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EMERGENCE OF CYBER MILITIAS: TIME TO REVISIT THE CRITERIA OF NON-INTERNATIONAL ARMED CONFLICTS?

Ahsan Qazi[*]

Abstract

Notwithstanding the fact that International Humanitarian Law governs cyber operations during armed conflicts, a myriad of issues pertaining to the practical application of IHL to specific situations of cyber operations remain unsettled. Technological developments in relation to cyber space raise the question whether and at what point cyber operations can amount to a non-international armed conflict. The established criteria of 'organization of parties' and 'intensity of conflict' required to classify a situation of violence as a non-international armed conflict remains practically inapplicable where the parties organize themselves solely online and conduct operations exclusively on cyber space. This piece examines the applicability of the established criteria in a world where societies have become deeply dependent on cyber infrastructure.

Keywords: International Humanitarian Law, Cyber Space, Cyber Militias, Armed Conflict.

1. Introduction

As the world embraces the reality of cyber capabilities, the threat template is also shifting from physical to non-physical space, especially when it comes to armed conflicts. Owing to the 'borderless' nature of cyberspace, operations conducted therein are not bound by geographical limitations. Fortunately, cyber operations during armed conflicts do not occur in a legal vacuum - they are governed by International Humanitarian Law (IHL).[1] Notwithstanding this, a myriad of issues pertaining to the practical application of IHL to specific situations of cyber operations remain unsettled. Notably, one of these is the issue of whether and at what point cyber operation(s) can amount to a Non-International Armed Conflict (NIAC).

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[1] ICRC, 'Cyber Warfare: does International Humanitarian Law apply?' (International Committee of the Red Cross, 25 February 2021) <https://www.icrc.org/en/document/cyber-warfare-and-international-humanitarian-law> accessed 08 July 2022

While traditionally, classification of a situation of violence as a NIAC requires satisfaction of the two-fold criteria of 'organization of parties' and 'intensity of conflict', this is difficult to satisfy if the parties to the supposed NIAC organize themselves solely online and conduct operations exclusively on cyber space, as is the case of 'cyber-militias'.

This article examines the applicability of the two-fold criteria of NIACs at a time where societies have become deeply dependent on cyber infrastructure. It first discusses the evolution of this criteria. It then moves on to discuss the emerging phenomenon of 'cyber militias' and finally tries to ascertain how we may apply the criteria in cyberspace in light of state practice and how the criteria's contextual origins render it difficult to be applied in cyberspace.

2. Classifying NIACs – The Existing Legal Regime

Common Article 3 to the Geneva Conventions applies "in the case of armed conflict not of an international character occurring in the territory of one of the High Contracting Parties". The International Court of Justice (ICJ) in *Nicaragua confirmed* that 'Article 3 which is common to all four Geneva Conventions of 12 August 1949 defines certain rules to be applied in the armed conflicts of a non-international character.'[2]

There is no general definition of 'conflict not of an international character' in public international law. Similarly, Common Article 3 to the Four Geneva Conventions of 1949 also does not contain a definition of a 'conflict not of an international character.'

During the 1990s, the two United Nations Security Council mandated *ad-hoc* international criminal tribunals namely, the International Criminal Tribunal for the Former Yugoslavia (ICTY) and the International Criminal Tribunal for Rwanda (ICTR) made important contributions towards establishing the constitutive criteria for 'armed conflicts not of an international character.'[3] The leading jurisprudential authority on the criteria of 'armed conflicts not of an international character' is the ICTY's Appeals Chamber *Decision on Jurisdiction*

[2] Judgment ICJ Reports, *Military and Paramilitary Activities in and against Nicaragua* (Nicaragua v. USA), Merits (1986) p. 14, para. 219

[3] Geneva Convention III (Commentary of 2020), Art. 3, para 460; 'In order to be able to exercise their jurisdiction over grave breaches and other war crimes, the Tribunals had to establish whether the situations in which crimes had allegedly been committed constituted armed conflicts and, if so, whether they were of an international or a non-international character.

in *Tadić*[4] wherein the Chamber determined the existence of the conflict within the former Yugoslavia with reference to two factors:

- The level of organization of the armed group in the conflict
- The intensity of the violence

It is both legally accurate and politically convenient to refer only to the two general requirements for the existence of a non-international armed conflict.[5] However, since these criteria evolved when kinetic warfare was the norm, it is understandably difficult to adapt them to 'non-kinetic' cyber operations.

2.1. Organization of Armed Groups

Since Common Article 3 presupposes the existence of the armed forces of a State arrayed against non-state armed groups, it is not material to assess the level of 'organization' of the armed forces of a State since they are generally presumed to be sufficiently organized. This factor has more to do with the level of 'organization' of the non-state armed group engaged in the conflict.

To assess the requisite level of 'organization' of non-state armed groups, the ICTY identified several indicators in *Haradinaj*[6], *Boskoski*[7] and *Limaj*[8] such as:

- The existence of a command structure and disciplinary rules and mechanisms within the group
- The existence of a headquarters
- The fact that the group controls a certain territory
- The ability of the group to gain access to weapons, other military equipment, recruits and military training
- Its ability to plan, coordinate and carry out military operations, including troop movements and logistics

[4] Tadić Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction [1995] ICTY, para. 70
[5] Lozano, G. and Machado, S. 'The Objective Qualification of Non-International Armed Conflicts: A Colombian Case Study' Amsterdam Law Forum (2012) 4:1, p.63
[6] *Prosecutor v. Haradinaj Trial Judgment* [2008] ICTY, para. 60
[7] *Prosecutor v. Boškoski and Tarčulovski Trial Judgment* [2008] ICTY, paras. 199–203
[8] *Prosecutor v. Limaj Trial Judgment* [2005] ICTY, paras. 94–134

- Its ability to define a unified military strategy and use military tactics; and
- Its ability to speak with one voice and negotiate and conclude agreements such as cease-fire or peace accords.

Some of these indicators have also been applied by the International Criminal Court ("ICC") in *Lubanga*[9], *Katanga*[10] and *Bamba*[11] as well.

In terms of practicality, the 'organization' criterion capacitates the parties to act in a coordinated manner, thereby generally strengthening the potential to engage in violence. In military operations, this ensures proper identification of a group so that it may be treated as a party to the NIAC.

2.2. Intensity of Violence

In *Haradinaj*[12], *Boskoski*[13], and *Lmiaj*[14], the ICTY identified the following indicators to assess the 'intensity' of the violence:

- The seriousness of attacks and whether there has been an increase in armed clashes
- The spread of clashes over territory and over a period of time
- Any increase in the number of government forces and mobilisation and the distribution of weapons among both parties to the conflict
- Whether the conflict has attracted the attention of the United Nations Security Council, and whether any resolutions on the matter have been passed
- The number of civilians forced to flee from the combat zones
- The type of weapons used, in particular the use of heavy weapons, and other military equipment, such as tanks and other heavy vehicles
- The blocking or besieging of towns and the heavy shelling of these towns

[9] *Prosecutor v. Lubanga Trial Judgment* [2012] ICTY, para. 537
[10] *Prosecutor v. Katanga Trial Judgment* [2014] ICC, para. 1186
[11] *Prosecutor v. Bemba Trial Judgment* [2016] ICC, paras. 134–136
[12] Ibid, n. 7, paras. 49 and 90–99
[13] Ibid, n. 8, para. 177
[14] Ibid, n. 9, paras. 90 and 135–170

- The extent of destruction and the number of casualties caused by shelling or fighting
- The quantity of troops and units deployed
- Existence and change of front lines between the parties
- The occupation of territory, and towns and villages
- The deployment of government forces to the crisis area
- The closure of roads
- Cease fire orders and agreements
- The attempt of representatives from international organisations to broker and enforce cease fire agreements

Similarly, the ICC in *Lubanga*[15], *Katanga*[16] and *Bemba*[17] has also applied some of these indicators.

It must be noted that the above-mentioned indicators for 'organization' and 'intensity' are only examples, and it is not necessary for all the indicators to be present in a particular case in order to conclude that the criteria of organization and intensity are fulfilled in a particular situation.

Nevertheless, for any situation to reach the threshold of a 'non-international armed conflict', the criteria of 'organization' and 'intensity' must be cumulatively met.[18] Ultimately, the determination of the 'organization' of the parties and the 'intensity' of a conflict are factual matters which need to be decided in light of the particular evidence and on a case-by-case basis.[19]

The jurisprudence of the ICTY in developing criteria for 'organization' and 'intensity' of NIAC's was understandably confined to the developments of that time i.e., the Yugoslav Wars of the 1990s and therefore, it made sense to establish them with reference to the 'physical' aspects of the conflict. However, applying criteria derived from looking at armed conflicts through a 'physical' lens and

[15] Ibid, n. 10, para. 538
[16] Ibid, n. 11, para. 1187
[17] Ibid, n. 12, paras. 137–141
[18] Geneva Convention III (Commentary of 2020) art 3, paras. 467, 468
[19] Ibid, n. 5, para. 84; Ibid, n. 8, para. 175

using the same criteria to a supposed conflict not taking place 'physically' i.e., in cyberspace, is an altogether different task.

3. Challenges Associated with Cyber-Militias in NIAC

Cyber-militias are 'a group of volunteers who are willing and able to use [disruptive] cyber-attacks in order to achieve a political goal.'[20] Similar to their physical counterparts, cyber-militias also maintain a hierarchy of command which typically involves 'officer roles' — leaders, trainers, suppliers, etc., and 'soldiers.' Otis elaborates:[21]

> *'Leaders motivate to act, coordinate actions and give the directions of attacks. The trainers give instructions of all kinds, including the ones concerning reconnaissance and attacks, as well as covering them. The suppliers are responsible for providing scanners, malware, attack kits, etc. Soldiers are the ones who take active part in attacks.'*

Similarly, cyber-militias also pursue an agenda similar to their physical counterparts which may be of a 'religious, nationalistic, or political character.'[22] However, what differentiates a cyber-militia from their physical counterparts is the fact that unlike the latter, the former 'organizes' themselves exclusively in cyberspace with the 'soldiers' communicating virtually using anonymizing tools to secure their identity.[23] Similarly, in juxtaposition to their physical counterparts, cyber-militia's operations and activities are of a 'virtual' nature rather than of a kinetic nature.

The distinct nature and modus operandi of cyber-militias give rise to two prominent issues to the extent of their involvement in a supposed NIAC between itself and a State. The first is whether a cyber-militia can be considered an 'organized' group sufficient to be considered a party to the supposed NIAC. The second is whether the cyber-militia's operations can satisfy the 'intensity' requirement.

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[20] Rain Ottis, 'Proactive Defence Tactics Against On-Line Cyber Militia' [2010] (01-02 July) Proceedings of the 9th European Conference on Information Warfare and Security, Thessaloniki, Greece 233-237

[21] Ibid

[22] Ibid

[23] Aleksandra Pawlicka and others, 'The stray sheep of cyberspace aka the actors who claim they break the law for the greater good' [2021] 25 Personal and Ubiquitous Computing 843–852, page 848.

3.1. Can Cyber-Militias be Considered 'Organized'?

As discussed above, 'organization' allows for acting in a coordinated manner, thereby generally heightening the capability of the group to engage in violence. In military operations, such coordination typically involves mission planning, sharing intelligence, and exercising command and control.[24] The structural requirement associated with 'organization' allows identification of a group as a party to the conflict. It also implies that the actions are best understood as those of a group and not its individual members.

In theory, it is possible for cyber-groups to act in a coordinated manner against the government, take orders from a virtual leadership, and be highly organized. For example, one element of the group might be tasked to identify vulnerabilities in target systems, a second might develop malware to exploit those vulnerabilities, a third might conduct the operations, and a fourth might maintain cyber defences against counter-attacks.[25] However, as Geiss states, the 'notorious human-machine gap'[26] inherent in cyberspace makes identifying the natural person behind a given computer difficult and accordingly, it is almost impossible to determine membership in a virtual group with any degree of certainty. The fact that the members of a virtual group use anonymizing tools further complicates this task.

A prime example of this conundrum are the notorious cyber-attacks against Estonia in 2007 where there was a difference of opinion in classifying the perpetrators of the attack. Schmitt[27] argues that 'despite the number of hacktivists involved in the cyber operations against Estonia, **they lacked the requisite degree of organization** and therefore the operations did not amount to non-international armed conflict.'[28] Whereas, Sigholm[29] among others[30], classify the perpetrators as 'cyber-militias' operating in an organized fashion in juxtaposition to individual hacktivists.

[24] Michael Schmitt, 'Classification of Cyber Conflict' [2012] 17(2) Journal of Conflict and Security Law 245–260, page 245
[25] Ibid, page 246
[26] Robin Geiss, 'Cyber Warfare: Implications for Non-international Armed Conflicts' [2013] 89 International Law Studies 627-645, page 636
[27] Ibid, n. 25, page 246
[28] Ibid
[29] Johan Sigholm, 'Non-State Actors in Cyberspace Operations' [2013] 4(1) Journal of Military Studies 1-37, page
[30] Ibid, n. 24, page 848

Additionally, the 'anonymity' of the individual occurring due to the 'human-machine gap' results in difficulty attributing a particular cyber-attack to a cyber-militia. In fact, Creery[31] argues that because of the attributability dilemma, States such as Russia actively employ cyber gangs and individuals to aid in their cyber operations as they allow the State to maintain a high-level of deniability whilst engaging in cyber operations.[32]

Accordingly, in theory, we can presume that a cyber-militia can be 'organized' to be considered a party to the conflict. However, in practical terms, the unique nature of cyberspace renders it difficult to ascertain whether a particular cyber-attack was indeed carried out by an 'organized' cyber-militia or not.

3.2. Can Cyber-Militia's Operations Satisfy the 'Intensity' Requirement?

As discussed above, a NIAC entails a certain degree of intensity with regard to the conflict. Mere riots, civil disturbances, or isolated and sporadic acts of violence do not suffice. However, save for the factors described in the jurisprudence of the ICTY, no 'bright-line' intensity exists.[33] Schmitt argues that due to the manner in which cyber-attacks are mounted, '[they must be] frequent enough to be considered related, they clearly do not have to be continuous.'[34]

Accordingly, this 'high' threshold would preclude many cyber operations (even the highly destructive ones) from sufficing for the purpose of finding a non-international armed conflict, unless they occurred on a regular basis over time.[35] In view of the ICRC, unless cyber operations have the same violent consequences as kinetic operations (for instance if they were used to open the floodgates of dams, or to cause aircraft or trains to collide), they are insufficient in terms of satisfying the intensity requirement.[36]

Geiss[37] argues that mere network intrusions, cyber exploitation operations, data theft and data manipulation, as well as random denial-of-service attacks carried

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[31] Madison Creery, 'Hacker Militias or Cyber Command? The US and Russian Institutionalization of Cyber Warfare' (Georgetown Security Studies Review, 7 March 2019) <https://georgetownsecuritystudiesreview.org/2019/03/07/hacker-militias-or-cyber-command-the-u-s-and-russian-institutionalization-of-cyber-warfare/> accessed 15 July 2022

[32] Ibid

[33] Abella v. Argentina, Case 11.137, Inter-Am. Comm'n H.R., Report No. 55/97, OEA\Ser.L\V\II.98, doc. 6 rev. ¶¶ 148, 327 (1998). The IACHR characterized a thirty-hour clash between dissident armed forces and the Argentinian military as a NIAC.

[34] Ibid, n. 25, page 249

[35] Ibid

[36] Geneva Convention III (Commentary of 2020), Art. 3, para 471

[37] Ibid, n. 27, pages 633 - 634

out by a non-State actor, would not suffice to trigger a NIAC in view of the intensity threshold.

3.3. Can NIACs Occur Solely in Cyberspace?

With States and non-State actors engaging in ever more destructive and disruptive cyber operations and societies becoming deeply dependent on the cyber infrastructure, it is indeed a possibility that we may witness NIACs occurring solely in cyberspace with State(s) arrayed against cyber-militias.

The Tallinn Manual, widely considered to be an authoritative text on how international law applies to cyber operations, acknowledges the existence of cyber NIACs in the form of Rule 83, which states:

> *A non-international armed conflict exists whenever there is protracted armed violence, which may include or be limited to cyber operations, occurring between governmental armed forces and organised armed groups, or between such groups. The confrontation must reach a minimum level of intensity and the parties involved in the conflict must have a minimum degree of organisation.*[38]

The application of the law of armed conflict is not dependent on the type of military operation or on the specific means and methods of warfare employed. Therefore, cyber operations alone, in the absence of kinetic operations, can bring a non-international armed conflict into existence – provided the organization and intensity criteria are met.[39]

Additionally, various States foresee such cyber NIACs as a possibility. For example, France's position is that an 'armed conflict consisting exclusively of digital activities cannot be ruled out in principle'[40] and that 'prolonged cyberoperations by government armed forces against one or more armed groups or by several armed groups between themselves may constitute a non-international armed conflict (NIAC).'[41]

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[38] Michael Schmitt, The Law of Cyber Armed Conflict. in Michael Schmitt (ed), Tallinn Manual 20 on the International Law Applicable to Cyber Operations (Cambridge University Press 2017) 373-562, rule 83

[39] Ibid, rule 83, commentary, para 2

[40] ICRC, 'National position of France (2019)' (Cyber Law Toolkit, 1 April 2022) <https://cyberlaw.ccdcoe.org/wiki/National_position_of_France_(2019)> accessed 15 July 2022

[41] Ibid

Similarly, Germany's position is that 'cyber operations between a non-State actor and a State alone may provoke a non-international armed conflict'[42] whilst ruling out cyber activities such as 'large-scale intrusion into foreign cyber systems, significant data theft, the blocking of internet services and the defacing of governmental channels or websites'[43] in themselves will not bring about a NIAC. Mačák[44] opines that other States should follow in France and Germany's footsteps to allow for a gradual consolidation of the law relating to cyber NIACs.

Therefore, cyber NIACs are indeed a possibility and State practice suggests an acknowledgement of this reality. It now remains to be seen how the two-fold criteria of organization and intensity can possibly adapt to this new reality.

4. Missing the Forest for the Trees? How Differences Between the Physical and Cyber Domains Impact the Classification of Cyber NIACs

The traditional criteria of 'organization' and 'intensity' were derived by observing physical (kinetic) conflicts prevalent in the latter half of the 20th Century and resultantly, they may seem inadequate when it comes to classifying cyber NIACs. This is because these two-fold criteria cannot be split from the contextual circumstances that birthed them i.e., physical conflicts and any attempt to apply criteria derived from observing the physical domain to the cyber domain cannot be properly done without understanding the far-reaching differences that exist between the physical and cyber domains and how these differences have an impact on how the conflict unfolds.

