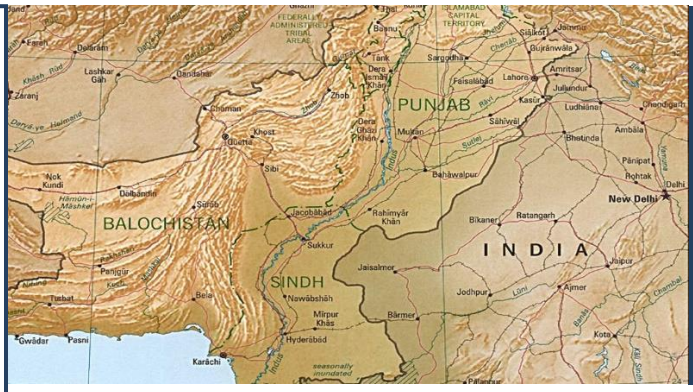
JINNAH INSTITUTE

POLICY BRIEF

January 7, 2019

OPEN DEMOCRACY INITIATIVE




## In this Issue

A Constitutional History of Water in Pakistan

*By Ahmad Rafay Alam*

## 1. Introduction

What exactly is water law? The answer is elusive. Water itself is fascinating. It adopts the shape of the vessel it occupies. Different vessels, different shapes. And for each shape, new characteristics, different properties. And different types of laws.

To understand water, one must be aware of the scale in which water is operating. For example, we may hear of dams, of water scarcity, of MAF (Million-acre-feet), and cusecs. This is water operating on the hydrological, security, agricultural and irrigation scales. Our cities dump their sewage, untreated, into rivers and water bodies, causing ecological ruin. We speak of the need of flushing the Indus Delta to maintain its ecosystem and the mangrove forests. This is water operating on an environmental scale.

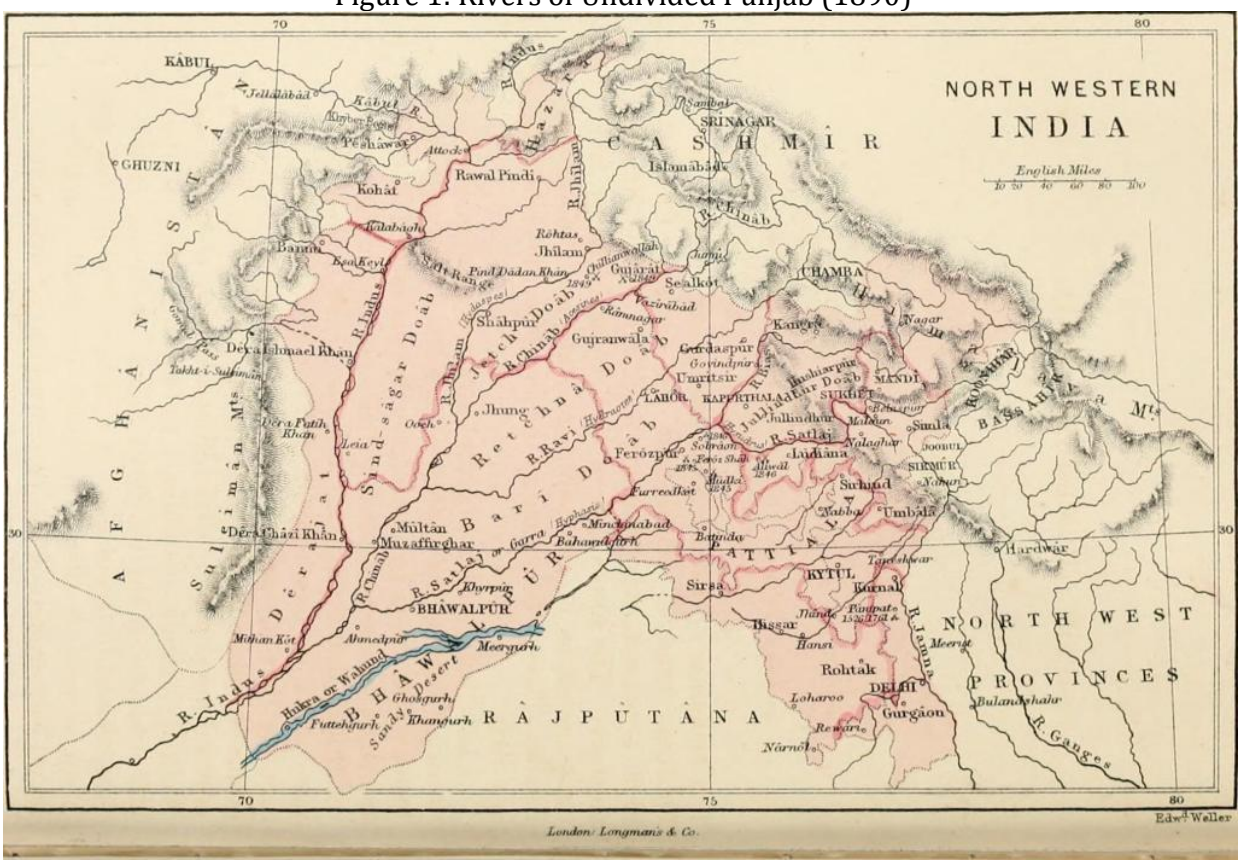
But it doesn't have to all be science or climate change. Just as water cannot be confined to a single shape, nor can one limit the scale on which it operates. So much Punjabi poetry, for instance, is set, at some point, on the banks of a river. This is water operating on a cultural scale. It takes water to produce the cotton we wear. That is virtual water at work translating everyday things to the amount of water it takes to produce them.

