rationing among co-dependent users.²⁸⁴ Pakistan acknowledges that its water scarcity problem, absent decisive action, likely will "become an existential threat."²⁸⁵ Perhaps praise for the Indus Waters Treaty expresses a preference falsification that only Panglossians and climate change deniers would assert.²⁸⁶

Customary international law, as interpreted in the scant case law pertaining to the Indus Waters Treaty, recognizes elements relating to changing circumstance, albeit not in ways that overturn the stated purposes of the treaty and not in ways that countenance geopolitical circumstances, as opposed to ambulatory changes in power generation and dam design brought on by technological advance. Revising the treaty to accommodate changing water and population circumstances infuses an objective beyond the original terms of the agreement. Rescinding the treaty to placate parochial agendas creates

BALUCHISTAN 2 (2018).

282. *See generally* SADIQ I. KHAN & THOMAS E. ADAMS, III, *INDUS RIVER BASIN: WATER SECURITY AND SUSTAINABILITY* (2019) (presenting essays on Indus River Basin water-related issues and implications of climate change).

283. WINSTON YU ET AL., *THE INDUS BASIN OF PAKISTAN: THE IMPACTS OF CLIMATE RISKS ON WATER AND AGRICULTURE* 2 (2013).

284. For more on the water rationality thesis, *see* Alam, *supra* note 147, at 347.

285. PAKISTAN WATER CHARTER, *supra* note 281, at 1.

286. The Islamic Studies scholar, Timur Kuran introduced the idea of preference falsification to explain the conferment of an aura of stability on structures vulnerable to sudden collapse and the concealment of social instability on distorted presentations of human knowledge. *See generally* TIMUR KURAN, *PRIVATE TRUTHS, PUBLIC LIES: THE SOCIAL CONSEQUENCES OF PREFERENCE FALSIFICATION* (1997).

existential anxiety, invites catastrophic consequences downstream, upsets established courses of dealings in decentralized federal arrangements, and fuels nationalistic if not secessionist sentiments that already roil more than the waters of much-disputed Jammu and Kashmir.²⁸⁷

Indian complaints about high-profile terrorist intrusions from Pakistan—the 2008 Mumbai attacks, the 2016 Uri army base assault, and now the Pulwama explosion—contribute to resurgent Hindu nationalism and emboldened domestic policy positions of the Modi government involving changes to Jammu and Kashmir's constitutional status. Absorption and bifurcation as Union Territories required a different form of signaling that deviated from usual expressions of threats. Leveraging unutilized portions of the Indus Waters Treaty, with the prospect of returning the waters to water-stressed Jammu and Kashmir, provides a lawful means of exploiting Hindu national designs while staying within the lanes of legality. However, India's heavy-handed military presence to thwart Kashmiri Muslim dissent has not only served in Pakistan as awakening evidence of Muslim nationalism, but also has reinforced the necessity of Pakistani founder Muhammad Ali Jinnah's Two Nations Theory, which led to the creation of the Islamic Republic of Pakistan.²⁸⁸

Framing India-Pakistan water issues around the Indus Waters Treaty presents a business-as-usual approach that only adds to concern about the treaty. Pakistan has labeled this approach “no longer an option,”²⁸⁹ although it continues for want of replacement options. If revisions or rescissions to the treaty present non-starters, then adopting a benefit-sharing approach rather than emphasizing the river-dividing approach may hold promise.

More than anything else, the Indus Waters Treaty needs temporal space to keep at bay geopolitical pressures that can break the treaty through maximum expression of its legal

287. See Reeta Tremblay, *Modi Ushers in a New Intolerant India and Revokes Multicultural Democracy*, CONVERSATION (Aug. 11, 2019), <https://theconversation.com/modi-ushers-in-a-new-intolerant-india-and-revokes-multicultural-democracy-121688> (noting increasing alienation of Kashmiri Muslims).

288. See, e.g., Malik Muhammad Ashraf, *Vindication of Two-Nation Theory* (Aug. 13, 2019), <https://www.pakistantoday.com.pk/2019/08/13/vindication-of-two-nation-theory/>; see also Abdul Majid et al., *Genesis of the Two Nations Theory and the Quaid-e-Azam*, 15 PAK. VISIONS 180 (2014).