Lin[45] argues that, inter alia, venue for conflict, capabilities of non-state actors and distance and natural borders are some elements which impact how a cyber conflict differs from a physical (kinetic) one. When it comes to the venue for conflict, Lin argues that in physical conflicts, 'many military activities (specifically, those in the air and on or under the ocean) occur in a space that is largely separate from the space in which large numbers of civilians are found.'[46] Whereas in cyber

[42] ICRC, 'National position of Germany (2021)' (Cyber Law Toolkit, 1 April 2022) <https://cyberlaw.ccdcoe.org/wiki/National_position_of_Germany_(2021)> accessed 15 July 2022

[43] ibid

[44] Kubo Mačák, 'Unblurring the lines: military cyber operations and international law' [2021] 6(3) Journal of Cyber Policy 411-428

[45] Herbert Lin, 'Cyber conflict and international humanitarian law' [2012] 94 International Review of the Red Cross 515-531

[46] Ibid

conflicts, 'the space in which many military activities occur is one in which civilians are ubiquitous.'[47]

The capabilities of non-state actors in physical conflicts can be measured by the effects they produce which, in turn, is determined by the number of personnel that can engage in combat.[48] Whereas in cyber conflicts, non-state actors can leverage the capabilities of ICT[49] to produce large-scale effects without necessarily having a large number of personnel. Lastly, Lin argues that in physical conflicts, distance looms large, and violations of national borders are significant.[50] But in cyber conflicts, distance is irrelevant, and penetrations of national boundaries for both attack and exploitation occur routinely and without being noticed.[51]

As a result of these differences, it is easy to conclude that the aforementioned 'constraints' associated with physical conflicts necessitate a non-state armed group to recruit as many personnel as possible to engage in hostilities to produce substantial results. Depending on the agenda of such a non-state armed group, it will also be seeking to occupy parts of the territory of the State it is engaged in hostilities with. Whereas a cyber-militia can mount sophisticated cyber-attacks against a State which can yield equally destructive results without having to recruit substantial personnel and occupy parts of the territory of such a State.

4.1. The Stuxnet Example

As a case study, Stuxnet offers us a window into how cyber operations are interpreted differently in juxtaposition to kinetic operations.[52] Stuxnet was a worm designed to target gas centrifuges used in Iran's uranium enrichment program in Natanz. Stuxnet is credited for the breakage of as many as 1,000 of the centrifuges and resultantly, setting Iran's nuclear program back by several years.[53] The entire 'operation' is said to have consisted of at least three 'waves'

[47] Ibid
[48] Ibid
[49] Information & Communications Technology
[50] Lin, n. 46
[51] ibid
[52] The question of whether Stuxnet was the work of a state or someone else is debated. See Schmitt, n. 25, page 240.
[53] John Markoff, 'Malware Aimed at Iran Hit Five Sites, Report Says' (New York Times, 11 February 2011) <https://www.nytimes.com/2011/02/13/science/13stuxnet.html> accessed 20 July 2022

over a period of 10 months[54] while the worm itself is said to have been created by a team of just 8-10 people.[55]

However, despite its 'physical' destructive effects and the fact that the operation associated with it was carried out over a considerable period, Stuxnet is not seen as qualifying the intensity requirement for an NIAC.[56] This is an example of how cyber operations have come to be seen through the lens typically used for characterizing kinetic operations.

It is not surprising then that very few or rarely will a cyber operation carried out by a cyber-militia amount to an NIAC even though such operations continue to have the same destructive effects as those of kinetic operations without the cyber-militia having to go through the trouble of maintaining substantial 'troop members' or 'occupying territory.'

4.2. The Case for Lowering the Threshold of NIACs in Cyberspace?

Perhaps the problem is employing a 'one size fits all' approach towards classifying cyber NIACs with reference to criteria derived from physical conflicts. Schmitt[57] foresees non-State actors engaging in ever more destructive and disruptive cyber operations and accordingly, expects that States will eventually lower the current threshold of 'organization' and 'intensity' when it comes to cyber operations. This approach makes sense as it acknowledges the differences between the physical and cyber domains.

However, agreeing to a lower threshold for cyber NIACs is not something that States will readily accept since typically States have a greater tendency to guard against regulation of their domestic affairs by international law.[58] In the meantime, we continue to witness the central role acquired by non-state actors in cyberspace, clearly demonstrating their ability and attitude to participate in cyberwarfare either alongside or against State actors.[59]

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[54] Foltz Andrew, 'Stuxnet, Schmitt Analysis, and the Cyber "Use-of-Force" Debate' [2012] (67) Joint Force Quarterly 40-48, page 44

[55] Bruce Schneier, 'The Story Behind the Stuxnet Virus' (Forbes, 7 October 2010) <https://www.forbes.com/2010/10/06/iran-nuclear-computer-technology-security-stuxnet-worm.html?sh=522c8a5151e8> accessed 25 July 2022Foltz Andrew, 'Stuxnet, Schmitt Analysis, and the Cyber "Use-of-Force" Debate' [2012] 0(67) Joint Force Quarterly 40-48

[56] Geiss, n. 27, page 633

[57] Schmitt, n. 25, page 250

[58] Geneva Convention III (Commentary of 2020), Art. 3, para 450

[59] CSIS, 'Significant Cyber Incidents' (Centre for Strategic and International Studies) <https://www.csis.org/programs/strategic-technologies-program/significant-cyber-incidents> accessed 27 July 2022

5. Conclusion

As discussed above, the rise of cyber-militias coupled with society's ever-increasing reliance on cyber infrastructure have put into doubt the utility of the existing criteria of 'organization' and 'intensity' used to classify a NIAC. The fact that these criteria are a product of a time when physical conflicts were the norm make them incompatible with a time where conflicts are moving towards cyberspace which has characteristics different from that of physical space. While States are continuing to recognize that in principle, a cyber NIAC may be possible, the conversation needs to move beyond that and arrive at either lowering the threshold of NIAC for cyber NIACs or arrive at a new set of criteria fit for cyberspace. As Schmitt notes:

> *International law necessarily evolves over time in order to ensure that the applicable normative architecture remains responsive to the context in which it applies. That dynamic occurs in three ways – through new treaty law, through the crystallization of new norms of international customary law, and by means of interpretation of existing treaty or customary law.*[60]

Until such normative evolution of international law relating to cyber operations occurs (when States sit down and meaningfully address issues relating to cyberspace), cyber-militias continue to operate in a 'vacuum.'

[60] Micheal Schmitt, 'The Law of Cyber Conflict: Quo Vadis?' (Articles of War, 22 July 2022) <https://lieber.westpoint.edu/law-cyber-conflict-quo-vadis/> accessed 28 July 2022

THE INDUS WATERS TREATY (IWT) AND THE CONTENTIONS OF SOVEREIGNTY IN THE INDUS BASIN

Khadija Naeem Khan[*]

Abstract

Pakistan and India are co-riparian countries which share the waters of the Indus Basin. There are six major rivers in the Indus Delta which originate in the Himalayas. Initially, the newly created states of Pakistan and India viewed their right over these rivers from a mutually exclusive and divergent lens of state sovereignty, based on these states' separate but parallel independence movements. Pakistan's conception of nationalism was not strictly territorial, while the Indian state asserted absolute sovereignty over the rivers that flowed through its territory. World Bank mediation found a legal compromise between the divergent views and led to the IWT (1960). The treaty approached the seemingly intractable problem from a technical, economic and political angle. The two states compromised on their historical conception of sovereignty for the sake of cooperative development and management of the Indus Basin. The article concludes that the transboundary water disputes which involve fundamentally different interpretations of sovereignty can hardly be resolved by universal and legalistic frameworks.

Keywords: Indus Water Treaty, Kashmir, Water Distribution, Water Management, Mediation.

> *"Fierce competition over fresh water may well become a source of conflict and wars in the future." - Kofi Annan (March 2001)*[1]

The Indus Water Treaty was signed between Pakistan and India in 1960.[2] During the last 62 years, the Treaty has survived constant political tension and two full-fledged wars between the South Asian neighbours.[3] On the one hand, the Treaty

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[1] The New Humanitarian, 'Water and Conflict' (22 April 2014) <https://www.thenewhumanitarian.org/analysis/2014/04/22/water-and-conflict#:~:text=In%202001%20then%20UN%20Secretary,a%20"catalyst%20for%20cooperation".> accessed 24 May 2022.

[2] Muhammad Nawaz Bhatti, Ghulam Mustafa and Muhammad Waris, 'Challenges to Indus Waters Treaty and Options for Pakistan' (2019) 4 Global Regional Review 249.

[3] Dr. Shaheen Akhtar, 'Emerging Challenges to Indus Waters Treaty' (2010) XXVIII Regional Studies 3.

has been championed as the ultimate success story of co-riparian cooperation, which can act as a guide for other transnational water distribution conflicts.[4] On the flipside, its detractors have dubbed it as an attempt at 'peaceful non-cooperation'.[5] This criticism is not without merit as the Treaty has sidestepped the difficulty of water distribution by dividing the rivers into 'Pakistani rivers' (Indus, Jhelum and Chenab) and 'Indian rivers' (Ravi, Beas and Sutlej).[6] This unique resolution has its genesis in the peculiar construction of national sovereignty in the Indian sub-continent.[7]

The two states of India and Pakistan were created in 1947 through the decolonisation of the Indian sub-continent. Historically speaking, the Indian sub-continent had never been a unified 'state' in the Westphalian connotation of the word. Even during the British Raj, there were 565 'princely states' which shared sovereignty with the British Raj.[8] The colonial powers possessed and regarded sovereignty not simply as uncontested control over territory, but as the very means of legitimacy of the state.[9] Simply put, foreign rule was peddled as 'legitimate' because it had created a centrally governed state where historically such a state had never existed. Resultantly, the Indian political tradition imagined freedom not as a simple eviction of foreign rule, but an active and positive replacement of legitimacy. The newly independent dominions were insecure about their moral right to assert legitimate control of the territories. After decolonisation, the ability to exert uncontested and exclusive control over natural resources thus became a test for their legitimacy. The correlation between sovereignty and legitimacy was so strong during the largely legalistic independence movement that the direction of causality was reversed in political discourse. Whereas in Western thought, state sovereignty flowed from political legitimacy, post-colonial political systems imagined political legitimacy of the nascent governments as a corollary of territorial sovereignty. Even the idea of negotiation or a perception of compromise over the flow of rivers resuscitated the humiliation of colonialism in the socio-political conscience. Such an environment of existential insecurity was absolutely antithetical to a peaceful resolution of the

[4] ibid
[5] Daniel Haines, *Rivers Divided: Indus Basin Waters in the Making of India and Pakistan* (Hurst, 2017) 23.
[6] Douglas Hill, 'Boundaries, scale and power in South Asia' in Devleena Ghoush, Heather Goodall and Stepheinie Hemelryk Donald (eds), *Water, Sovereignty and Borders in Asia and Oceana* (Routledge, 2009)
[7] ibid (n 5) 29.
[8] Ayesha Jalal, *The Struggle for Pakistan: A Muslim Homeland and Global Politics* (Harvard, 2014) 34.
[9] Ibid (n 5) 27.

transboundary water disputes between Pakistan and India. Since negotiation implies compromise, the two governments were not ideally placed viz-a-viz their respective domestic political scene to negotiate over shared waters. Any form of mutual accommodation would be onerous to their political legitimacy.

Rivers flow across international borders, with huge implications for state sovereignty.[10] Broadly speaking, there are two approaches to state sovereignty over the flow of rivers. Both these approaches find their proponents not only in the Indus Basin but the world over. The first approach is what may be called 'territorial sovereignty'. It asserts that a country has absolute control over the rivers which flow through its territory.[11] India in the Indus Basin and Turkey in its transboundary water dispute over the Euphrates and the Tigris have advocated this approach.[12] The lower-riparian states like Pakistan in the Indus Basin, and Egypt in the Nile Delta, have historically challenged this conception of sovereignty. These lower-riparian countries have instead claimed 'territorial integrity' as the basis of water distribution. This principle attaches a higher value to the right created through prior-use of water.[13] Simply put, the advocates of the prior-use concept assert that downstream population(s) have a right of non-reduction in the volume they have historically drawn from a water channel. The two principles, diametrically opposed to each other, interpret the concept of state sovereignty from mutually exclusive vantage points.

A historical survey of the negotiations between Syria and Turkey over the distribution of water from the Euphrates and the Tigris is the closest parallel to the Pakistan-India dynamic in the Indus Basin. The ancient Sumerian civilization evolved on the banks of the Euphrates; the rivers have thus historically been synonymous with life and development, long before the contraption of borders and nation-states. Turkey is an upper-riparian country with more economic, geographic and political power at its disposal – a parallel can be drawn with India's position in the Indus Basin. Upper-riparian status coupled with a favourable power asymmetry is a "structural dilemma" for lower-riparian and weaker states.[14] Turkey claims absolute sovereignty over both these rivers, and retains that assertion, in the face of "concessions" afforded to Syria in the "spirit

[10] Undala Z. Alam, 'Questioning the Water Wars Rationale: A Case Study of the Indus Waters Treaty' (2002) 168 The Geographical Journal 341.
[11] Ibid (n 5) 37.
[12] Ibid (n 5) 37.
[13] Ibid (n 5) 39.
[14] Jeffery Z. Rubin and William I. Zartman, 'Asymmetric negotiations: Some survey results that may surprise' (1995) 11(4) Negotiation Journal 349.

of good neighbourly relations."[15] The Turkish President said in 1990, "Turkey refused to have to share the Euphrates waters because the Euphrates is a Turkish river".[16] The threat of decreased flow to Syria and Iraq was made real with the announcement of South-Eastern Anatolia Project (GAP) by Turkey.[17] It was only through issue-linkage of Kurdish unrest with water distribution, and the joint bargaining position of Syria and Iraq, that Turkey agreed to a minimum water supply of 500 m^3/second.[18] It was a practical approach to negotiation, unencumbered and uninstructed by the international law on water distribution. It was realpolitik pure and simple. As the analysis of the IWT would further substantiate, the most enduring of the water-sharing agreements are grounded in practical, rather than legalistic frameworks.

As early as 1949, the Indian government viewed the rivers passing through its territory with no consequential distinction from the land they passed over. Just as sovereignty over Indian territory was non-negotiable, exclusive sovereignty was also imagined over the river water that flowed over the Indian territory. The fact that the rivers flowed first through India made her their sole custodian, and any down-riparian state could only utilize as much of the waters as was surplus to the Indian needs. Hence, at the Karachi Conference (1949), India insisted upon the recognition of her absolute claim "over every drop of water" that passed through the Indian state of Punjab to Pakistan.[19] This imagination of sovereignty is the ecological equivalent of the Westphalian model of the nation-state.[20] The imagination renders the nation-state as the focal point and the prime actor in the international system. This approach has been criticised for being reductionist in the sense that it completely ignores the natural interdependencies in the transboundary water sharing.[21] Natural phenomena like the monsoon, and the natural course of rivers, put continuous strain on this idea of absolute sovereignty. This rendition of sovereignty was particularly suited to India in the sub-continent because it was not only the upper-riparian country, but also a more powerful

[15] Marwa Daoudy, 'Asymmetric Power: Negotiating Water in the Euphrates and Tigris' (2009) 14(2) International Negotiation 361.
[16] Hasan Chalaby and Tarek Majzoub, 'Turkey, the Waters of the Euphrates and Public International Law' in A. Coddington (eds), *Theories of the Bargaining Process* (Aldine, 1968).
[17] Ibid (n 14) 377.
[18] Ibid.
[19] Dante Augusto Caponera, 'International Water Resources Law in the Indus Basin' in Muhammad Ali (eds) *Water Resources Policy for Asia* (Balkema, 1987) 509.
[20] Undala Alam, Ousmane Dione and Paul Jefferey, 'The benefit-sharing principle: Implementing sovereignty bargains on water' (2009) 28 Political Geography 90.
[21] Ibid 357.

one.[22] This power asymmetry disincentivized cooperation. The realist school of International Relations posits that the fundamental objective of the state is to maximize power, whereas state power is reduced through bilateral or institutional cooperation.[23] Negotiation, settlement and cooperation, then, was regarded by India as a compromise on sovereignty, without any real compulsion or incentive to do so, much less with a weaker and vulnerable lower-riparian Pakistan.

The primary legal argument by Pakistan was the right of prior usage. It was a rights-oriented approach to sovereignty which asserted that historic usage created a legally enforceable right for future availability. If the Indian claim to sovereignty was territorial, Pakistan's idea of it was ground in history. This approach deemphasized the role of territory in sovereignty and found its origins in the people inhabiting that defined geographical area. This approach assumed that the sovereign rights vest in people, not geography.[24] It asserted the right of the people of Pakistan to use the water of the Indus Basin for agriculture, industry and other developmental needs. This disposition can also be traced back to the political discourse during the Pakistan Movement. The All India Muslim League had popularized the idea of Pakistan through what they called a 'Two-Nation Theory'.[25] It was basically nationalism based upon a distinct Muslim conception of nationhood which posited that Muslims and Hindus living in pre-partition India differed not only in religion, but that their whole weltanschauung was so different from each other that they constituted two separate nations.[26] Whereas the leadership of the Indian National Congress revolved its political discourse around the 'state', the Muslim League based its creed on the 'nation'.

The Western concept of the *nation-state* thus stood fractured and de-hyphenated in the Indian sub-continent. Consequently, the welfare of the Muslim nation became the primary test of sovereignty in Pakistan. India rebutted this interpretation by importing the Harmon Doctrine. Judson Harmon, the then United States Attorney General, claimed that recognition of the so-called right of prior-use would result in a perpetual servitude of the upper-riparian country to the whims of the lower-riparian one.[27] He emphasized that sovereignty could not be held hostage to compromise. However, this doctrine never gained traction in

[22] Ibid (n 3).
[23] Arild Vatn, 'Resource Regimes and Cooperation' (2007) 24(4) Land Use Policy 624.
[24] Ibid (n 5) 43.
[25] Ibid (n 8) 108.
[26] Ibid.
[27] Stephen C. McCaffrey, 'The Harmon Doctrine One Hundred Years Later: Buried, Not Praised' (1996) 36 Nat. Resources J. 549.