There are innumerable scales to water. This is why water law is complex.

There are a number of laws on water. Provincial canal and drainage legislation is the first to come to mind. We have the Indus River System Authority and a Water Apportionment Accord. Balochistan has an ordinance that regulates groundwater. There are laws for fisheries. The KPK's forest legislation has specific provisions relating to water. Pakistan is signatory to the Convention on the Law of the Sea. Environment Quality Standards determine what industry can discharge into water bodies. A National Water Policy was announced earlier this year. There is a bit of water law everywhere, frankly.

So how can one make sense of water law? What is a rational way of approaching the subject? The approach taken in this essay is inspired by two observations – both by the legendary jurist Oliver Wendell Holmes, Jr.

Figure 1: Rivers of Undivided Punjab (1890)




In his essay titled "The Common Law", Holmes said "The life of the law has not been logic. It has been experience." It would be impossible to attempt to explain any corpus of law logically, let alone water law. And so this essay attempts to introduce water law in Pakistan in its historical context. It will take us to the British Colonial period and to the development of the expansive canal irrigation networks in Punjab and Sindh. It will move on to the post-Partition period, where the One Unit period and Indus Waters Treaty fundamentally changed the paradigm of water management in the country. Understanding the times and exigencies of these differing legislations, disputes, treaties and reports can help explain where the foundations of water law in Pakistan were laid. The first of Holmes' observations, therefore, gives this essay its direction.

The Second of Holmes' observations is a comment made in New Jersey vs. New York,[1] where the US Supreme Court was adjudicating the legality of New York State and the City of New York diverting the non-navigable tributaries of the Delaware River. In two sentences that in an instance reveal the beauty and complexity of this subject, Holmes observed "A river is not an amenity. It is a treasure." This essay in no way claims to be sophisticated enough to describe the legal features of a treasure, let alone *all* water. And so the second of Holmes' observations recognizes the impossibility of describing a treasure and serves to provide reason to restrict the scope of this essay: It attempts to introduce water law in Pakistan within the context of the Constitution.

This essay originates as a response to the judicial interest developed in water in 2018. The Supreme Court's *suo motu* hearings on the drinking water situation in Karachi and Sindh have grown into other *suo motu* proceedings regarding drinking water in Lahore, the use of groundwater by cement manufacturers in the Salt Range, the quality of bottled drinking water in Lahore and the notification of the CJ-PM Diamer-Bhasha Dam Fund. Such a heightening

interest in water litigation would be complimented with some knowledge of water law in Pakistan.

In no way, however, should this essay be seen as an attempt to address so many areas of judicial interest in water. Instead, the effort in this paper is to identify water laws and principles as they emerged in Pakistan's constitutional history, and provide, hopefully, a framework within which discussion on water laws can be more structured and beneficial to the stakeholders outside the irrigation and hydropower scales of water.