289. PAKISTAN WATER CHARTER, *supra* note 281, at 2.

allowances. Ambulatory changes in customary international law cannot break free from the strictures of the treaty or from arbitral or Neutral Expert interpretations of its terms because the treaty intended to permanently separate water uses. Important means of buying time for the treaty appear necessary and in-the-making, at least until that time when the parties can reconcile much needed principles of water-management with abject conditions of population and now climate changes.²⁹⁰

Pakistan increasingly evidences the will to confront its water challenge. Internal domestic policy initiatives designed to alleviate supply and demand pressures double as a splint to ease pressure on the Indus Waters Treaty. Pakistan is well motivated to move beyond business as usual. Its total water storage capacity satisfies average demand for only 30 days.²⁹¹ By comparison, Egypt has storage capacity for 1,000 days, and India for 220 days.²⁹² With the world's "lowest storage percentage," increasing storage capacity ranks as "the most important step required to secure water availability for future generations and mitigate the looming water crisis."²⁹³ Moreover, Pakistan annually loses millions of cubic feet of Indus waters to the sea due to management and infrastructure issues. Pakistan's Indus River System Authority (IRSA) estimated this annual water loss approaches \$21 billion due to a lack of water conservation systems alone.²⁹⁴ During flood season, Pakistan loses 35 MAF of water to the sea.²⁹⁵ This loss presents a focal point of attention that can materially alleviate water stress, if corrected through policy integration. Integrating policies regarding resource management has already attracted World Bank attention, which has a vested interest in securing the future of the treaty given its presence at and participation in the treaty's creation.

The World Bank's country partnership strategy governing relations with Pakistan noted that Pakistan's productivity levels is low in all agriculture-based industries; it suffers endemically

290. See MINISTRY OF WATER RESOURCES, GOV'T OF PAK., NAT'L WATER POL'Y 2018 15 (2018) (committing the country to working out a mechanism "for sharing of trans-boundary aquifers and joint watershed management").

291. IMF REPORT, *supra* note 280, at 13.

292. *Id.*

293. SENATE FORUM FOR POL'Y RES., SENATE OF PAK., THE ISSUES OF WATER CRISIS IN PAKISTAN 3, 4 (2018).

294. Nadir Guramani, *Pakistan Dumps \$21bn Worth of Water in the Sea Each Year*, DAWN (Nov. 2, 2017), <https://www.dawn.com/news/1367885>.

295. PLANNING COMM'N, GOV'T OF PAK., PAKISTAN IN THE 21ST CENTURY: VISION 2030 56 (2007).

from low water productivity “largely due to . . . weak extension services; and lack of financing.”²⁹⁶ Silt and sedimentation problems affect many of Pakistan’s largest dams, including Pakistan’s two mega hydropower dams at Mangla and Tarbela, resulting in functional and power losses.²⁹⁷ Sedimentation dynamics in the Indus Basin have “significantly altered” and will “increasingly threaten” operational performance of water infrastructure and delta ecosystems.²⁹⁸ Infrastructure leakage and illicit siphoning off of supply appreciably contribute to Pakistan’s water management problem.²⁹⁹ A 2019 World Bank Report forwarded 12 recommendations for improving Pakistan’s water security, integrating legal, policy, institutional, and infrastructural investment reforms grouped into recommendations about water resource management, service delivery, and risk mitigation.³⁰⁰ Alterable domestic policies and practices hold the key to the Indus Waters Treaty’s short-to-mid-term future.

Addressing these problems requires a comprehensive and integrated policy that accounts for demand and supply-side factors, all of which relate to Pakistan’s reliance on this single river basin. The World Bank, which modified David Lilienthal’s “idealistic vision of water beyond politics . . . [and] finished the job of [p]artition,” contributed to the division of the basin and doubtlessly must play a leading role in financing domestic reforms.³⁰¹ A consortium of specialists from Indus Basin

296. See WORLD BANK GRP., PAKISTAN-COUNTRY PARTNERSHIP STRATEGY FOR THE PERIOD FY 2015–19 (ENG.) 7 (2019).

297. See Ali Raza Kalair et al., *Water, Energy and Food Nexus of Indus Water Treaty: Water Governance*, 2 WATER-ENERGY NEXUS, 11, 15 (2019) (noting inefficiencies due to silt at Tarbela and Mangla).