American jurisprudence because of its own lower-riparian status vis-à-vis Canada.[28]

The IWT (1960) was an attempt to reconcile the aforementioned disparate perspectives on sovereignty.[29] The World Bank mediated treaty avoided the legalistic interpretations of the two approaches altogether. Instead, it approached the issue of water distribution from the lens of economics and hydrological engineering. Pakistan's stance of "no appreciable harm"[30] was taken into account by the commitment of aid for building link-canals, barrages and dams. On the other hand, India's desire for "equitable distribution"[31] was accorded recognition by an exclusive allocation of the three eastern rivers to India. The IWT is unique in the sense that it is not based upon any covenant or dictum of International Law.[32] It is instead based upon geographical imperatives and political expediency. The existence of active hostility between Pakistan and India had rendered moot the ideal of joint development of the rivers. At the same time, an absolute acceptance of either's viewpoint on sovereignty would have invariably led to conflict.[33] It was owing to the mediation of the good offices of the World Bank that the two parties could find middle-ground over the contentious issue of sovereignty over the shared rivers.[34]

India's acquiescence to the treaty meant an accommodation on its historic interpretation of sovereignty in two ways. First, by accepting the primary right of Pakistan over the three western rivers, it backtracked from its earlier stance of absolute sovereignty. Secondly, by accepting restrictions on the extent of development on the western rivers, and the restriction against changing the course of rivers even within Indian territory, it accepted joint ownership of natural resources. On Pakistan's part, it too retracted from the hardened stance regarding the right of prior usage. Pakistan had previously claimed that the prior appropriation gave it the right to receive the same quantity of water and from the same sources. By surrendering the right over the three eastern rivers, it rebutted its own argument in principle. The treaty, therefore, was a marriage of convenience between diametrically opposing views on sovereignty. In the legal sense, it might be too arbitrary and expedient to serve as a beacon for

[28] Ibid.
[29] Ibid (n 3) 4.
[30] Ibid (n 5) 14.
[31] Ibid.
[32] Ibid (n 14) 90.
[33] Ibid (n 7) 108.
[34] Undala Alam, 'Water Rationality: Mediating the Indus Waters Treaty' (PhD Dissertation, University of Durham 1998).

transboundary water conflicts in other parts of the world. However, it can serve as an ideal for peaceful settlements by demonstrating that no matter how intractable the dispute, it can be resolved with political will and institutional mediation. This successful compromise on the fundamental identity of nationhood can be rightfully credited to the mediation of the World Bank. The Government of Pakistan recognized the value of its mediation in the following words:[35]

> *Indeed, without the aid of good offices such as you have offered, little, if any, progress toward a constructive solution could be anticipated. Three years of direct negotiations had failed to achieve agreement even on a procedure for reaching a solution.*

Pakistan and India had negotiated for three years without success before the World Bank undertook a mediation role. As discussed above, states as realist actors with asymmetric power create a dynamic of non-cooperation. Only through the intervention of supra-national organizations can this asymmetry be bridged to a certain extent. The presence of active hostility between co-riparian states necessitates a further consideration of security on the part of the lower-riparian state. Water is increasingly being viewed as a strategic resource by countries; with a vital importance for national development and an acute scarcity in the face of climate change and population growth. Hence, the value of mediation by supra-national organizations like the World Bank in securing and ensuring an acceptable compromise on national sovereignty cannot be overstated. Moreover, the World Bank facilitated the IWT by securing the necessary financing for hydro-development in Pakistan.[36] The rendering of economic resources for canal development made the treaty acceptable to Pakistan. As Aloys Michel has succinctly put it, "The final treaty was published as an Annexure to the Development Fund Agreement rather than vice versa."[37] The development aid, just shy of $1 billion, was provided by the international community. It also goes to prove that an ostensibly intractable water conflict can be resolved with international co-operation and through the auspices of international organizations.

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[35] Government of Pakistan, International Bank for Reconstruction and Development, Memo IBRD-25/9/61a, (1961).

[36] Erum Sattar, Jason Robison and Daniel McCool, 'Evolution of Water Institutions in the Indus River Basin: Reflections from the Law of the Colorado River' (2018) 51 University of Michigan Journal of Law Reform 751.

[37] David Gilmartin, Blood and Water: The Indus River Basin in Modern History (University of California Press, 2020) 228

The lessons of the Indus Water Treaty can be imported to the Iberian Peninsula and the Tigris-Euphrates Valley. In the Iberian Peninsula, for example, Spain is the upper-riparian country and Portugal the lower-riparian one. Although relations between the two countries are much more amenable than those between Pakistan and India, the scarcity of water creates the same dynamic of contesting claims of sovereignty. Until 1990, the water distribution mechanism between the two countries was smooth, albeit exploitatively favourable to Spain.[38] However, membership of the European Union proved to be a watershed moment which corrected the power asymmetry between the two neighbours.[39] The 1998 Albufeira Convention is representative of the changed power equation. The said convention is based upon International Law and European Union treaties on water distribution.[40] Lopes has argued that the framework only allows for joint management of the Iberian Basin and disincentivizes cooperation.[41] Resultantly, the hegemonic position of Spain is not sufficiently diluted and remains a source of continuous Portuguese anxiety. Factors such as recent Spanish plans to withdraw a larger proportion of water than in the past has created a sense of anxiety in Portugal. Conversely, a co-operative framework like the IWT can lead to a fair and judicious distribution of water by transforming the question of sovereignty into a matter of equity. The lessons of pragmatism, economic and technical negotiations, and mediation of a supra-national organization, can serve as a guide in the long-term water rationality and water-resource management in the Peninsula.[42]

In short, the IWT is an institutionalized compromise between competing claims and adversarial interpretations of state sovereignty. These conflicting claims find their roots in the equally divergent ideologies of nationalism during the independence movement of Pakistan and India. After partition, the positions of both sides were gradually refined and hardened. For each, a compromise on the river waters had become a formidable task because of the popular imagination of sovereignty in the social conscience. The treaty is vulnerable to criticism as an opportunistic, unprincipled and arbitrary settlement which failed to address the problem of cooperation between the two countries. However, the fact remains that the treaty has withstood the test of time and survived two full-fledged wars.

[38] Paula Duarte Lopes, 'Governing Iberian Rivers: from bilateral management to common basin governance?' (2012) 12 International Environmental Agreements: Politics, Law and Economics 251.
[39] Ibid.
[40] Ibid.
[41] Ibid.
[42] Article 2, The Indus Waters Treaty 1960.

If such enduring understanding can happen in the inhospitable political environment of South Asia, it surely augurs well for other transboundary water disputes in the world.

INVESTOR-STATE DISPUTE SETTLEMENT, ITS EXISTING MECHANISM AND THE ALTERNATIVES: A WAY FORWARD FOR PAKISTAN

Muhammad Wahaj Sohail *

Abstract

The initial intent of Investor-State Dispute Settlement (ISDS), which constantly features in International Investment Agreements (IIAs), was to aid international investors and shield them from unjust and unlawful treatment by host countries. However, in practice, it has been criticized for structural flaws that restrict the host country's authority while enforcing policies that promote the welfare of the general public. The disputes over foreign investments have also put countries at risk of paying billions of dollars in compensation if they choose not to comply with the demands of powerful corporations. Pakistan, a developing economy, is the pioneer in implementing ISDS in order to facilitate foreign investors. However, frequent international investment disputes and the structural flaws of ISDS have led Pakistan to revise its investment strategy by initiating the process to either renegotiate or terminate the existing bilateral investment treaties (BITs). Foreign investors, however, would be hesitant to make an investment in Pakistan without some form of legal protection. Therefore, Pakistan needs to consider alternatives to ISDS. This paper explores four alternative ISDS strategies that, whether utilized individually or in concert, may better achieve the intended goals of ISDS. It focuses on these alternatives in light of Pakistan's revised investment strategy.

Keywords: ISDS; ICSID; Dispute Settlement; Foreign Direct Investment (FDI); International Investment Agreements (IIAs); Bilateral Investment Treaties (BITs).

1. Introduction

International investment agreements (IIAs) frequently include the investor-state dispute settlement (ISDS) mechanism. There is plenty of information available for examining countries' responses to ISDS across various IIAs and the application of the pertinent rules in arbitral procedures thanks to the existing body

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of treaties and arbitral decisions, both of which have developed significantly over the past several years.[1]

A vast majority of states have agreed on the laws and regulations regulating ISDS. The Convention on the Settlement of International Investment Disputes (the ICSID Convention) governs most of the ISDS proceedings. Furthermore, the Arbitration Rules, developed by the United Nations Commission on International Trade Law (UNCITRAL) and adopted by the United Nations General Assembly in December 1976, apply to the second largest group of ISDS cases. Lastly, the 1958 New York Convention on Recognition and Execution of Foreign Arbitral Awards (the New York Convention) guarantees the enforcement of arbitral awards under non-ICISD proceedings.[2]

Countries had aimed to establish a neutral venue that affords the chance of a fair hearing before a tribunal unencumbered by domestic political factors by setting up a framework for the resolution of disputes between investors and states. International arbitration was anticipated to have other benefits beyond just acting as a depoliticized platform for dispute resolution, including the possibility of being quicker, less expensive, and more adjustable than existing dispute resolution mechanisms. In addition, international conventions conveniently permit the enforcement of arbitral rulings in the majority of states.[3]

However, in actuality, the functioning of ISDS under IIAs has given rise to doubts concerning structural flaws in the existing mechanism. As measures opposed by investors increasingly entail problems like protection of the environment, public health, or other aspects of governance, the majority of ISDS disputes are not merely economic disputes but instead involve matters of public policy. Arbitral tribunals that are constituted on an ad-hoc basis make decisions on these issues, although many have doubts about the competence of arbitrators and the legality

[1] Joachim Pohl, Kekeletso Mashigo and Alexis Nohen, "Dispute Settlement Provisions in International Investment Agreements: A Large Sample Survey", (2012) OECD Working Papers on International Investment, OECD Publishing. http://dx.doi.org/10.1787/5k8xb71nf628-en accessed on 23 September 2022.

[2] Arbitration Institute of the Stockholm Chamber of Commerce, "ISDS Factsheet", https://sccinstitute.com/media/148946/investor-state-dispute-settlement-isds-_a5_ny-framsida.pdf accessed on 25 September 2022.

[3] UNCTAD, "World Investment Report: Global Value Chains: Investment and Trade for Development", (2013) Sales No. E.13. II. D.5.

of their making such decisions on what are fundamentally concerns of public policy.[4]

Despite the fact that ISDS has become increasingly open over time, not all awards are disclosed, and parties may choose to keep the existence of procedures secret. Even when a dispute concerns issues of public importance, ISDS procedures can nonetheless be kept totally secret if both disputing parties so want. This applies to arbitration proceedings conducted in accordance with arbitration rules other than ICSID, as only ICSID maintains a public database of arbitrations and also to disputes in which neither Canada nor the United States are parties, because both countries make public information about all disputes against them.[5]

Additionally, the awards are frequently uneven, and the current review systems are unable to successfully resolve opposing viewpoints or reverse erroneous verdicts. Lastly, proceedings are typically expensive and drawn out.[6] The majority of the cost is comprised of the fees and outlays spent by each party on its attorneys and consultants. They are predicted to account for, on average, 82% of a case's overall expenses. On average, arbitrator fees make up about 16% of expenditures. In comparison, institutional fees paid to institutions that administer arbitration and provide secretariat services, such as the ICSID, are minimal, accounting for only about 2% of total expenditures.[7]

In view of the above-mentioned loopholes and other related concerns, Pakistan has introduced a strategy to revise its approach towards ISDS. Pakistan, being a pioneer in the field of BITs, has signed a total of 53 BITs with various states, of which 32 were in forced, 5 were terminated before being in forced, and 16 were only signed. However, the previous government had initiated the process to either renegotiate or terminate the existing BITs in order to prevent international commercial contracts with foreign corporations from being excessively and unjustly exploited through ISDS.

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[4] See UNCTAD, "Reforming Investment Dispute Settlement: A Stocktaking" (2019) IIA Issues Note, Issue No. 1, https://unctad.org/system/files/official-document/diaepcbinf2019d3_en.pdf accessed on 27 September 2022.

[5] UNCTAD, "Transparency: UNCTAD Series on Issues in International Investment Agreements II", (2012) UNCTAD/DIAE/IA/2011/6.

[6] Ibid 4.

[7] See, for instance, David Gaukrodger and Kathryn Gordon, "Investor-State Dispute Settlement: A Scoping Paper for the Investment Policy Community", (2012) OECD Working Papers on International Investment, 2012/03, OECD Publishing. http://dx.doi.org/10.1787/5k46b1r85j6f-en accessed on 20 July 2022.

This article will examine the criticism of the existing ISDS mechanism, the revised ISDS strategy of Pakistan, and finally, a possible course of action for Pakistan by exploring the alternatives to ISDS.

2. Existing ISDS Mechanism and its Criticism

In the late 1960s and early 1970s, states began incorporating ISDS into their investment treaties; by the 1990s, this treaty component had become ubiquitous. Without ISDS, a foreign investor had two options to pursue if a host state expropriated the property of a foreign investor or otherwise interfered with its investment. Firstly, the investor might file a complaint with the host state's local courts or administrative tribunals. When investors sought such relief, they frequently encountered obstacles that prevented them from recovering their losses, such as local sovereign immunity or an untrustworthy court that could be swayed by the host state's political leaders.[8]

Secondly, in the event that domestic courts were ineffectual, a foreign investor's only remaining option was to persuade their own government to support their case, for instance, by exercising diplomatic protection.[9] This might be a formidable tool for investors from developed states, but even developed states are often unwilling to act on behalf of investors when higher political concerns are involved. The obstacle to obtaining promulgation might be quite high for a smaller investor lacking political influence in a particular dispute. Even if an investor receives an endorsement, the claim would still be sent to their home state, which may decide whether to proceed or even settle it.[10]

Additionally, the state, not the investor, would technically be the owner of the earnings from the dispute. Additionally, transnational companies (TNCs) may find it challenging to precisely identify their nationality for the purposes of establishing a claim to diplomatic protection if they have affiliates in multiple countries.[11]

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[8] UNCTAD, "Investor–State Dispute Settlement and Impact on Investment Rulemaking", (2007) UNCTAD/ITE/IIA/2007/3.

[9] Edwin Borchard, *The Diplomatic Protection of Citizens Abroad* (Banks Law Publishing, 1915).

[10] Arseni Matveev, "Investor-State Dispute Settlement: The Evolving Balance between Investor Protection and State Sovereignty", (2016) UWA Law Review, Vol. 40, Issue No. 1, pp. 348-386.

[11] Eleonora Alabrese and Bruno Casella, "The Blurring of Corporate Investor Nationality and Complex Ownership Structures" in UNCTAD, "Transnational Corporations: Investment and Development", (2020) Vol. 27, No. 1, pp. 115-137.

In order to provide investors with the chance of a fair hearing before a tribunal unfettered by local political factors and able to concentrate on the legal issues in the dispute, states wanted to establish ISDS as a neutral apparatus. Furthermore, ISDS gave investors the option of presenting a claim to international arbitration without first having to persuade their home state to support it. Less powerful host states believed that impartial dispute resolution was a preferable option to caving into pressure from a strong home state. The issue of sovereign immunity was resolved by the states' early acquiescence to this type of adjudication in IIAs.[12]

The conclusion of the Convention on the Settlement of Investment Disputes (ICSID Convention) between States and Nationals of Other States in 1965 was motivated by the need to provide a neutral apparatus for ISDS. The International Centre on Settlement of Investment Disputes (ICSID) was created by the ICSID Convention as an international apparatus to handle disputes between foreign investors and host countries. Although many agreements also provide for arbitration under other arbitral procedures, IIAs frequently list ICSID arbitration as one of the remedies for resolving investment disputes.[13]

In addition to acting as a depoliticized apparatus, international arbitration was expected to provide additional benefits for resolving investor-state conflicts. Investors would be guaranteed impartiality and independence in the adjudication of their claims by a qualified and independent panel. Both sides might exert influence over the process by choosing arbitrators based on their experience of the expected issues in the case. Arbitration is often described as swifter, cheaper, and more flexible than other dispute settlement mechanisms. The advantages of arbitration over alternative conflict resolution processes are speed, cost, and flexibility. Additionally, the ICSID Convention and the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards both make arbitral awards easily enforceable in the majority of nations. Finally, international arbitration has remained the most prominent tool in settling international commercial disputes for centuries.[14]

[12]UNCTAD, "Reform of Investor-State Dispute Settlement: In Search of a Roadmap" (2013) IIA Issues Note, Issue No. 2 https://unctad.org/system/files/official-document/webdiaepcb2013d4_en.pdf accessed on 27 September 2022.
[13]Allen Weiner, Barry E. Carter, and Duncan B. Hollis, *International Law* (Wolters Kluwer, 2018, 7th ed.) pp. 412-425.
[14] Ibid 11.

However, questions regarding systemic flaws in the framework have been raised as a result of how ISDS under investment treaties really operates. They have a rich literary history and can be summed up as follows:[15]

2.1. Arbitrators—Issues with Party Nominations and Undue Incentives

Despite the fact that arbitrators are bound by ethical principles mandating independence and impartiality, an increase in challenges to arbitrators may suggest that disputing parties believe them to be prejudiced or inclined to a specific conclusion. A projected propensity for each disputing side to choose people who will support their position has given rise to specific concerns. These issues are amplified by the arbitrators' desire to be re-appointed in upcoming cases and their propensity to change positions frequently, as evidenced by the fact that such arbitrators are acting as counsel in some instances and as arbiters in others.[16]

2.2. Arbitral Decisions—Erroneous Decisions and Inconsistency Concerns

Arbitral verdicts that have become public have revealed recurrent instances of contradictory results. There have been discrepancies in the judgement of the merits of cases involving the same circumstances as well as different legal constructions of identical or similar treaty clauses. The duty to provide Fair and Equitable Treatment (FET), for example, is at a somewhat high level of abstraction and is subject to diverse interpretations. Major treaty obligations have been interpreted inconsistently, leaving it ambiguous as to what they represent and how they will be enforced in the future.[17]

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[15] See Michael Waibel, Asha Kaushal, Kwo-Hwa Chung & Claire Balchin, "The Backlash Against Investment Arbitration: Perceptions and Reality" in Michael Waibel, Asha Kaushal, Kyo-Hwa Chung & Claire Balchin eds, The Backlash Against Investment Arbitration (Kluwer Law International, 2010); David Gaukrodger and Kathryn Gordon, "Investor-State Dispute Settlement: A Scoping Paper for the Investment Policy Community", (2012) OECD Working Papers on International Investment, 2012/03, OECD Publishing. http://dx.doi.org/10.1787/5k46b1r85j6f-en accessed on 20 July 2022; Pia Eberhardt & Cecilia Olivet, "Profiting from injustice: how law firms, arbitrators and financiers are fuelling an investment arbitration boom", (2012) Corporate Europe Observatory and Transnational Institute, https://www.tni.org/files/download/profitingfrominjustice.pdf accessed on 20 July, 2022.

[16] Ibid 7, p. 19.

[17] Divergent conclusions can occasionally be explained by variations in the wording of the particular IIA that applies to a certain case, but they frequently reflect disparities in the opinions of individual arbitrators; also see UNCTAD, "Investor-State Dispute Settlement: A Sequel", (2014) UNCTAD Series on Issues in International Investment Agreements II, https://unctad.org/system/files/official-document/diaeia2013d2_en.pdf accessed on 21 July 2022.

Another issue is that decisions made by arbitrators without the benefit of meaningful scrutiny may be erroneous. The two review procedures that are now in place, the ICSID annulment procedure and national-court review at the place of arbitration for non-ICSID cases, both function within a limited sphere of jurisdiction. Notable is the possibility that, even having found apparent errors of law, an ICSID annulment committee may nonetheless be unable to reverse or rectify an award.[18] Additionally, since annulment committees, like arbitral tribunals, are formed on an ad-hoc basis to hear a specific dispute, they may reach contradictory decisions, further eroding the predictability of international investment law.[19]

2.3. Arbitrations—Costly and Time-Intensive

The oft-quoted idea that arbitration represents a quick and inexpensive method of dispute resolution has been called into question by existing ISDS practice. Costs are generally quite substantial, including legal fees and tribunal costs. This might put a major strain on public budgets for any nation, but especially for poorer ones. Even in cases where the state succeeds, tribunals have often refrained from requiring the claimant investor to cover the respondent's fees. Investors are also concerned about excessive costs, particularly for small and medium-sized businesses.[20]

2.4. Transparency and Legitimacy

Foreign investors have frequently utilized ISDS to contest state actions taken in the public interest. There have been concerns about whether three people who were selected on an ad-hoc basis had enough authority to evaluate the legality of state activities, especially when crucial public policy matters are at stake.[21]

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[18] See CMS Gas Transmission Company v. The Republic of Argentina, ICSID Case No. ARB/01/8, Decision of the ad hoc Committee on the application for annulment, 25 September 2007, paras. 97, 127, 136, 150, 157–159; The following reasons for annulment are listed in Article 52(1) of the ICSID Convention: (a) improper appointment of the arbitral tribunal; (b) manifest overreach on the part of the arbitral tribunal; (c) bribery of a member of the arbitral tribunal; (d) material deviation from a basic rule of procedure; or (e) lack of a statement of reasons in the arbitral award.