## 2. The Colonial Settlement of Punjab

One could argue the history of water law in the parts of pre-Partition India that are now Pakistan begins with the British colonization of Sindh (1843) and Punjab (1849). The manner of colonization is immaterial. What is relevant is the fact that, for the first time, the major tributaries of the Indus River flowed through lands that were under the control of a single entity: the East India Company.[2]

The events of 1857 saw the Crown replace the Company and the beginning of the British Raj, whose initial approach to its Colonial enterprise was rewarded by famine after devastating famine. In Punjab alone, famines in 1860-1861, 1868-1870, 1896-1897, 1899-1900 killed millions upon millions of Indians. If nothing else but to save face, something had to be done.

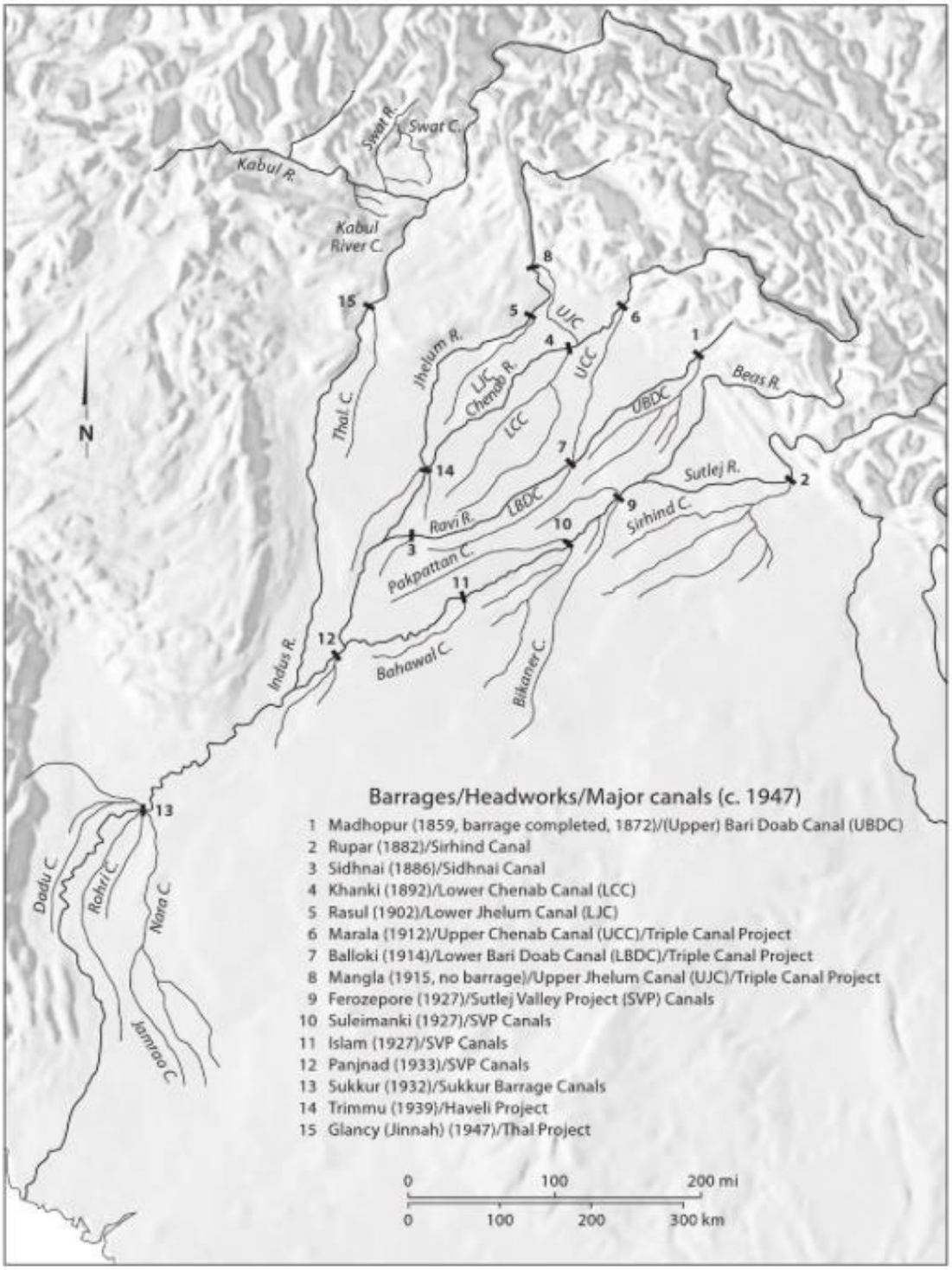
In Punjab, British engineers identified the potential of irrigating the great doabs (literally *do aab*, or two rivers – meaning the land between them). Arable land or "canal colonies" could be settled by rewarding post-1857 allies (like the princely state of Bikaner) and the recently disbanded, well-armed and trained, and equally troublesome, Sikh Khalsa. The crops from the newly arable lands would produce food to prevent famine, revenue to justify India as the "Jewel" of the Colonial crown, and settled Indians owing allegiance to the British over the vanquished Sikh and Mughal empires: part strategy, part greed and part White Man's Burden. All this has been documented much better by Imran Ali, David Gilmartin, Daanish Mustafa and Saiyid Ali Naqvi in his magnum opus *Indus Water and Social Change*.