298. YOUNG ET AL., *supra* note 230, at XVI.

299. Daa Hadid, *For Karachi’s Water Mafia, Stolen H₂O is a ‘Lucrative Business’*, NAT’L PUB. RADIO (Sept. 10, 2018), <https://www.npr.org/sections/goatsandsoda/2018/09/10/645525392/for-karachis-water-mafia-stolen-h20-is-a-lucrative-business> (noting, for instance, that about one-third of Karachi’s municipal water supply is lost or siphoned off).

300. YOUNG ET AL., *supra* note 230, XXI–XXII (strengthening water data, establishing a multi-stakeholder process, establishing provincial water planning and intersectoral water allocation mechanisms, accelerating agricultural water productivity increases, adopting conjunctive planning and management of surface and groundwater, constructing new storage and reviewing reservoir operations, modernizing irrigation and drainage, reforming urban water governance, improving rural sanitation, improving and managing climate risks, strengthening planning and management of water-energy interactions, and improving basin-scale sediment dynamics).

301. AMRITH, *supra* note 94, at 206.

countries has attempted to reframe the approach to the basin's management by focusing on bottom up integrated modeling involving all regional and provincial stakeholders.³⁰² Integrated analysis has identified inefficient hydropower management as a major contributor to Pakistan's water insecurity.³⁰³ Pakistan's Senate Forum for Policy Research, in conjunction with government institutions such as Pakistan's Water and Power Development Authority (WAPDA), IRSA, the Pakistan Council of Research in Water Resources (PCRWR), and the Ministries of Water Resources and Planning, Development and Reforms held a series of meetings in 2017 and 2018 to hone recommendations for Pakistan's Senate.³⁰⁴ On April 23, 2018, Pakistan's Council of Common Interests approved a comprehensive National Water Policy along with a National Water Charter.³⁰⁵ Delayed for over a decade, the policy aims for an immediate augmentation of storage capacity through construction of large and small dams,³⁰⁶ including the controversial 6.4 MAF Diamer-Bhasha dam.³⁰⁷ It also targets public water sector investment increases from 3.7 percent in 2018 to 20 percent by 2030,³⁰⁸ along with efforts to curtail water loss by 33 percent by 2030.³⁰⁹

Domestic policy changes in Pakistan do not necessarily affect policy calculations of the Modi government, which soon may encounter backlash from seeds sown by abrogation of Article 370, both in terms of Kashmiri discontent with the absorption decision and with the rising regional and international concern over human rights abuses, which feeds the self-fulfilling prophecies of terrorists and separatists. Blood and

302. Yoshihide Wada et al., *Co-Designing Indus Water-Energy-Land Futures*, 1 ONE EARTH 186 (2019).

303. *See id.* at 187.

304. SENATE FORUM FOR POLICY RESEARCH, *supra* note 293, at 3.

305. MINISTRY OF WATER RESOURCES, GOV'T OF PAK., NAT'L WATER POL'Y 2018 13 (2018).

306. *Id.* at 13.

307. *CCI Unanimously Approves National Water Policy*, DAWN (Apr. 25, 2018), <https://www.dawn.com/news/1403743> (describing how criticism of the project stems from the displacement of over 35,000 people, the destruction of ancient carvings and cultural heirlooms, the placement of the dam in the politically-contested Northern Area of Pakistan-occupied Kashmir, and the subcontracting of construction to Chinese interests criticized for poor environment and social practices); *see Diamer-Bhasha Dam*, INT'L RIVERS, <https://www.internationalrivers.org/campaigns/diamer-bhasha-dam> (last visited Apr. 21, 2020).

308. Shafqat Kakakhel, *Opinion: Pakistan's New National Water Policy Is Historic*, THE THIRD POLE.NET (May 8, 2018), <https://www.thethirdpole.net/en/2018/05/08/opinion-pakistans-new-national-water-policy-is-historic/>.

309. *CCI Unanimously Approves National Water Policy*, *supra* note 307.

water do not mix, although the violent complications surrounding a collapse of the Indus Waters Treaty surely would. Water insecurity is the Achilles' Heel for both India and Pakistan, and all of it flows through Kashmir. India and Pakistan inseparably share a separated resource. They will know the worth of water when the Indus Waters Treaty runs dry.