[19] Ibid 15.

[20] Ibid 14.

[21] See, for instance, Hulley Enterprises Limited (Cyprus) v. The Russian Federation, PCA Case No. AA 226; Yukos Universal Limited (Isle of Man) v. The Russian Federation, PCA Case No. AA 227; Veteran Petroleum Limited (Cyprus) v. The Russian Federation, PCA Case No. AA 228.

Furthermore, the system is much more transparent than it was in the early 2000s[22], but ISDS procedures can still be completely confidential if all parties to the dispute agree to it.[23] In order to take advantage of IIAs, including their ISDS mechanism, investors sometimes organize their investments through intermediate nations. This practice is known as nationality planning, and it raises additional concerns.[24]

3. ISDS Mechanism and Pakistan

International arbitration procedures have been widely used in Pakistan to settle disputes between the state and foreign investors. Furthermore, bilateral investment treaties (BITs), which offer protection for foreign investors and encourage foreign investment, typically include arbitration mechanisms when a multilateral or international framework is missing.[25] Germany and Pakistan signed the first BIT in 1959, and it has been in effect ever since.[26] Pakistan has concluded 53 BITs, and in accordance with Pakistani BIT regulations, investors have the right to approach ICSID for dispute resolution.[27]

Additionally, in 1965, Pakistan ratified the Convention on the Settlement of Investment Disputes between a State and Foreign Investor (Washington Convention). Under the Pakistan Arbitration Act, which was approved by parliament, the International Arbitration Act (AIID) was recognized. Moreover, an act implementing the International Convention on Settlement of Investment

[22] See, for instance, the 2013 rules on transparency in ISDS proceedings implemented by UNCITRAL and the 2006 amendments to the ICSID Arbitration Rules. Since they are intended to solely apply to arbitrations under upcoming IIAs, rather than all future arbitrations, the new guidelines for UNCITRAL have a limited impact. Simultaneously, UNCITRAL assigned the relevant working group the task to study the viability of an international convention that would apply the new UNCITRAL transparency criteria to ISDS proceedings under pre-existing IIAs for those States who ratify the convention.

[23] Ibid 4.

[24] Ibid 4.

[25] On this matter, there are only guidelines available. See the World Bank's Foreign Direct Investment Treatment Guidelines (1992). The Organization for Economic Cooperation and Development's discussions on a prospective Multilateral Agreement on Investment (the MAI Negotiating Text, dated February 14, 1998) concluded without an agreement.

[26] Treaty for the Promotion and Protection of Investments (with Protocol and exchange of notes), Germany and Pakistan, 25 November 1959, https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280132bef accessed on 21 July 2022.

[27] Details of Pakistan's BITs are available on UCTAD's Investment Policy Hub, https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280132bef accessed on 22 July 2022.

Disputes between States and Nationals of Other States was published by the Pakistani parliament on April 28, 2011.[28]

Eleven claims against Pakistan have so far been taken to ISDS by investors.[29] Foreign investors had brought these disputes to various international arbitral tribunals, putting the government of Pakistan at risk of billions of dollars in compensation. Consequently, it prompted Pakistan to reassess its stance on ISDS, particularly BITs, in 2013.[30] The process eventually led Pakistan to devise a revised strategy for reforming Pakistan's existing and future BITs with 48 countries.[31]

The Board of Investment (BOI) of Pakistan is mandated under Section 9 (m) of the Board of Investment Ordinance, 2001.[32] The BOI suggested in 2021 that 23 ratified bilateral investment treaties (BITs), which had reached the end of their initial period of 10, 15, or 20 years, be terminated with six months to one year's notice, along with the 16 unratified BITs.[33] Furthermore, it was proposed that contracting states be given the choice to renegotiate existing treaties using a new framework; but, if the party declines, the government should engage them to terminate BITs. The BOI suggested that a strategy may be used on a case-by-case basis in the event that the other states refused to comply, including getting them to sign the joint interpretation procedure to lessen any negative impacts. Moreover, it has been urged to work with contracting states to alter clauses relating to expropriation, ISDS, and FET. In August 2021, Pakistan formally initiated the process of implementing the revised strategy.[34]

4. A Way Forward for Pakistan

Since Pakistan has initiated the process of renegotiating and terminating the existing BITs in order to prevent the allegedly overt misuse of ISDS by foreign investors, it must take into account the alternatives to ISDS because foreign

[28] The Arbitration (International Investment Disputes) Act, 2011.
[29] See details of investors' claims against Pakistan on UCTAD's Investment Policy Hub, https://investmentpolicy.unctad.org/investment-dispute-settlement/country/160/pakistan accessed at 22 July, 2022.
[30] Zafar Bhutta, "Pakistan to Terminate 23 Bilateral Investment Treaties", The Express Tribune (Islamabad, August 05, 2021) https://tribune.com.pk/story/2313937/pakistan-to-terminate-23-bilateral-investment-treaties accessed at 22 July, 2022.
[31] Ibid.
[32] The Board of Investment Ordinance, 2001.
[33] Staff Report, "BOI Prepares Strategy for Reforming Bilateral Investment Treaties", Pakistan Today (Islamabad, April 02, 2021) https://profit.pakistantoday.com.pk/2021/04/03/boi-prepares-strategy-for-reforming-investment-treaties/ accessed at 22 July, 2022.
[34] Ibid 13.

investors would be reluctant to invest in the country without some form of legal protection, including the ability to sue in a neutral court in the event that a host country violates their fundamental as well as contractual rights.

This article examines four alternative ISDS strategies that, whether employed separately or in combination, may serve the often-stated goals more effectively. It focuses on how these alternatives could advance re-evaluated goals that are in line with the priorities of the revised investment strategy of Pakistan. These alternatives consist of:

a. inter-state collaboration and dispute settlement mechanisms

b. empowerment of domestic legal systems

c. employing current human rights mechanisms for specific types of reparation; and

d. the practice of investors utilizing risk insurance

Assumptions that ISDS is required or even ideal for good investment promotion or governance goals are called into question by the actual and anticipated roles of these alternatives. It is crucial for Pakistan to examine these alternatives, their complementary roles, and their benefits and drawbacks as instruments to serve contemporary, and even conventional, goals, particularly as substitutes to ISDS.

4.1. Inter-State Dispute Settlement

Many investment treaties already include inter-state dispute settlement provisions that allow states to file lawsuits against their treaty partners for damages suffered by investors; these provisions can be found both alone and frequently with ISDS.[35] Furthermore, certain matters are expressly exempt from the application of the ISDS regulations and may be settled entirely by the states, or sometimes before the ISDS can be approached on the issue. This phasing is intended to restrict the use of ISDS and provide more control over certain issues or policy matters for dispute settlement to national as well as treaty organizations.[36]

While there are some differences, the ways that inter-state dispute settlement would possibly influence investment flows by serving as an indicating function,

[35] Nathalie Bernasconi-Osterwalder, "State-State Dispute Settlement In Investment Treaties" in Kavaljit Singh, Burghard Ilge (eds.) *Rethinking Bilateral Investment Treaties* (Both Ends, Madhyam, SOMO 2014).

[36] See, for instance, Arts. 9.11(4)-(8), 9.19, Australia-China FTA; Art. 13(5), Australia-Hong Kong Investment Agreement.

exhibiting a reliable obligation, and having an effect on the rule of law are consistent with the theories regarding how ISDS might affect investor decisions. The enforcement of the commitment could not be as strong as with inter-state dispute settlement since there will be fewer possible claimants. However, there is evidence of a correlation between a decline in FDI in a host state and ISDS claims, including claims that were eventually fruitless.[37] The existence of ISDS cases may be an unreliable and overbroad indicator of whether commitments of states to investors are actually credible if the claims are premised on an interpretation of treaty obligations that goes beyond what the state parties to the treaty intended. This indicates that ISDS might possibly cause host nations to suffer unjustified reputational injury, resulting in declines in FDI for even treaty-compliant behaviour, which is at odds with the expanding investment flows purpose. By creating fewer claims claiming too broad interpretations of IIA obligations, inter-state dispute settlement may be able to prevent this scenario.

Inter-state mechanisms can promote fair, efficient, and rule-based domestic governance more effectively in terms of the domestic rule of law. To determine, for example, whether a state should or should not pursue claims of one of its investors or a class of investors, as well as to ensure decision-making is transparent and free from political influence, criteria and processes may be developed at the domestic level. The EU has developed procedures to address systemic issues with regard to the rule of law between its member states.[38]

In order to ensure that disputes are decided according to the rule of law rather than the exercise of power, treaties might either create rigidly legalized dispute resolution mechanisms or versions that incorporate more political elements, depending, for example, on the nature of the dispute.[39]

Last but not least, it's conceivable that some investors would see inter-state dispute mechanisms less favourably than ISDS in terms of recovering losses. However, in an inter-state system, it may nevertheless be more probable for states to file claims than for investors in the same situation. A shift to an inter-state

[37] Emma Aisbett, Matthias Busse, and Peter Nunnenkamp, "Investment Treaties as Deterrents of Host Country Discretion: The Impact of Investor-State Disputes on Foreign Direct Investment in Developing Countries" (2018) 154 Review of World Economics 119; Todd Allee and Clint Peinhardt, "Contingent Credibility: The Impact of Investment Treaty Violations on Foreign Direct Investment" (2011) 65 International Organization 401.

[38] Theodore Posner and Marguerite Walter, "The Abiding Role of State-State Engagement in the Resolution of Investor-State Disputes" in Jean E. Kalicki and Anna Joubin-Bret (eds), Reshaping the Investor-State Dispute Settlement System (Brill Nijhoff, 2015).

[39] Kenneth Abbott, Robert Keohane, Andrew Moravcsik, Anne-Marie Slaughter, and Duncan Snidal, "The Concept of Legalization'", (2000) 54(3) International Organization 401.

system might hurt investors' capacity to get financial awards to the degree that they win in ISDS cases, which is the current situation. Even so, there can be benefits for investors as well. Inter-state mechanisms might be used, for example, to obtain a declaratory decision that a specific domestic legislation of the host state is incompatible with the treaty, in addition to allowing the investor to remain anonymous. Inter-state mechanisms might be used, for example, to obtain a declaratory decision that a specific domestic legislation of the host state is incompatible with the treaty, allowing the investor to remain anonymous as well. Small investors or situations where the disputed measure has little or no dollar-value impact may find this to be very significant.[40]

Inter-state mechanisms might also be utilized to comprehensively resolve any claims made by investors from the home state who were harmed by the actions of the host state, with the possibility of disbursing the proceeds of that resolution to the aggrieved investors. Moreover, in some situations, the state may also initiate claims via an inter-state mechanism.

Therefore, reality paints a more nuanced picture, demonstrating an existing and potentially expanding role for home states in assisting investors in securing relief in investor-state disputes. This is in contrast to popular beliefs that investors want to work independently of their home governments; home states utilize investment treaties to block investor requests for diplomatic assistance; and home states' engagement with host states is invariably coercive and undesirable.

4.2. Empowering Domestic Legal Systems

A unilateral approach can be taken and used to enhance national legal systems. However, treaties could also help in monitoring, enforcing, and supporting those endeavours. For instance, treaties might establish:

- an impartial entity charged with producing reports on the rule of law in the treaty parties

[40] Martin Dietrich Brauch, "The Brazil-Mozambique and Brazil-Angola Cooperation and Investment Facilitation Agreements (CIFAs): A Descriptive Overview" (Investment Treaty News, 21 May 2015) https://www.iisd.org/itn/en/2015/05/21/the-brazil-mozambique-and-brazil-angola-cooperation-and-investment-facilitation-agreements-cifas-a-descriptive-overview/ accessed on 25 July, 2022; Nathalie Bernasconi-Osterwalder and Martin Dietrich Brauch, "Brazil's Innovative Approach to International Investment Law" (IISD Blog, 15 September 2015) https://www.iisd.org/articles/insight/brazils-innovative-approach-international-investment-law#:~:text=Unlike%20traditional%20BITs%2C%20Brazil's%20model,provisions%20for%20investor%E2%80%93state%20arbitration accessed on 25 July, 2022.

- pledges by the nations to defend and advance the rule of law as stated, as well as an agreed-upon definition of the rule of law to be used by treaty parties in the framework of a treaty
- to recognize or address issues with the domestic rule of law by making commitments and utilizing methods for providing financial and technical support to increase capacity
- devise mechanisms to monitor the rule of law
- to address recognized concerns, incentives for discussion between states, a treaty body or expert institution may be established; and/or
- sanctions for noncompliance and procedures for enforcing rule of law norms and obligations.

The European Union (EU) is one example of a treaty-based framework for resolving rule of law challenges, for instance, under the Framework on the Rule of Law[41] and the Article 7 of the Treaty on European Union (TEU),[42] the European Commission can address major and systematic rule of law failures, amongst many other issues.

Treaty mechanisms to strengthen domestic legal systems would improve domestic rule of law for all stakeholders and would obligate treaty parties to address rule of law problems regardless of which stakeholder group was negatively impacted. This is in contrast to ISDS, which is only relevant when rule of law failures negatively impacts foreign investors.

These efforts to boost the domestic judicial system and associated entities could perhaps increase the attractiveness of host governments for improved international investment and recurring re-investment, to the extent that investors take a secure and resilient domestic judicial system into account when making investment decisions.[43]

The personnel, distributors, and clients of foreign enterprises, for example, whose social and economic welfare and prosperity can be crucial to foreign investors'

[41] European Commission, "Rule of Law Framework", https://ec.europa.eu/info/policies/justice-and-fundamental-rights/upholding-rule-law/rule-law/rule-law-framework_en#:~:text=in%20EU%20countries.-,Objective,with%20the%20EU%20country%20concerned accessed on 25 July, 2022.

[42] See Article 7 of Consolidated Version of the Treaty on European Union [2012] OJ C 326/13.

[43] Jason Yackee, "Politicized Dispute Settlement in the Pre-Investment Treaty Era: A Micro-Historical Approach" (2017) University of Wisconsin Legal Studies Research Paper No. 1412.

interests and success, as well as small and medium-sized enterprises for whom ISDS is likely to be unfeasible, may benefit most from a firm basis for the rule of law and improved domestic institutional structures.[44]

4.3. Existing Human Rights Mechanisms

Although, like investors, human rights petitioners are typically not regarded as subjects of public international law, the variety of monitoring and enforcement mechanisms established under international human rights conventions are notable within the wider context of contemporary international law for providing claimants with direct rights to sue states.[45] Investors may therefore be justified in using human rights processes in certain instances when basic rights have been violated. By providing an alternative guarantee in the event of outrageous actions or omissions by host governments with respect to the rights of investors, particularly situations involving denials of justice, this alternative may supplement the availability of other options addressed in this note, such as inter-state mechanisms.

A host state's adherence to human rights laws, along with the presence of human rights monitoring and enforcement mechanisms, could be argued to foster similar beliefs or indicators regarding the rule of law, plausible obligations, and transparent legal systems regarding these standards, as are asserted by IIAs in terms of boosting flows of foreign investment. Further, it is more likely that there are ties between human rights law and strengthening the rule of law in host countries than between ISDS and the domestic rule of law.[46]

Human rights mechanisms notably focus on the improvement of domestic governance for all stakeholders with regard to the goal of bolstering the rule of law.[47] Prior to bringing a complaint before a human rights tribunal or UN treaty body, claimants are required by procedure to exhaust all available domestic remedies, unless they can demonstrate a compelling reason why they

[44] See, for instance, Robert Howse, "International Investment Law and Arbitration: A Conceptual Framework" (2017) Institute for International Law and Justice Working Paper 2017/1, https://www.iilj.org/wp-content/uploads/2017/04/Howse_IILJ_2017_1-MegaReg.pdf accessed on 25 July 2022.

[45] James Crawford, "*Brownlie's Principles of Public International Law*", pp. 121-123 (8th ed., Oxford University Press, 2012).

[46] Ibid 24.

[47] See, for instance, André Nollkaemper, "*National Courts and the International Rule of Law*" (Oxford University Press, 2011); Veronika Fikfak, "Judicial Strategies and their Impact on the Development of the International Rule of Law" in Machiko Kanetake and André Nollkaemper (eds), "*The Rule of Law at the National and International Levels: Contestations and Deference*" (Hart Publishing, 2014).

should not have done so.[48] With regard to a particular case as well as more generally with regard to improving domestic legal and regulatory frameworks or procedures, this requirement provides domestic legal systems and institutions the chance and determination to make amends for harm inflicted. A relatively small number of IIAs, on the other hand, require the exhaustion of domestic remedies, and ISDS establishes a substitute system for the resolution of investment disputes that may subvert or at the very least deter the bolstering of domestic institutions.[49]

Likewise, the rule of law issues raised by ISDS, such as concerns about unfair access to justice and inequality before the law, do not apply to human rights law and its enforcement mechanisms due to the universal applicability of international human rights law.[50]

International human rights legislation mandates that nations must offer adequate remedies for rights violations, with regard to the goal of compensating those who have been harmed. For instance, the International Covenant on Civil and Political Rights (ICCPR) mandates that state parties guarantee an appropriate remedy for any individual whose rights or freedoms are violated.[51] The importance of reparation under international human rights law was also emphasized by the Human Rights Committee, who noted that the duty to offer a sufficient remedy is

[48] According to Article 35(1) of ECHR, all domestic remedies that relate to the claimed violations and at the same time are accessible and adequate must be exhausted. Exhaustion criteria are also outlined in Articles 46(1), 50 and 56(5) of ACHPR. Prior to presenting a claim to UN treaty authorities, claimants must first exhaust all domestic remedies; See, for instance, Office of the United Nations High Commissioner for Human Rights, "Individual Complaint Procedures under the United Nations Human Rights Treaties", (UN 2013) https://www.ohchr.org/sites/default/files/Documents/Publications/FactSheet7Rev.2.pdf accessed on 25 July 2022.

[49] See David Gaukrodger and Kathryn Gordon, "Investor- State Dispute Settlement: A Scoping Paper for the Investment Policy Community" (2012) OECD Working Paper on International Investment 2012/3, 15 https://www.oecd.org/daf/inv/investment-policy/WP-2012_3.pdf accessed on 25 July 2022. Regarding the conditions of exhaustion in later negotiated treaties, see Lise Johnson, Lisa Sachs and Jesse Coleman, "International Investment Agreements, 2014: A Review of Trends and Approaches" in Andrea Bjorklund (ed.), "*Yearbook on International Investment Law & Policy*", pp. 46-48 (Oxford University Press, 2016).

[50] Lisa Sachs and Lise Johnson, "Investment Treaties, Investor-State Dispute Settlement and Inequality: How International Rules and Institutions Can Exacerbate Domestic Disparities" in José Antonio Ocampo (ed.), "*International Rules and Inequality: Implications for Global Economic Governance*" (Columbia University Press, 2019); Further, see Columbia Center on Sustainable Investment (CCSI), "Access to Justice" https://ccsi.columbia.edu/content/access-justice accessed on 25 July 2022.

[51] Article 2(3), International Covenant on Civil and Political Rights.

not absolved in the absence of restitution.[52] Additionally, regional and other international human rights agreements provide the right to an adequate remedy.[53] In contrast to ISDS, which has a tendency to concentrate principally on remuneratory relief, a variety of remedies are frequently used under international human rights law, including reparation, financial damages, rehabilitation in the form of medical, psychological, social, or legal services, contentment relating specifically to each violation, and prevention of recurrence of future violations.[54]

Nevertheless, it is noteworthy that natural beings, not formal corporations, are the main complainants to regional human rights courts and UN treaty bodies. The European Court of Human Rights (ECtHR) is the only regional human rights court which has regularly and expressly permitted corporations to file disputes directly before the Court at the regional level. Furthermore, compared to ISDS-enforced provisions, regional procedures provide far less protection, if any, for minority and indirect owners.[55] However, even if there are few legal protections for corporations, human rights frameworks might still be useful in addressing some of the concerns that people and, in certain cases, businesses encounter when making investments and conducting business in host countries.

Besides, the provenance of human rights protection as a matter of integrity diffe rs from that of corporate protection. Corporate interests already hold significant sway at both the international and local levels and resolving these conflicts through human rights forums might add to the system's already excessive workload and compromise everyone's access to justice.

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[52] UN Human Rights Committee, "General Comment No. 31: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant General Comment", 26 May 2004, CCPR/C/21/Rev.1/Add. 13 31, paras. 15-17.

[53] See, for instance, Article 25 of ACHR and Articles 13 and 41 of ECHR. See also Olivier De Schutter, "*International Human Rights Law*", Chapter No. 8, (2nd ed., Cambridge University Press, 2014).

[54] United Nations General Assembly, "Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law" 21 March 2006 A/RES/60/147. Moreover, the ECtHR's decisions often consist of declaratory judgements that establish ECHR violations and award monetary damages.

[55] David Gaukrodger, "Investment Treaties As Corporate Law: Shareholder Claims And Issues Of Consistency" (2013) OECD Working Papers on International Investment 2013/3 https://www.oecd.org/investment/investment-policy/WP-2013_3.pdf accessed on 26 July, 2022; Lise Johnson, Lisa Sachs and Jeffrey Sachs, "Investor-State Dispute Settlement, Public Interest and US Domestic Law", (2015) CCSI Policy Paper https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1021&context=sustainable_investment_staffpubs accessed on 26 July, 2022.

Therefore, using human rights processes is probably only acceptable in very specific situations when host nations are alleged to have violated investors' rights either as natural persons or, as in the context of the ECHR, as legal organizations. Even so, the range of methods and mechanisms accessible to investors to assert their interests, pursue claims, and formalize, develop, and strive to enforce the relevant international norms of state behaviour should be considered, and this alternative should be one of them.

4.4. Risk Insurance

Political scenarios and the intended and ancillary strategies of host governments, including arbitration award fallback, breach of contract, and political conflict, which includes war, terrorism, civil disturbance, eminent domain, money inconvertibility, and transfer constraints, are all covered by Political Risk Insurance (PRI)[56]. Certain regulatory risks, such as considerable changes to feed-in-tariff plans, significant changes to tax regimes or other rules that have an impact on undertakings' capacity to function, and termination of relevant permits and licenses, are also covered by insurance by various insurers.[57]

There have been successful ISDS claims involving each of those risk categories.[58] It is crucial to take into consideration the costs and advantages of Risk Insurance (RI) in comparison with ISDS, given that the RI market, which includes political as well as other commercial risk insurances available through private insurers, may offer protections as provided by investment treaties and ISDS.

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[56] Kathryn Gordon, "Investment Guarantees and Political Risk Insurance: Institutions, Incentives and Development", (2008) OECD Investment Policy Perspectives, 91; MIGA, "World Investment and Political Risk 2013", World Bank Group, DOI: 10.1596/978-1-4648-0039-9.

[57] U.S. International Development Finance Corporation (DFC), "Types of Coverage", https://www.dfc.gov/what-we-offer-our-products/political-risk-insurance accessed on 26 July, 2022.

[58] See, for instance, Bear Creek v. Peru, ICSID Case No. ARB/14/2, Award, November 30, 2017 (holding Peru responsible for the cancellation of a permit required to hold and develop a mining concession); Chevron v. Ecuador, UNCITRAL, PCA 2009-23, Second Partial Award on Track II, August 30, 2018 (ruling that the government broke the investment treaty by permitting tort claimants' lawsuits against Chevron to go forward in court, among other breaches); Novenergia II – Energy & Environment (SCA) v Spain, SCC Case No 2015/063, Final Arbitral Award (February 15, 2018) (determining that a decrease in the incentives for renewable energy projects violates the FET requirement); Occidental Petroleum Corporation v. Ecuador, ICSID Case No. ARB/06/11, Award, October 5, 2012 (on the grounds that it was an excessively harsh response, the court found Ecuador responsible for enforcing the contractual termination clause); Veteran Petroleum Limited (Cyprus) v. Russia, UNCITRAL, PCA Case No. AA 228, Final Award, July 18, 2014 (determining that the government was at fault for the way it handled the claimant's aggressive tax strategies).

With regard to the objective of investment promotion, this choice may be the most pertinent. Foreign investors' concerns about risks, which may have discouraged them from investing in host countries, could be addressed through RI, similarly to ISDS. However, RI necessitates the investor to absorb the costs of the risk it is taking, at least to some level, unlike ISDS, which essentially functions as a wide, unequalled and freemium RI.[59] The volatility of any specific investment or place for investments can be deduced from the price of fees, insurance policy restrictions, and limitations on coverage. Making sure such risk signals are robust makes sense from a policy standpoint in some situations. Making a case for policy that investors should be protected from the possibility that prospective regulations will force the stranding of fossil-based resources or that enterprises embracing expansionary fiscal strategies should be protected from the possibility that governments will change the rules or how they are interpreted to confront core deterioration and potential revenue transfer, for example, would be difficult. In certain other situations, such as those where we wish to facilitate the deployment of cutting-edge technology or practices or promote sustainable investment in conflict-ridden areas, we may genuinely want to reduce risk.

Thus, debates about insurance policy frequently revolve around difficult yet fundamental issues such as what kinds of conduct insurance should or should not foster as well as how to prevent moral hazard situations from encouraging unwanted risk-taking. These topics frequently come up in debates on investment treaties and ISDS, despite being important to the conversation on insurance and its regulation. Regardless of their actions or effects, investment treaty provisions and ISDS usually safeguard and presumably strive to encourage investments. The moral risks that could be developed for foreign investors by shielding them from or providing them with potent instruments to overcome a variety of risks, such as altering the tax law regime, limiting future fossil-based exploratory projects, and tort claims from the nationals of a host country, are rarely, if ever, taken into account.

In the same vein, investments backed by RI may have a higher propensity to contribute to the sustainable development of their host nations, or at the very least not have negative effects. Certain international anticorruption, environmental, human rights and perhaps other sustainable development criteria may be

[59] Phil Levy, "Critique of NAFTA Provision Highlights Team Trump's Misconceptions on Investment Abroad", (Forbes, 23 October 2017) https://www.forbes.com/sites/phillevy/2017/10/23/should-team-trump-encourage-investment-in-mexico/?sh=16b18ba270b4 accessed on 26 July 2022.

particularly demanded by RI companies who are also subject to human rights commitments.[60] The foreign political risk insurer for the US government, the U.S. International Development Finance Corporation (DFC), for instance, sets criteria on policyholders in the areas of the environment, human rights, labour, and the impact on the host state's growth.[61] Both public and private insurers may play a crucial quasi-regulatory role in helping their insureds conduct themselves properly and take fewer risky steps.[62] RI insurers can create and promote compliance with standard practices in the variety of fields they accommodate because of the expertise and understanding they have developed regarding the behaviour of their insureds and the variables influencing risks; their ability to dictate insurance costs as well as other contractual conditions; and their stimulis to put limitations on pay-outs.[63] Since the investor internalizes calculated risk via freemiums, exclusions, and limitations, unlike with ISDS, sustainable development rules may be promoted, evaluated, and implemented in a more meaningful way.

When considering how risk insurance affects inter-state interactions, politicization may occasionally result from state-backed political risk insurance. In the case of a private insurer, host state intervention that ultimately results in an insurance pay-out or compensation may not result in home government involvement. However, if the insurance provider is a domestic organization, such as DFC of the United States, or an intergovernmental risk insurer, such as the World Bank's Multilateral Investment Guarantee Agency, things might be different.[64] Nevertheless, from the standpoint of the investor, the dispute never became politicized because, similar to ISDS, an investor covered by RI would have the choice of whether and when to sue for damages. Further, the home government would not need to file a claim in order for the investor to be compensated. There are suggestions that home country or multilateral insurers may be involved actually or potentially in settling or preventing

[60] Office of the United Nations High Commissioner for Human Rights, "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework", (UN, 2011) https://www.ohchr.org/sites/default/files/documents/publications/GuidingprinciplesBusinesshr_eN.pdf accessed on 26 July 2022.
[61] Ibid 40.
[62] Christian Lahnstein, "Tort Law and the Ethical Responsibilities of Liability Insurers: Comments from a Reinsurer's Perspective", (2011) 103 Journal of Business Ethics pp. 87, 91, 93; Kernaghan Webb, "Political Risk Insurance and the Mining Sector: An Analysis of the Regulatory Effects of Contracts", (2012) 54 International Journal of Law and Management 394.
[63] Ibid.
[64] Ibid 40.

investment disputes. Hence, the investor may be able to gain from political participation in the case that the RI provider is a government organization.[65] Depoliticization, therefore, might not always be the ideal goal when seen from the viewpoint of several different participants.

Lastly, RI offers advantages and disadvantages in relation to the objective of investor compensation, much like ISDS. Depending on the selection and coverage criteria of each endeavour, as well as the involvement of foreign investors and host states, RI may lessen the possibility of losses. The contractual restrictions that are not present under investment treaties; the finite premises for recovery in comparison to the protections provided by investment treaties; the insurance contract's requirement that all available remedies be exhausted before filing a claim for compensation; and the amount of premium costs and co-payments paid which must be considered are all disadvantages from the investor's point of view.

5. Conclusion

The situation of Pakistan serves as evidence that ISDS can be exceedingly expensive with little benefits that have been demonstrated. The alternatives presented in this note, particularly when utilized in tandem, have the potential to achieve many of the goals Pakistan had set for ISDS in its revised strategy without incurring the same expenses. The dangers of gunboat diplomacy where lawful dispute resolution is substituted by the use of force and violence, are not increased by eliminating ISDS. While upholding the rule of law, international commitments, and extensive access to justice, investors would still be able to obtain restitution for unjustified government actions. These alternatives might fill the void left by Pakistan's decision to withdraw from all BITs, even if they do not necessarily satisfy each of the four frequently cited purposes of ISDS to the same extent as ISDS does. The alternatives could perform better than ISDS in some areas while falling short in others, like in the case of compensating foreign investors for economic losses, the factor which could be a determinant in attracting foreign investment flow to Pakistan. However, whether from the standpoint of the earlier or revised strategy, it is important for Pakistan to take into account the advantages and disadvantages of each alternative dispute resolution mechanism, as well as if and how they might be used to more

[65] Efraim Chalamish and Robert Howse, "Conceptualizing Political Risk Insurance: Toward a Legal and Economic Analysis of the Multilateral Investment Guarantee Agency (MIGA)" in Mathias Audit and Stephan Schill (eds.), "*Transnational Law of Public Contracts*" (Bruylant, 2016).

effectively facilitate and regulate foreign investment than the ISDS model pursued previously.

THE INTEGRATION OF THE RIGHT TO A HEALTHY ENVIRONMENT IN PAKISTAN'S LEGAL FRAMEWORK

Anum Haroon Pasha [*]

Abstract

This article intends to consider whether the formal integration of the right to a healthy environment within Pakistan's legal framework will bring about the required protection of human health and life. It discusses human rights in relation to the environment, starting from the history of environmental laws around the globe to the right to life and its relation to environmental degradation. It further investigates the existence of the right to a healthy environment, both through international jurisprudence on rights-based climate change litigation as well as within the context of Pakistan's legal system. In addition to this, the article also considers the impact of creating, maintaining, and enforcing the right to a healthy environment. Furthermore, the role of international best practices is also assessed in terms of successfully integrating the right to a healthy environment within Pakistan whilst keeping in mind the practical hurdles that exist. In conclusion, it is argued that formally integrating the right to a healthy environment within Pakistan's legal framework will grant significant protection to human health and the environment.

Keywords: Human Rights, Environment, Climate Change Litigation, Right to Healthy Environment.

1. Introduction

With rapid human development came irreversible destruction of the Earth, including the overuse of fossil fuels, increased pollution, rising sea levels, and global warming. The burnout of resources coupled with historic disasters like the atomic bombings of Hiroshima and Nagasaki (1945),[1] the London Smog disaster (1952), the Bhopal Union Carbide gas leak (1984), and Chernobyl (1986), have caused substantial loss of life and environmental damage not just for those present

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[1] Celia I. Campbell-Mohn and Federico Cheever, 'Environmental Law' *Encyclopedia Britannica* (September 19, 2016) <https://www.britannica.com/topic/environmental-law> accessed 16 June 2022.

but also for future generations.[2] The Earth is fighting back. In 2021 alone, natural disasters – earthquake in Haiti, super typhoon in Philippines, volcanic eruption in Indonesia, cyclone in India, flash floods in China, Germany, India, Pakistan, and Nepal – swept away thousands of lives.[3]

Historically, the global legal framework on environmental and human rights lacked the express right to a healthy environment. Instead, it chose to interpret the right to life expansively by including within in the right to a healthy environment. Recently, the right to a healthy environment has gained global recognition. Therefore, this article will discuss whether the right to a healthy environment exists in Pakistan and, if so, whether its formal integration within Pakistan's legal framework will bring about the required protection of the environment and human rights.

2. Human Rights and the Environment

Human rights and the environment are intrinsically linked; a clean, healthy, and sustainable environment is essential for the enjoyment of fundamental human rights. Hence, a polluted environment would interfere with the enjoyment of human rights.

2.1. History of Environmental Laws

The global trend, progression, and protection afforded by environmental laws must first be assessed to understand the development of the right to a healthy environment under international law. While early international environmental agreements primarily focused on navigation and shared waterways, the 20th century saw several firsts that catalysed global environmental cooperation; international legal instruments such as the Convention Relative to the Preservation of Fauna and Flora in their Natural State 1933 were developed and ratified and environmental law was recognised as an influential political and intellectual movement.

Additionally, there was significant damage to human health due to incidents like Hiroshima and Nagasaki and the subsequent industrialisation of Japan, which released several harmful chemicals, such as mercury, that caused the people of

[2] 'Top 10 of Anthropogenic and Natural Environmental Disasters' (lenntech.com) available at: <https://www.lenntech.com/environmental-disasters.htm#4._The_1952_London_smog_disaster> accessed 16 June 2022.

[3] Brianna Navarre, '10 of the Deadliest Natural Disasters in 2021' *US News* (23 December 2021) <https://www.usnews.com/news/best-countries/slideshows/here-are-10-of-the-deadliest-natural-disasters-in-2021?slide=12> accessed 16 June 2022.

Minamata to consume contaminated fish. To counteract this, Japan enacted the world's first law to address the matter; the Basic Law for Environmental Pollution Control (1967) which was instrumental in Minamata becoming mercury-free by the end of the 20th century.[4]

The United Nations Environment Programme (UNEP) was established at the Stockholm Conference in 1972[5] as the world's "principal international environmental organization".[6] Subsequently, the European Commission produced the first Environmental Action Programme. Thus, countries like Germany, the Netherlands, and Denmark began spearheading environmental policymaking as the so-called "green troika". The transboundary nature of environmental hazards was also witnessed after Chernobyl,[7] igniting a rapid and restrictive response through international conventions.[8]

An important feature of environmental laws and conventions, like the Rio Declaration 1992,[9] are that they are constructed flexibly so they may be tailored according to State's scientific comprehension, technological capacity, and economic standing. This allows countries to cater to environmental concerns practically and realistically although this model is being tested with the rapidly accelerating climate crisis.

2.2. The Right to Life and Environmental Degradation

In the absence of an independent right to a healthy environment, other human rights, like the right to life, have been relied upon to achieve the outcome of protecting against environmental degradation. The right to life lies at the foundation of modern human rights law and is historically entrenched across cultures, religions, and philosophy over centuries.

[4] Ibid (n 1).
[5] United Nations Conference on the Human Environment, 1972
[6] Ibid (n 1)..
[7] Ibid.
[8] Convention on Early Notification of a Nuclear Accident (1986) and Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency (1986).
[9] Rio Declaration on Environment and Development UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992).

The right to life,[10] better known as the "master of all rights", grants no leeway for derogation even in times of national security or emergency.[11] The right not only encompasses issues such as euthanasia, abortion, and the death penalty[12] but can potentially include environmental degradation and climate change as such issues pose serious threats to the ability of present and future generations to enjoy it.[13]

Given that the right to life includes issues of environmental degradation and climate change, it is possible to include the right to a healthy environment within the right to life as it is intrinsically linked to human health and the enjoyment of a healthy life. However, is expanding the right to life enough to adequately protect the right to a healthy environment? Is it sufficient to enact environment-friendly legislation to provide a healthy environment, i.e. breathable air, drinkable water, and uncontaminated food?

From a legal standpoint, environmental legislation does create provisions to protect the environment, biodiversity, and water resources and prevent damaging practices. In turn, human rights such as the rights to life, healthcare, access to religious sites and rights of indigenous people are also relied on so that where the environment directly affects their enjoyment, protection can be afforded. The extent of this protection shall be assessed in the following section.

3. The Right to a Healthy Environment

The idea of an express "right to a healthy environment" was a novel concept just fifty years ago. Environmental protection and human rights were viewed as independent concerns, and only recently have they been appreciated as far more interconnected. The right to a healthy environment attained formal footing for the first time in the Stockholm Declaration only 40 years ago. Contrastingly, the right to life has been around for much longer, as discussed in the section above.

The right to a healthy environment includes the air we breathe, the food we eat, the water we drink, human health, well-being and above all, survival. It all depends on a clean, healthy, and sustainable environment that future generations

[10] Universal Declaration of Human Rights (adopted 10 December 1948), UNGA Res 217 A (III) (UDHR) art 3; International Covenant on Civil and Political Rights (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171 (ICCPR) art 6(1)
[11] UNHRC, CCPR General Comment No. 6: Article 6 (Right to Life) 30 April 1982 <https://www.refworld.org/docid/45388400a.html> accessed 16 June 2022.
[12] Ibid.
[13] UNHRC, CCPR General Comment No. 36: Article 6 (Right to Life), 30 October 2018. <https://www.ohchr.org/EN/HRBodies/CCPR/Pages/GC36-Article6Righttolife.aspx> accessed 16 June 2022.

are entitled to enjoy. Hence, this right which is fundamentally linked to the existence of all other rights must be given the importance it deserves.

Additionally, this right threads together the environmental dimensions of civil, cultural, economic, political, and social rights and extends a platform for individuals to engage in a constructive dialogue on environmental policies. Without such public involvement, states lose sight of the problem. Marcos A. Orellana believes that a "fresh debate on the right to a healthy environment would increase awareness of how humans are not isolated from, but depend on, the natural world."[14]

Notably, "every year since 1971, at least one nation has written or amended its constitution to include or strengthen provisions related to environmental protection."[15] The first few countries to incorporate such provisions in their constitutions were Switzerland (1971), Greece (1975), and Papua New Guinea (1975), whereas Portugal (1976) and Spain (1978) were the first to recognise the "right to live in a healthy environment".[16] The trend continued across the late 20th century as regional human rights treaties made mention of the right,[17] and 44 countries adopted constitutional provisions regarding environmental protection. Today, roughly 149 out of 193 of the world's national constitutions contain express references to environmental laws and rights.[18] However, several "holdouts" exist, including the United States, Canada, United Kingdom, Japan, Australia, China, North Korea, and Pakistan.[19]

Although the right to a healthy environment is explicitly recognised by some countries in their national constitutions and international organisations, as mentioned above, some domestic legal systems tend to construe it as a mere

[14] 'The Case for a Right to a Healthy Environment' (*Human Rights Watch*, 1 March 2018) <https://www.hrw.org/news/2018/03/01/case-right-healthy-environment> accessed 15 June 2022.

[15] David R. Boyd, 'The Status of Constitutional Protection for the Environment in Other Nation' [2013] David Suzuki Foundation, Paper 4, 6.

[16] Ibid.

[17] African Charter on Human and People's Rights 1981; San Salvador Protocol to the American Convention on Human Rights 1988.

[18] Ibid, (n 16).

[19] Nations without environmental protection provisions in their constitutions include Antigua and Barbuda, Australia, Bahamas, Barbados, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Canada, Cyprus, Denmark, Djibouti, Dominica, Grenada, Guinea-Bissau, Ireland, Israel, Japan, Jordan, Kiribati, Lebanon, Liberia, Libya, Liechtenstein, Malaysia, Marshall Islands, Mauritius, Micronesia, Monaco, Nauru, New Zealand, Pakistan, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sierra Leone, Singapore, Solomon Islands, Tonga, Trinidad and Tobago, Tunisia, Tuvalu, the United Kingdom and the United States.

extension of the right to life instead of independently. Still, there is progress. In 2021, after much deliberation, the UN Human Rights Council (UNHRC) adopted a resolution to recognise "the human right to a clean, healthy and sustainable environment."[20] By affirming principles of international law on sustainable development, human rights, and the environment, the Resolution also recognised the importance of such a right for future generations.

The Resolution encourages States to recognise that the right is essential to the enjoyment of all other rights and that promoting the right through multilateral environmental agreements is key. States must also increase their efforts to achieve their human rights obligations, cooperate through best practices and the exchange of knowledge and ideas, adopt policies, and implement the Sustainable Development Goals (SDGs). Having heard these commitments, the Resolution was adopted by States with a vote of 43 to 0 in favour of formally recognising the right to a safe, clean, healthy, and sustainable environment.[21]

On 28 July 2022, the United Nations General Assembly adopted a resolution to recognise the right to a healthy environment with 161 votes in favour (including Pakistan), 8 abstentions (including Belarus, Cambodia, China, Ethiopia, Iran, Kyrgyzstan, the Russian Federation, and Syria) and 0 votes against the resolution. The Resolution (A/76/L.75) notes that the right to a clean, healthy and sustainable environment is related to other rights and existing international law and calls on States, international organisations, business enterprises, and other stakeholders to adopt policies, enhance international cooperation, strengthen capacity building and share good practices.

3.1. International Right-Based Jurisprudence

Increasingly, activists are invoking rights-based litigation to remind States of their human rights obligations by relying on the rights to life, health, food, water, adequate housing, etc. and by extension, the right to a safe and healthy environment.[22]

[20] Human Rights Council Resolution 48/13; OHCHR, 'A New Climate Change Agreement Must Include Human Rights Protections for All' (2014) <https://www.ohchr.org/Documents/HRBodies/SP/SP_To_UNFCCC.pdf> accessed 18 March 2022.

[21] Human Rights Council Resolution 48/13.

[22] Ibid.

In 2015, the first climate justice lawsuit was initiated against the Dutch Government in the Urgenda case.[23] The Supreme Court (SC) ordered the government to make faster GHG emissions cuts as human rights were being violated under the European Convention on Human Rights.[24] The case illustrates the application of substantive and procedural provisions of international human rights instruments and soft law provisions to fill the gap between the State's international obligations and its domestic law.

Similar arguments were made by the Torres Strait Islanders, who filed a case against Australia, with the assistance of the UNHRC, alleging that the country's abysmal record on climate change violates fundamental human rights.[25] In Future Generations v Ministry of Environment,[26] youth plaintiffs successfully sued the Columbian Government for failing to protect their rights to life, a healthy environment, and health and to adopt measures counteracting deforestation in the Amazon.[27] The SC ruled that "fundamental rights of life, health, the minimum subsistence, freedom, and human dignity are substantially linked and determined by the environment and the ecosystem."[28]

Although such cases do not bring instant changes to the existing legal framework, they provide a gateway that grants justice through policy discourse. For instance, after Urgenda, 30 out of 54 of Urgenda's Climate Solutions Plan were adopted.[29] When used strategically, such cases can increase awareness and address the adverse impacts of environmental degradation and climate change. Countries with "green" constitutions (i.e., containing environment-friendly provisions) are said to have smaller ecological footprints, meaning cleaner air, safer water, and a healthier environment.[30]

[23] Urgenda Foundation v The State of Netherlands HAZA C/09/00456689 (June 24, 2015); aff'd (Oct. 9, 2018) District Court of the Hague, and The Hague Court of Appeal.
[24] Arthur Neslen, 'Dutch Government Ordered to Cut Emissions in Landmark Ruling' *The Guardian* (24 June 2015) <https://www.theguardian.com/environment/2015/jun/24/dutch-government-ordered-cut-carbon-emissions-landmark-ruling> accessed 18 March 2022.
[25] 'First Person: Torres Strait Islanders fight the loss of their ancestral home' *UN News* (23 April 2022) <https://news.un.org/en/story/2022/04/1116552> accessed 12 July 2022.
[26] Future Generations v Ministry of Environment and Others (Demanda Generaciones Futuras v. Minambiente) (2018) 11001 22 03 000 2018 00319 00
[27] Ibid.
[28] Ibid.
[29] Urgenda (2020), 54 Climate Solutions Plan <https://www.urgenda.nl/en/themas/climate-case/dutch-implementation-plan.> accessed 18 March 2022.
[30] Ibid.

The trend of right-based litigation is likely to persist as the public, activists, and international organisations put pressure on courts and governments.

3.2. Pakistan and the Right to a Healthy Environment

According to an estimate by the WHO Global Health Observatory, roughly 200 deaths per 100,000 population are attributable to environmental factors in Pakistan.[31]

From a legislative perspective, the Constitution of Pakistan makes no express mention of a right to a healthy environment. This is also true for the Pakistan Environmental Protection Act (PEPA) 1997 and its subsequent provincial counterparts following the 18th amendment. On the other hand, through early environmental jurisprudence in Pakistan, the judicial arm of the State has played a pioneering role acknowledging and developing the connection between environmental hazards and human rights and to recognise the right to a healthy environment in Pakistan.

In the landmark case of Shehla Zia v WAPDA (1994),[32] a precursor to PEPA 1997, the petitioners challenged the construction and installation of an electricity grid station based on health risks from exposure to electromagnetic fields. Article 184 of the Constitution, which concerns Public Interest Litigation (PIL), was successfully invoked to facilitate the claim. The SC held, inter alia, that the rights to life and dignity – which include the right to a healthy environment – were infringed. With this precedent came the wide expansion of the right to life which led to revolutionary changes such as the enactment of environmental legislation (PEPA 1997) and the establishment of commissions to assist courts with environment-related technicalities.[33] Today, the Shehla Zia case is internationally recognized as a pioneer judgment in the field of international environmental law and human rights.

Similarly, in Salt Mines v Mineral Development (1994),[34] the SC ordered remedial measures to avoid water contamination, passed an order that prohibited

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[31] 'Pakistan: Environmental health' (emro.who.int) <http://www.emro.who.int/pak/programmes/environmental-health.html> accessed 12 July 2022.

[32] *Shehla Zia and Others v WAPDA* [1994] PLD SC 693.

[33] Solid Waste Management Commission 2003; Lahore Clean Air Commission 2003; Lahore Canal Road Mediation Committee 2011; Islamabad Environmental Commission 2015; Climate Change Commission 2015-2018; Houbara Bustard Commission 2017-2018; and Smog Commission.

[34] *General Secretary, West Pakistan Salt Mines Labour Union (CBA) Khewra, Jhelum v The Director, Industries and Mineral Development, Punjab, Lahore* [1994] SCMR 2061.

dumping industrial and nuclear waste, and halted mining operations to curtail water pollution of a residential catchment area. It was held, relying on the Shehla Zia case, that "the right to have unpolluted water is the right of every person wherever he lives".[35] Unfortunately for citizens, the country faces severe water shortages, and a large percentage of the population lacks access to clean water.[36]

Just a few months after the Dutch Urgenda case, in Asghar Leghari v Federation of Pakistan (2015),[37] a farmer claimed through PIL that the State's lax attitude towards implementing the National Climate Policy 2012[38] and Framework for Implementation of Climate Change Policy 2014-2030[39] violated his constitutional right to life, dignity and a healthy and clean environment because climate change presents serious threats to water, food, and energy security in Pakistan.[40] Importantly, the Lahore High Court (LHC) noted that no substantial work had been done to implement the framework and held that the "delay and lethargy" displayed by the Government transgressed the right to life and, by extension, the right to a healthy environment.

Drawing support from Asghar Leghari, the petitioner in Sheikh Asim Farooq v Federation of Pakistan (2018)[41] argued that through their inaction, the government violated his fundamental rights and failed to implement deforestation-related legislation and policies.[42] The argument highlighted that forest area was decreasing at a rate of 1.9% due to governmental inaction.

Not only this, but even youth petitioners are voicing their demands, as was seen in Rabab Ali v Federation of Pakistan (2016),[43] where a young girl petitioned the

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[35] Ibid.

[36] 'Pakistan Third Amongst Countries Facing Water Shortages' *The News* (14 January 2019) <https://www.thenews.com.pk/print/418698-pakistan-third-amongst-countries-facing-water-shortages#:~:text=Pakistan%20ranks%20third%20amongst%20countries,steadily%20growing%20in%20recent%20years.> accessed 18 March 2022.

[37] *Asghar Leghari v Federation of Pakistan* [2015] LHC W.P. No. 25501/2015.

[38] UNDP, Government of Pakistan, 'National Climate Change Policy' (2012) <http://www.pk.undp.org/content/pakistan/en/home/library/hiv_aids/publication_1.htm> accessed 18 March 2022.

[39] UNDP, Government of Pakistan, Climate Change Division, 'Framework for Implementation of Climate Change Policy (2014–2030)' (2013) <http://www.gcisc.org.pk/Framework%20for%20Implementation%20of%20CC%20Policy.pdf > accessed 18 March.

[40] Ibid (n 38), para 11.

[41] *Sheikh Asim Farooq v Federation of Pakistan* [2018] LHC W.P. No. 192069/2018.

[42] Forest Act 1927; Punjab Plantation and Maintenance Trees Act 1974; the National Climate Change Policy 2012; National Forest Policy 2015; Forest Policy Statement 1999; Punjab Forestry Sector (Forests, Watershed, Rangelands and Wildlife) Policy 1999.

[43] *Rabab Ali v Federation of Pakistan & Another* [2016] SC 2016.

SC for an injunction against the development of the Thar Coalfield, which is estimated to increase coal production in Pakistan from 4.5 to 60 million metric tons per year and release approximately 327 billion tons of CO2, more than 1,000 times Pakistan's previous estimate for annual GHG emissions. The youth petitioner alleged that the development violates constitutionally protected fundamental rights and the Public Trust Doctrine.[44]

In relation to the right to a healthy environment, the petitioners in Maria Khan v Federation of Pakistan (2019)[45] alleged that the federal government's inaction on climate change violated this right and Pakistan's international commitments under the Paris Agreement.[46]

In D.G. Khan Cement Company v Government of Punjab (2019),[47] it was questioned whether a provincial decision barring new or expanded cement plants in environmentally fragile zones was legal. The SC upheld the prohibition based on the National Climate Change Policy and environmental impact assessment reports, setting an exemplary precedent that showcases their dedication to implementing policies effectively. Justice Mansoor explained, "Through our pen and jurisprudential fiat, we need to decolonise our future generations from the wrath of climate change, by upholding climate justice at all times."[48]

Although these cases represent positive change, the right to a healthy life must not be treated as a mere extension of the right to life in Pakistan. Incorporating the right to a healthy environment will benefit Pakistan and facilitate the protection of human health and rights. The recognition of such a right is often accompanied and reinforced by the development of legal, judicial, and administrative measures for enforcement, as witnessed through the case law discussed above. This can potentially enhance the accountability of a State towards its citizens by enforcing human rights standards in relation to the right to a healthy environment and guard against the violation of this right by third parties. Therefore, as suggested by the 2021 UNHRC vote, to which Pakistan voted in favour, and the positive jurisprudence, the right to a healthy environment deserves legal recognition and protection.

The next step would be identifying how the right should be incorporated within Pakistan's legal system. According to the UN good practices on the integration

[44] Ibid.
[45] *Maria Khan v Federation of Pakistan* [2019] W.P. No. 8960 of 2019.
[46] Ibid, para 23.
[47] *D.G. Khan Cement Company v Government of Punjab* [2019] W.P. No. 5898/2019
[48] Ibid.

of the right to a healthy environment,[49] the first way to incorporate this right is through "legal recognition".[50] Although this can take various forms, i.e., a novel environmental law, a regional treaty or perhaps a policy, constitutional recognition would be the strongest and most efficacious. Not only would this ensure consistency between provincial governments, but it would also create awareness and promote the right independently as opposed to through the lens of the right to life. This is legally and symbolically imperative because "a constitution is a mirror of a nation's soul."[51]

Additionally, support can be drawn from other countries and their approaches toward integration. For example, Section 112 of the Norwegian Constitution provides that "every person has the right to an environment that is conducive in health and to a natural environment whose productivity and diversity are maintained." The provision further emphasises that the right must be protected for "future generations as well." The law also entitles citizens "to information on the state of the natural environment and on the effects of any encroachment on nature." This can happen in various ways; for instance, it is done through a National Environmental Information System in Hungary. Therefore, publishing information through websites, bulletins, and even social media can bring about real change.[52]

Good practices suggest that "public participation in environmental decision-making" is essential. In 2005, the public's "right to participate in decisions affecting the environment" was incorporated within France's Constitution, allowing a constructive dialogue between the State and its people.[53] Finland went a step further in 2017, setting up an Agenda 2030 Youth Group to pioneer the Sustainable Development Goals and actively engage in the planning and implementation of the law with the help of twenty diverse people aged 15 to 28

[49] UNEP, 'Right to a Healthy Environment: Good Practices' (2020). <https://wedocs.unep.org/bitstream/handle/20.500.11822/32450/RHE.pdf?sequence=1&isAllowed=y> accessed 30 April 2022 [Hereinafter 'Good Practices']; OHCHR, 'Intersessional Seminar on the Role of Good Governance in the Promotion and Protection of Human Rights and Best Practices in the Implementation of the Sustainable Development Goals' (2019) <https://www.ohchr.org/EN/Issues/Development/GoodGovernance/Pages/SeminarRoleGoodGovernance.aspx> accessed 30 April 2022.

[50] Good Practices, paras 9-13, 10.

[51] Ibid (n 16).

[52] Good Practices, para 17, 15.

[53] Good Practices, paras 22-29, 18.

years.[54] This reflects the crucial role youth activists can play in matters of global significance.

Moreover, the Global Pact for the Environment, an initiative taken by France addressed at the UN General Assembly, President Emmanuel Macron urged countries to build on the success of the Paris Agreement on Climate Change, using the Global Pact, and hold states liable for infringing environmental rights. The Global Pact aims to ratify environmental principles established in the Stockholm and Rio Declarations.

These suggested practices are to be invoked and enforced with vigour and dedication to achieve goals that will not only serve as a foundation for the "right to a healthy environment" but will transcend beyond that to unify people and countries. By conducting international, regional, and national environmental law training programs, the enforcement and awareness of the right can become ten-fold.[55] Although Pakistan's legal system faces strain, it is encouraging that consistent progress is being made and this momentum needs to be capitalized on.

4. Practical Hurdles to Integration of the Right to a Healthy Environment in Pakistan

Despite having one of the lowest shares of GHG emissions in the world,[56] Pakistan is highly vulnerable to environmental degradation and climate change due to poverty, lack of funds, ineffective implementation, and provincial disparity. The situation at the ground level is worsening, especially in terms of pollution, with Lahore ranking third on the list of top ten cities with the world's worst air quality in December 2020[57] and both Lahore and Karachi recording "unhealthy" levels of Particulate Matter (PM).[58] The World Bank estimates that Pakistan's annual disease burden due to outdoor air pollution accounts for 22,000

[54] Good Practices, para 26, 18.
[55] SACEP/UNEP/NORAD, 'Compendium of Summaries of Judicial Decisions in Environment Cases at xiv-xv (Donald Kaniaru et al. eds., 1997); UNEP, Training Manual on Environmental Law (1997).
[56] Abdul Salam, 'Pakistan is Ground Zero for Global Warming Consequences' *USA Today* (24 July 2018) <https://www.usatoday.com/story/news/world/2018/07/24/pakistan-one-worlds-leading-victims-global-warming/809509002/> accessed 15 June 2022.
[57] 'Lahore Ranks Third on List of World's Most Polluted Cities' *The News* (15 December 2020) <https://www.thenews.com.pk/latest/759048-lahore-ranks-third-in-worlds-most-polluted-cities> accessed 15 June 2022.
[58] Ibid.

premature adult deaths. In comparison, indoor pollution accounts for 40 million acute respiratory infections and 28,000 deaths yearly.[59]

To counteract these staggering figures, something must be done to protect the right to a healthy environment. A few efforts have been made. According to Pakistan's Economic Survey, the government acted to alleviate the effects of climate change by initiating the Eco-system Restoration Initiative (ESRI), which aims to "establish an independent, transparent and comprehensive financial mechanism" called "Eco-system Restoration Fund".[60] To reduce the impacts of carbon emissions from vehicles, the National Electric Vehicle Policy was introduced, "targeting a 30 per cent shift to electric vehicles by 2030." Further, Pakistan launched the world's first "zero emissions" metro line project in Karachi,[61] the Citizens Engagement Programme titled "Clean Green Champions",[62] and the "Ten Billion Tree Tsunami Programme".[63]

4.1. Lack of Implementation

Despite the initiatives mentioned above, problems persist. The country's greatest hurdle on the road to a greener constitution is ineffective judicial, executive, and legislative enforcement. For example, despite the ban on the manufacture, sale, and distribution of plastic bags in Islamabad,[64] the restrictions became lax and plastic bags were widely circulated once again. Keeping in mind the fact that this ban was limited to a single city, enforcing laws and policies becomes much harder for a country of over 220 million people. For these reasons, it can become challenging to foresee the proper implementation of the right to a healthy environment on a large scale.

4.2. Provincial Disparity

Several problems can arise if the right to a healthy environment is incorporated through legislation as opposed to a constitutional amendment. In the aftermath of

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[59] WHO, 'Pakistan: Environmental Health' <http://www.emro.who.int/pak/programmes/environmental-health.html> accessed 30 April 2022.

[60] Government of Pakistan, Finance Division, 'Pakistan Economic Survey (2019-2020)' [2020] ch 16. [Hereinafter Pakistan Economic Survey] <http://www.finance.gov.pk/survey/chapter_20/16_Climate_Change.pdf> accessed 30 April 2022.

[61] Ibid, 306.

[62] Ibid, 304-307.

[63] Ibid.

[64] Syed Irfan Raza, 'Polythene Bags Will be Banned in Capital from Aug 14' Dawn News (1 August 2019) <https://www.dawn.com/news/1497352> accessed 15 June 2022.

the 18th constitutional amendment, which excluded the subject of "environmental pollution and ecology" from the Federal Legislative List, the subject was delegated to the provinces instead.[65] Although the provinces enacted their respective statutes between 2012 and 2014,[66] the delegation of power diverged the law,[67] leading to discrepancies. As opposed to a unified front, the provinces have chartered differing courses. For instance, in Punjab and Sindh, the penalty for contravention or non-compliance with statutory provisions warrants a fine of up to five million rupees.[68] Contrastingly, Balochistan has lowered this to one million rupees,[69] and KP has placed the fine between fifty thousand and five million rupees.[70]

Almost all provincial environmental tribunals lack adequate resources, qualified officials, and even a chair at certain points. For example, "the Balochistan Environmental Tribunal has been without a chair since 2010, and as a result, a legal member was appointed as a chair to meet the requirements of law."[71] Consequently, the continued inadequacy in the operation of the existing provincial frameworks disrupts the smooth functioning of the law, makes redundant the protective regimes in place and decreases uniformity and consistency.[72] Therefore, such provincial disparity would also exist if a new law containing the right were introduced.

4.3. Lack of Funds

Moreover, the provincial environmental protection agencies depend entirely on funding from their respective provincial governments and the annual budget allocation. It has also been expressed that on account of insufficient expertise and

[65] Faiza Ilyas, 'Environmental Interests Damaged By 18th Amendment' *Dawn News* (3 May 2018) <https://www.dawn.com/news/1405280> accessed 30 April 2022.
[66] Punjab Environmental Protection (Amendment) Act 2012; Balochistan Environmental Protection Act 2012; Khyber Pakhtunkhwa Environmental Protection Act 2014; Sindh Environmental Protection Act 2014.
[67] IUCN, 'Environment Protection and The Eighteenth Amendment' [2012] <https://www.iucn.org/sites/dev/files/import/downloads/pk_niap_impact_of_18th_amd___final_draft__19_may_2012__formatted.pdf> accessed 20 April 2022.
[68] Punjab Environmental Protection (Amendment) Act 2012, s 17(2), Sindh Environmental Protection Act 2014, s 22.
[69] Balochistan Environmental Protection Act 2014, s 25.
[70] Khyber Pakhtunkhwa Environmental Protection Act 2014, s 18.
[71] Irum Ahsan and Saima Amin Khawaja, 'Development of Environmental Laws and Jurisprudence in Pakistan' [2013] Asian Development Bank.
[72] Ibid (n 61).

inadequate resources, the integrity of evidence gathered, and the investigative procedures are substandard.

According to the Asian Development Bank (ADB), the "socioeconomic costs of environmental degradation are considerable with climate adaptation needs ranging between $7 billion and $14 billion per year", far beyond Pakistan's financial capacity.[73] This is evidenced by the allocation of funds to "Environment Protection" under the Summary of Expenditure mentioned in Pakistan's Annual Budget Statement of 2022-2023, which is estimated at just 749 million rupees - the lowest amongst the subjects for the upcoming fiscal year.[74] To put into context, 749 million rupees is only around $3.6 million, significantly lower than the ADB figure.

The problem of funding is also the major hurdle to the incorporating the right to a healthy environment in the Constitution since it will create wide-ranging obligations on the federal and provincial governments that can be enforced through the superior courts. This will naturally necessitate far greater budgetary allocations to this subject at the federal and provincial levels. Given the multifaceted challenges facing Pakistan, policymakers are likely to resist constitutional reform in the face of competing policy priorities.

5. Conclusion

It is clear that matters of environmental degradation and their after-effects are being treated as human rights violations in Pakistan. The judiciary has played an integral role in effectively creating and maintaining the right to a healthy environment. Their jurisprudence from Shehla Zia and Asghar Leghari should be utilised as a catalyst for the advancement and development of this right to ensure a sustainable environment exists for generations to come.

Justice Ayesha Malik has pointed out that the only way forward with our predicament is to develop a "collectivist solution in an individualist world".[75] With help from international standards and the practices of other countries, real

[73] Qamar-uz-Zaman Chaudhry, 'Climate Change Profile of Pakistan' [2017] Asian Development Bank. <https://www.adb.org/sites/default/files/publication/357876/climate-change-profile-pakistan.pdf> accessed 30 April 2022.

[74] Government of Pakistan, Finance Division, 'Federal Budget 2022-23' (2022) <https://www.finance.gov.pk/budget/Budget_2022_23/1_ABS-English_2022_23.pdf> accessed 16 June 2022.

[75] Ayesha A. Malik, 'The Handbook on Environmental Law' <http://www.pja.gov.pk/system/files/The%20Handbook%20On%20Environmental%20Law%20%28v4%29.pdf> accessed 29 April 2022.

change can be made. The right to a healthy environment, if adequately funded by the government, can be incorporated and implemented with the help of law enforcement agencies and dedicated government bodies to achieve the goals set out in the 2021 UN Resolution and the 2022 UNGA Resolution.[76] The right to a healthy environment would protect the rights of those working in factories, those exposed to harmful substances while mining, and most of all, it would protect the environment and help reverse harmful climate change impacts. Therefore, the right to a healthy environment would pave the way for the positive advancement and progression of human rights, making it an essential requirement for Pakistan's legal system**.**

[76] Human Rights Council Resolution 48/13.

BLOCKCHAIN AND THE DIGITIZATION OF INTERNATIONAL TRADE: A LEGAL ASPECT

Izhaan Ali Shah [*]

Abstract

The initial execution of blockchain as the technology supporting cryptocurrency or 'crypto' has allured many to relate blockchain with Bitcoin. The potential use of blockchain however is much wider than cryptocurrency. Proponents of blockchain firmly believe the technology will become a game changer with a profound impact on the human experience. Sceptics dismiss it as a fantasy with faulty and potentially dangerous foundations. Nonetheless, the technology is still hard for many to comprehend. Importantly, there is also a very technical legal aspect to this newly introduced phenomenon which often gets overlooked but is very necessary to understand if we are ever to achieve practical implementation of blockchain in the world of business and trade. This paper attempts to create a parallel between both the technology and the legal implications and contemporary challenges of regulating such complex networks. It also explores whether blockchain has the potential to revolutionize international trade and make it fully digital.

Keywords: International Trade Law, Cyberspace, Blockchain Transactions, International Contracts, Cross-Border Data.

1. Introduction and Background

The internet is an ever-changing phenomenon which continues to evolve at rapid speed and complexity. At first the concept of a network system was to allow individuals to link from one file on one machine to another file on another. Since then, the world wide web as we know it has gone through three iterations. Web 1.0 was its first, usually referred to as the read-only web, where websites were informational and contained only static content. Web 2.0 from 2004 till now, is the second stage, usually referred to as the read-write web, which brought about a fundamental shift, where people could share their perspectives, opinions, thoughts, and experiences through a variety of online tools and platforms. Some of the early platforms based on web 2.0 are YouTube, Facebook, Amazon and so on. This iteration emphasised user-generated content, ease of use, participatory

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culture, and interoperability. Finally, Web 3.0 aims to create a decentralized but secure internet in which people can exchange money and information, without the need for middlemen or big tech companies. Unlike Web 2.0 where data is stored in a single database or on a cloud provider, Web 3.0 applications run on blockchain and peer to peer nodes, a concept which we explain further later on in this paper.[1]

Keeping in mind the complexity and intricacy which exists between different types of evolving networks, this paper will explore the relevance and advantage of blockchain for cross-border trade transactions and how it functions. It will aim to examine how this new form of digitization can have a practical effect on the various steps involved in international trade in goods, from trade finance to customs procedures, certification, and transportation, and help move toward greater digitalization of trade. Furthermore, this paper will try to elaborate the technological, legal, and jurisdictional hurdles blockchain faces and possible solutions to address these issues.

2. What is Blockchain?

Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network where a network of companies work together to accomplish certain objectives. Each block in the chain contains several transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant's ledger. The decentralized database managed by multiple participants is known as Distributed Ledger Technology (DLT). Virtually anything of value can be tracked and traded on a blockchain network, reducing risk, and cutting costs for all involved.[2]

[1] 'Web 1.0, Web 2.0 & Web3 Explained' (*DEV Community*, 2022) <https://dev.to/narottam04/web-10-web-20-web-30-explained-591n> accessed 5 July 2022

[2] 'What Is Blockchain Technology? - IBM Blockchain | IBM' (*Ibm.com*, 2022) <https://www.ibm.com/topics/what-is-blockchain> accessed 26 May 2022

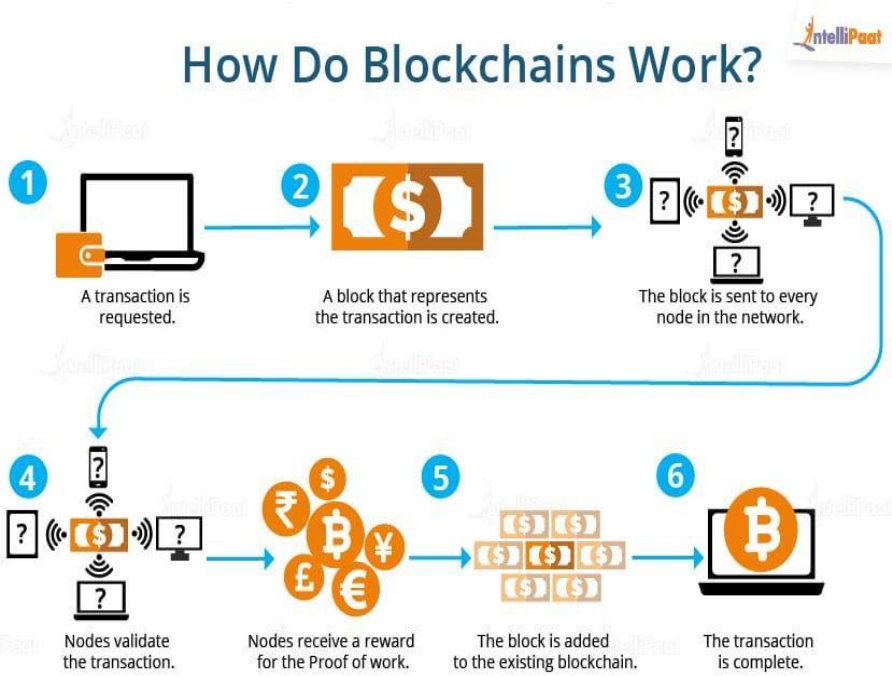

Image Source: IntelliOaat[3]

3. Advantages of Blockchain in International Trade

Usually, international trade transactions depend heavily on paper for processing. In 2014, shipping company Maersk followed a refrigerated container filled with roses and avocados from Kenya to the Netherlands to document the maze of physical processes and paperwork that impact every shipment.[4] The numbers speak for themselves: they found that around 30 actors and more than 100 people were involved throughout the journey, with the number of interactions exceeding 200. The shipment took about 34 days to go from the farm to the retailers, of which 10 days were spent waiting for documents to be processed. A critical document went missing, only to be found later amid a pile of paper.[5] The

[3] IntelliOaat <https://intellipaat.com/mediaFiles/2019/02/Blockchain-05.jpg> accessed 13 June 2022

[3] 'Bloomberg - Are You A Robot?' (*Bloomberg.com*, 2022)

[4] 'Big Data and Global Trade Law' (*Wti.org*, 2022) <https://www.wti.org/media/filer_public/79/c7/79c76644-2b72-445a-b9ee-2411f01fb633/big_data_and_global_trade_law.pdf> accessed 13 June 2022

[5] 'Bloomberg - Are You A Robot?' (*Bloomberg.com*, 2022) <https://www.bloomberg.com/news/articles/2018-04-18/drowning-in-a-sea-of-paper-world-s-biggest-ships-seek-a-way-out> accessed 13 June 2022

complication and costs linked with international trade in goods has resulted in a number of companies as well as governments looking in to how Blockchain may be utilized to cut the amount of paperwork and processes concerned with the export of goods, from trade finance to border procedures as well as transportation, with the goal of drawing nearer to truly paperless trade.[6]

Secondly, insurance is another sector with the capability and capacity to be drastically influenced by blockchain technology. The computerization of processes via the utilization of smart contracts (self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code) could decrease administrative procedures and costs, deal with claims, and manage multinational insurance contracts.[7] Additionally, blockchain is beginning to set foot in the e-commerce world. The technology could influence existing business models in the field even if it may not be able to revolutionize it due to its automation capabilities via smart contracts.

Blockchain can be a significant instrument in order to encourage transparency and traceability of supply chains, aid in combating sham or fraudulent practices, and develop consumers' trust.[8] In order to track the emergence of products, determine their authenticity and quality, and affirm ethical claims and fair-trade practices, a number of start-ups as well as more established companies are expanding blockchain applications. Following several scandals that have hit the food industry[9] such as recalling major stock due to contamination, many food and retail companies seem to be shifting towards Blockchain. This is because it allows them to increase transparency of the food supply chain as well as to rapidly track tainted products and assist in restoring trust in food quality.[10] Although setting up a convincing link between offline and online events is important as well as

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[6] Huseyin T, and 文 H, 'A Prospective Study on Faster and More Secure Document Traffic for International Trade with Blockchain Technology' (*Academia.edu*, 2022)

[7] 'An Introduction to Smart Contracts and Their Potential and Inherent Limitations' (*The Harvard Law School Forum on Corporate Governance*, 2022) <https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/> accessed 26 May 2022

[8] 'Building A Transparent Supply Chain' (*Harvard Business Review*, 2022) <https://hbr.org/2020/05/building-a-transparent-supply-chain> accessed 26 May 2022

[9] 'Transparency in the Global Food Supply Chain Is A Must-Have' (*Food Logistics*, 2022) <https://www.foodlogistics.com/software-technology/article/21083413/transparency-in-the-global-food-supply-chain-is-a-musthave> accessed 13 June 2022

[10] 'How Blockchain Is Revolutionising Food Supply Chains - Blockhead Technologies' (*Blockhead Technologies*, 2022) <https://blockheadtechnologies.com/how-blockchain-is-revolutionising-food-supply-chains/> accessed 26 May 2022

expensive, information added to the blockchain, is in fact, is similar to the offline verification process that currently exists.

4. Setting Up a Legal Framework

As with any process, for actual implementation, blockchain requires an adequate legal infrastructure for its inter and intra border functionality. Legal frameworks are required to establish the legal status of electronic documents, the rules and regulations which apply when a smart contract is utilized, and who may be accountable at each stage of the process.

However, regulating Web 3.0 will be a challenge as it will have to progress parallel to a number of other regimes of law, including Intellectual Property, Anti-Money Laundering, Cybersecurity etc which could also regulate some of the same conduct. Thus, it is imperative that legalized and uniform standards be formulated which codify the ambit of these areas in a way which avoids any regime conflict.

Similarly, to how letters of credit accepted by the International Chamber of Commerce are regulated by a particular set of rules,[11] blockchain-enabled smart contracts used for letter-of-credit transactions must also be regulated by internationally accepted rules. Banks might not be inclined to commit before these legal issues are looked at. The present letter of credit system is well organized with regards to legal protection; however, it may be quite expensive. Work is advancing, nevertheless, evolving standards may take a while.

The extensive deployment of Blockchain requires frameworks to guarantee interoperability of networks as well as highlight the legal status of blockchain transactions and administer responsibilities and the system of how data shall be accessed and utilized. Blockchain technology, in the absence of this regulatory layer, could just be restricted to pilot projects in a simulated environment lacking any practical effect. There are two categories of legal issues which have risen in the use of Blockchain: general issues, for instance, the legal status of blockchain transactions and questions in relation to jurisdiction; and particular matters related to the use of Blockchain for specific cases.

Furthermore, blockchain transactions also lead to problems with classification.[12] How do we classify activities that are lawful as per the legal conditions of the

[11] 'Global Rules - ICC - International Chamber of Commerce' (*ICC - International Chamber of Commerce*, 2022) <https://iccwbo.org/global-issues-trends/banking-finance/global-rules/> accessed 26 May 2022

[12] 'The Blockchain and The New Architecture of Trust' (*The MIT Press*, 2022) <https://mitpress.mit.edu/books/blockchain-and-new-architecture-trust> accessed 26 May 2022

non-blockchain world?[13] To what degree shall a court identify Blockchain as an inflexible, inviolable source of truth?[14] Do smart contracts classify as legal contracts?[15] In order to make the legal status of such transactions and processes clear, a few initiatives have started at the international level. The UNCITRAL, on 13 July 2017, ratified the keenly anticipated Model Law on Electronic Transferable Records (United Nations Information Service, 2017).[16]

5. The United Nations Commission on International Trade Law (UNCITRAL): The Model Law

The Model Law permits the use of electronic transferable records and codifies the requirements for an electronic record to be treated as a transferable document, i.e., a document which allows the holder to claim fulfilment of the duty specified in the document such as bills and receipts. The idea of neutrality incorporated in the Model Law permits the use of all methods and technologies, inclusive of distributed ledgers. The process of the adoption of the UNCITRAL Model Law on Electronic Transferable Records is significant and, if interchanged into national legislation, can make way to the legal use of blockchain technology for international trade transactions. The Model Law effectively supplements the UNCITRAL ideas that manage electronic commerce. In accordance with the idea of technology neutrality incorporated in the Model Law on Electronic Commerce (1996, revised in 1998),[17] the Model Law on Electronic Signatures (2001) and the Convention on the Use of Electronic Communications in International Contracts (2005),[18] a data message contained on a blockchain is considered to meet the paper-based conditions of writing and a signature, given that it fulfils the

[13] Ibid 10

[14] 'Applications Of Blockchain Technology in Various Sectors: A Review' (2020) <https://www.researchgate.net/profile/Bharati-Ramageri/publication/354652587_Applications_of_Blockchain_Technology_in_Various_SectorsA_Review/links/61446549f4a9f76511635ad4/Applications-of-Blockchain-Technology-in-Various-SectorsA-Review.pdf> accessed 5 July 2022

[15] Ibid 4

[16] (*Uncitral.un.org*, 2022) <https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr_ebook_e.pdf> accessed 26 May 2022

[17] 'UNCITRAL Model Law on Electronic Commerce (1996) With Additional Article 5 Bis as Adopted In 1998 | United Nations Commission on International Trade Law' (*Uncitral.un.org*, 2022) <https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_commerce#:~:text=Purpose,legal%20predictability%20for%20electronic%20commerce.> accessed 26 May 2022

[18] 'United Nations Convention on The Use of Electronic Communications In International Contracts (New York, 2005) | United Nations Commission On International Trade Law' (*Uncitral.un.org*, 2022) <https://uncitral.un.org/en/texts/ecommerce/conventions/electronic_communications> accessed 26 May 2022

specified requirements.[19] Nonetheless, cryptocurrencies are not covered by the Model Law. Distinct legislation is necessary to lay out requirements among which blockchain-based tokens for securities (crypto securities) can be dealt with as securities. For Web 3.0, domestic regulatory bodies are still trying to figure out how these tokens should be treated in terms of securities laws.

6. The Need for a Practically Applicable Law

Even though UNCITRAL model laws are important as a form of legislative guidance, they do not have any legal implications, countries use them as an outline to draft their own legislation. Currently, several governments are working on legislation in order to acknowledge the legal efficacy of blockchain signatures, smart contracts and financial tools provided on the blockchain. For instance, states in the United States have worked on bills accepting or encouraging the benefit of Bitcoin and blockchain technology, and some have even passed these into law.[20] In the state of Florida in 2018, a draft administration legalizing blockchain signatures and smart contracts was inaugurated.

Malta is another example which in July 2018, passed laws to administer distributed ledger technologies and virtual financial resources, to enhance Malta's reputation as a "blockchain island".[21] France has also taken several leads to acknowledge financial tools issued on blockchains. The country inaugurated legislative alterations in 2016 to acknowledge specific mini bonds issued on blockchains and a new order was passed in December 2017 to permit registration and the transfer of financial securities via distributed ledger technology. Furthermore, a ruling by China's Supreme Court in 2018 held that evidence authenticated with Blockchain is conclusive in legal disputes.[22] Several proposals have also been submitted to the WTO in the circumstances of the WTO

[19] Takahashi K, 'Implications of Blockchain Technology for The UNCITRAL Works' (*Papers.ssrn.com*, 2022) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3566691> accessed 5 July 2022

[20] 'Blockchain: Technological Revolution In Business And Administration' (2019) <https://www.researchgate.net/publication/342328740_Blockchain_Technological_Revolution_in_Business_and_Administration> accessed 5 July 2022

[21] 'An Exploration Of Blockchain Technology In Supply Chain Management' (2018) <https://www.researchgate.net/publication/328365701_An_exploration_of_blockchain_technology_in_supply_chain_management> accessed 6 July 2022

[22] Magbagbeola T, 'How Blockchain Technology Is Reshaping International Trade In Goods: Its Disruptive Effect And How International Law Is Responding' (*Academia.edu*, 2022) <https://www.academia.edu/43391703/HOW_BLOCKCHAIN_TECHNOLOGY_IS_RESHAPING_INTERNATIONAL_TRADE_IN_GOODS_ITS_DISRUPTIVE_EFFECT_AND_HOW_INTERNATIONAL_LAW_IS_RESPONDING> accessed 6 July 2022

Joint Statement on Electronic Commerce which are of direct importance to Blockchain.[23]

This tilt towards legislation, albeit at a moderate pace, is extremely important. Laws regulating smart contracts and acknowledging the presence of blockchain will have a notable impact on its functionality. As the US and France push for legislation they will encounter much less barriers in the digitized market, specifically in terms of jurisdictional issues between them which we will go into in more detail later on. Furthermore, China serves as a good example on the need to set up a dispute mechanism for blockchain which provides a grounding for future legislation.

7. Problems Pertaining to Legality of Blockchain Transactions

However, there remain problems in relation to electronic authentication, the recognition of electronic documents as well as e-signatures, the setting up of a structure for electronic contracting, encryption, cybersecurity, e-payments, and the safeguarding of personal information. Whilst Blockchain can assist to digitize trade, as discussed above, the switch to paperless trade requires a useful administrative structure that acknowledges the legitimacy of e-signatures, e-documents, and e-transactions, and lays down the legal boundaries for the electronic exchange of data between relevant stakeholders, specifically government authorities.

Some argue, however, that technology is evolving so rapidly that it may be too soon to administer it. There is a possibility that early administration may restrict its advancement and ability and render attempts to properly administer it unsuccessful. This might seem adequate at an experimental phase. Timing, however, is only one part of the issue as the bigger problems are those of coordination and content. Usually, blockchain applications cover various jurisdictions because they are scattered and dispersed.

The insufficiency of coordination and of common knowledge on how best to administer blockchain technology on an international plane may result in haphazard regulations which could be more detrimental than the insufficiency of regulation itself. The dispersion and possibly global character of Blockchain

[23] 'WTO | Can Blockchain Revolutionize International Trade?' (*Wto.org*, 2022) <https://www.wto.org/english/res_e/publications_e/blockchainrev18_e.htm> accessed 26 May 2022

demands a global outlook to regulation, and thus, an adequate governance structure.

8. Jurisdiction

Additionally, blockchains give rise to problems of applicable jurisdiction. Blockchains can reach numerous jurisdictions which raises the question of which national law is applicable. Kevin Werbach contends that it is possible that every transaction may come under the jurisdiction of the location of each contributor in the network.[24] In the case of public blockchains, nevertheless, nodes can be found in any part of the world, and the unknown character of the platform means it is exceptionally difficult, if not impossible altogether, to recognize the processing body and determine the place where the disputed transaction is located. A blockchain node is one of a number of devices that run the blockchain protocol software and usually stores the history of transactions. Due to the participants being recognized, the issue is less severe in the instance of approved (regulated) blockchains. However, the problem of the applicable jurisdiction is still important in the course of blockchains across numerous jurisdictions. Similarly, using Blockchain poses problems in relation to the liability structure applicable to blockchain transactions in case anything goes wrong, and the resolution mechanism in the circumstance of a conflict, technical issues or involuntary action. As there is no primary body regulating the platform, who is in charge of operating distributed ledgers and the information stored in them in case of a controversy or involuntary action which leads to detrimental outcomes? And which party shall be held liable in case a smart contract does not work as anticipated? Do such regulatory obstacles hinder the placement of the technology on a wider scale? A whole host of problems in regard to jurisdiction and liability permit a technical workaround in the circumstances of approved blockchains.

One remedy that could be availed, based on the actual case, would be to have a "real", conventional contract which would rule the parties' relationship, extending to what the blockchain is meant to do (for instance, permitting damages to be availed in the circumstance of a wrongful code in a smart contract), and formal legal conditions such as jurisdiction or the applicable law.

In the past few years, a rather heated debate has been taking place over problems in respect to limitations on cross-border data transfers and data privacy, with an exceeding number of countries taking on measures that establish conditions or

[24] 'Trust, But Verify' (2018) <https://www.jstor.org/stable/26533144> accessed 6 July 2022

restrictions on data flows. Since 2017, 34 countries have ratified or suggested data localization conditions as per the Information Technology and Innovation Foundation (ITIF).[25] Data localization conditions can take several forms. It can be definitively demanded by law or can be a consequence of a chain of limitations that make it impossible to transfer data, for instance local storage conditions, local processing of the data, or government permission to transfer data. There are a few countries that forbid all data transfers, while there are some that aim at sectors or services.

As far as impediments to cross-border data flows are concerned, they usually include limitations on the transfer of personal data to jurisdictions assumed to supply a lower level of data protection, inclusive of restrictions on information that governments regard as "sensitive".[26] The aim behind Governments' setting in place such policies are manifold. Usually, they aim to manage potential cybersecurity threats, encourage the local economy, guarantee access to data with the motive of law enforcement, and safeguard the privacy of citizens. However, states have to be mindful of the fact that such policies should aid and interpret blockchain transactions rather than cause a hindrance.

9. Codification of Legislation

The relationship between law and code has evolved remarkably since the emergence of digital technologies. Despite the digitalization of law and the prominence of Lawrence Lessig's "code is law" concept[27] (i.e., the notion that code sets the terms by which internet users' behaviour is understood), law is still difficult for machines to read but simple for humans to comprehend. Humans, on the other hand, find the codes used to program computers and smart contracts exceedingly cryptic and difficult. While it is not a need for the deployment of Blockchain, closing the gap between the two could be a significant enabler for the use of smart contracts. Legislation and contracts are frequently written in the context of a paper-based society, which makes the presence of Smart Contracts troublesome.

[25] Nigel Cory L, 'How Barriers to Cross-Border Data Flows Are Spreading Globally, What They Cost, And How to Address Them' (*Itif.org*, 2022) <https://itif.org/publications/2021/07/19/how-barriers-cross-border-data-flows-are-spreading-globally-what-they-cost> accessed 27 May 2022

[26] Ibid 14

[27] (*Cyber.harvard.edu*, 2022) <https://cyber.harvard.edu/works/lessig/pcforum.pdf> accessed 27 May 2022

The "codification of legislation" is a novel approach to regulation that is gaining traction.[28] Several organizations and start-ups are looking into how law might be codified and made machine-readable to make it easier to convert contractual obligations into digital contract code. New Zealand recently completed a project to investigate how laws could be rewritten and laid out programmatically so that they could be analysed by a machine,[29] and several start-ups, such as Monax,[30] are providing "legal engineering" services to help codify contractual obligations and make them machine-readable, making smart contracts writing easier. While the shift from "code is law" to "law is code" could result in significant gains in efficiency and transparency, the difficulty in converting the flexibility of legal rules into a formalized language that can be interpreted and used by machines could result in greater rigidity in rule implementation.[31] Finding the correct balance between increased efficiency and machine-readability is crucial.

When a transaction takes place, being able to pinpoint the counterparties is essential. Legal identification is vital, but can be daunting, as in the world of trade and financial transactions, there are a number of transactions which take place in nanoseconds covered by different jurisdictions around the globe. These jurisdictions may not have the same standards, such as the financial sector. The 2008 financial crisis highlighted the need for a pragmatic approach which tackles fundamental problems in existing systems for the recognition of entities. This led the G-20 Submit to address this issue and call for the formation of a Global Legal Entity Identifier (LEI).[32] This Global framework would act as a Legal Identification tool for the economic actors involved in financial transactions. While the creation of a global LEI is not required for the adoption of blockchain applications, it would substantially simplify the processing of blockchain-based transactions and allow the technology to be used more efficiently.

The ongoing attempts to plan a global system are appreciated, however, prominent international cooperation might be needed in order to avert the

[28] 'View of Blockchain Technology as A Regulatory Technology: From Code Is Law to Law Is Code | First Monday' (*Firstmonday.org*, 2022) <https://firstmonday.org/ojs/index.php/fm/article/view/7113/5657> accessed 27 May 2022

[29] 'Machine-Readable Laws Could Transform Government | Apolitical' (*Apolitical*, 2022) <https://apolitical.co/solution-articles/en/new-zealand-explores-machine-readable-laws-to-transform-government> accessed 27 May 2022

[30] 'Collusion by Blockchain and Smart Contracts' (*Jolt.law.harvard.edu*, 2022) <https://jolt.law.harvard.edu/assets/articlePDFs/v33/03-Schrepel.pdf> accessed 27 May 2022

[31] Ibid 17

[32] 'The Global LEI System – About LEI – GLEIF' (*Gleif.org*, 2022) <https://www.gleif.org/en/about-lei/gleif-management-of-the-global-lei-system> accessed 27 May 2022

advancement of varying systems. Legal systems participating in financial transactions are in fact covered by the global LEI. At the same time, debates are occurring at the World Customs Organization (WCO) with the aim to advance a global trader identification number in relation to traders.[33] Uniformity between these two approaches, or united attempts to establish a common system, will reward bodies participating in international trade transactions and encourage the disposition of technologies which have the capacity to radically enhance trade processes. Contrarily, the use of Blockchain might be of interest in encouraging attempts to advance global body identification systems.

10. Conclusion

The advantages of deploying blockchain in the realm of international trade are many; allowing records and information to be transparent and secure, which in turn leads to efficient, economic, and quick transactions; by digitalizing processes, it greatly reduces transport costs and improves means of verification, tracking, and coordination, which previously, have been heavily reliant on paper. However, although blockchain entails a high degree of transparency and traceability in its use, in many instances transactions might not require this quality which begs the question of unnecessary investment and coordination efforts in setting up a technology which may outweigh its use. A balance needs to be ascertained after critically analysing and assessing the use of blockchain in different situations.

Nonetheless, aspects of this technology are still developing, and myriad objections, as well as technical, consistency and legal problems, must be looked at before the technology can be used to its complete ability. Technical solutions must be established in order to guarantee that blockchains can communicate with each other and rules are required to refine applicable laws as well as administer responsibilities. It is probable that Blockchain will be restricted to proofs of concept and pilot projects in the absence of this regulatory layer.[34]

Considering the capability of Blockchain, companies, civil society organizations, software developers, academics, governments, and intergovernmental organizations must operate together to determine the practical as well as legal involvements of the technology and establish combined solutions to actual

[33] 'Unveiling the Potential of Blockchain for Customs' (*Wcoomd.org*, 2018) <http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/research/research-paper-series/45_yotaro_okazaki_unveiling_the_potential_of_blockchain_for_customs.pdf> accessed 27 May 2022

[34] Ibid 13

disputes. This seems to be specifically accurate as far as international trade is concerned. Blockchain can make international trade smarter, although smart trade demands smart standardization - and smart standardization can solely take place via effective determination and coordination between all actors involved.

BOOK REVIEW

HYDRO-DIPLOMACY: PREVENTING WATER WAR BETWEEN NUCLEAR-ARMED PAKISTAN AND INDIA BY ASHFAQ MAHMOOD

Maha Hussain[*]

Ashfaq Mahmood's book[1] deftly presents the argument that given recent water issues between Pakistan and India and the deteriorating trend of water relations between the two countries, if the situation is left to simmer, the possibility of water-instigated war in the future cannot be ruled out. This is achieved through a critical approach to the partition of the Indian subcontinent and the evolution of the IWT (1960). *Hydro-Diplomacy* is divided into three parts which deal with the evolution and provisions of the IWT between Pakistan and India, post-treaty water issues between the countries, and the use of hydro-diplomacy to avert water war between the nuclear-armed states, respectively. As a recent addition to a long list of books assessing the IWT, Mahmood's book differentiates itself through its solution-oriented approach backed by the author's experience and exposure in the field. It identifies areas for potential collaboration that may overcome mutual distrust between the states and recommends a strategy for resolving post-treaty issues.

In Part II, *Hydro-Diplomacy* assesses water issues between Pakistan and India through examples of four instances of disagreement between the countries, which either culminated in the use of Article IX of the Treaty on settlement of differences and disputes or bilateral negotiations resulting in a separate agreement between the two states. Through these examples, Mahmood provides information about the nature and facets of water disputes between India and Pakistan that often occur behind closed doors and rarely come to the knowledge of the common man. These chapters provide insight into the technical details of the dispute, Pakistan and India's stances respectively, the dispute settlement process, and the outcome of the dispute, whether it be a decision by a Neutral Expert, a decision of the Court of Arbitration (CoA) or a new bilateral agreement. The variety of examples mentioned in the book also enables readers to understand the differences between

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[1] Ashfaq Mahmood. *Hydro-Diplomacy: Preventing Water War Between Nuclear-Armed Pakistan and India*. IPS Press, 2018. 244 pages. ISBN: 978-969-448-170-8.

settlement procedures; for example, the decision of a Neutral Expert is project-specific, whereas the decision of the CoA on the interpretation of the Treaty is binding for all future projects.

One fascinating post-treaty water issue mentioned in the book is the case of the Kishanganga Hydroelectric Plant (KHEP), for which Mahmood was involved in preparing the Pakistan case, which was subsequently adjudicated by the CoA. The case concerned the KHEP, a project based on the diversion of waters of the Kishanganga River in Indian-occupied Kashmir, called Neelum River. Pakistan and India disagreed over whether the diversion of the Kishanganga (Neelum) River into another tributary was lawful under the Treaty and whether India was allowed to deplete or draw down the reservoir level of a run-of-river plant below dead storage level (DSL) in circumstances except in the case of an unforeseen emergency. As this was the first instance that a dispute under the IWT was referred to a CoA, Mahmood elaborates on the process of constitution of the CoA and the procedure followed by the Court, which included opportunities for parties to submit a memorial and counter-memorial, a hearing on merits, and two site visits. The CoA eventually decided that India is permitted under the IWT to divert water from the Kishanganga (Neelum) River for power generation by the KHEP. However, it placed India under an obligation to construct and operate KHEP in a manner that maintains a minimum flow of water in the river. It also decided that the Treaty does not permit reduction below DSL of the water level in the reservoirs of run-of-river plants on the western rivers except in the case of unforeseen emergency, and the accumulation of sediment does not constitute an unforeseen emergency.

Hydro-Diplomacy also highlights how the transparent and seamless sharing of data, essential for co-riparian states, has not been as seamless as would be desirable. Since data sharing is foundational to the IWT to maintain mutual trust and cooperation between Pakistan and India, the IWT lays down several provisions relating to data sharing between the two parties and from one party to another. Mahmood suggests that one factor leading to significant mistrust between the parties is the provision of data regarding new projects and engineering works. Data of planned engineering work that will affect the other party must be provided to the other party though it is up to the discretion of the state as to whether they believe that the work will materially affect the other party. India must also notify Pakistan of the construction of new projects (storage projects and run-of-river plants) on the Indus and the tributaries. The Treaty

specifies that the data must be provided six months before the beginning of construction.

Given that hydroelectric plants have a long gestation period, and it takes a minimum of three to four years for pre-construction activities after the decision is made to construct a project, Pakistan often observes India's actions near the project sites and suspects that India is building a project without informing Pakistan. This created mistrust in the case of Wullar Barrage and KHEP. Mahmood proposes that to overcome this mistrust, it could be desirable that data is shared once a project is conceived and planned rather than right before the six-month threshold. Mahmood also recommends twelve reforms to strengthen the framework for data sharing, including a joint task force under the Permanent Indus Commission to identify gaps in data availability and propose mechanisms to fill these gaps and review the data-sharing mechanism of the Permanent Indus Commission.

Hydro-Diplomacy addresses many issues, including the over-abstraction from transboundary aquifers, increased pollution of rivers, and climate change effects on the rivers, that were not included in the Treaty because it was drafted at a time when these issues were not overwhelmingly important. In such a way, Mahmood addresses the shortcomings of the IWT. He identifies areas for cooperation between Pakistan and India, including the issues of groundwater management, watershed management, the release of flood waters and mitigating the effect of climate change.

Mahmood is a practitioner well-positioned to discuss the issues in the book, having addressed international transboundary water issues, interprovincial water sharing and overseeing the Pakistan Commission for Indus Waters (PCIW) and the Indus River System Authority (IRSA) during his time as federal secretary for Water and Power for the Government of Pakistan. Mahmood led Pakistan's team during talks with India on several water issues between 2004 and 2007 and led the delegation in proceedings before the Neutral Expert for settling the Baglihar Hydro Electric Plant issue. He was also instrumental in preparing Pakistan's case before the CoA on the KHEP dispute. His insight and the lessons learnt from his real-life experiences are reflected in his well-argued analysis throughout the book. His suggestions include confidence-building measures focusing on de-escalation, reducing tension and building mutual trust between Pakistan and India. Instead of suggesting the revision of the IWT, which is largely impractical, Mahmood suggests that it would be best to try to maximise the benefits within the cooperative framework of the treaty and supplementary agreements.

Mahmood reserves a hopeful tone throughout the book despite the real threat of escalating tensions between Pakistan and India on water issues. He maintains that by engaging necessary stakeholders and focusing on areas of mutual benefit for the two nations, it is possible to prevent water-instigated war between the two countries and create a successful strategy to manage post-Treaty water issues between Pakistan and India.

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