Thus the Upper Bari Doab Canal from the Ravi (1859), Sirhand Canal from the Sutlej (1872), Sidhnai Canal from the Ravi (1872), the Sutlej Valley Project came to be. There were more,[3] but these can suffice to illustrate for now.

In Sindh, through which runs only the River Indus, irrigation development began by rehabilitating pre-existing seasonal inundation[4] canals such as the Beghari Canal (1856) and Desert Canal (1892). The latter was the source of such prosperity to the Baloch tribes that helped construct it that they renamed the town of Khangarh "Jacobababad" in honor of John Jacob, the Superintendent of Upper Sindh Frontier who initiated its construction.

After the canals came the canal colonies, such as the Sidhnai and Lower Chenab Colonies in Punjab and Jamrao Canal Colony in Sindh. Vast, previously arid lands that had now been brought under agriculture by this immense canal infrastructure were now inhabited by a cross-section of a variety of tenant farmers and, in some instances in Punjab feudal landed estates. The Colonial project then introduced legal reforms including property laws that established tenancy rights and allowed for their transfer by inheritance or by sale, lease, exchange, or mortgage.

Figure 2




MAP 7. Perennial canal system in the late colonial period, ca. 1947.

The Colonial experiment was indeed bold. And it was during this period of the second half of the 19th Century do we begin to see the first flashes of what we can now call water-related law.

## 3. Colonial Legislative Experience

One of the earliest water-related legislation enforced by the British in the Indus Basin was the Northern Indian Canal and Drainage Act, 1873, which extended to the territories of Punjab, United Provinces (now Uttar Pradesh), Central Provinces (now Delhi) and the (then) North-

West Frontier Province. Because Sindh was not yet a separate province at the time and was governed from the Bombay Presidency, the Bombay Irrigation Act, 1879 regulated the water rights of the Provincial Government in Sindh. In post-Partition Pakistan, these laws are now referred to as the Punjab Irrigation and Drainage Act, 1873 and the Sindh Irrigation and Drainage Act, 1879. The Khyber Pakhtunkhwa Irrigation and Drainage Act, 1873 now applies to the territory of what was once the North West Frontier Province as well as the Provincially Administered Tribal Areas of Chitral, Dir, Kalam, Swat, and the Malakand Protected Area.

The scheme of these irrigation and drainage laws is similar. Provincial Governments were (and are) empowered to take water from a river or natural source of water for any irrigation project wherever deemed expedient and in the public interest. However, these laws did provide for compensation to be paid to persons in the event such irrigation projects caused stoppage or diminution of their existing water supplies.

Individual rights to water can be found in the Easements Act of 1882. Easements are a type of property law and were part of the legal reforms introduced in India by the Colonialist. Professor Phillipe Cullet's critique of the riparian doctrine emerging from the Easements Act, 1882 may be appreciated,[5] as it applies equally to Pakistan:

*The fact that existing rules directly derive from English case law is not surprising since the rules were developed in the nineteenth century. What is more surprising is that the rules were never adapted to the vastly different climactic conditions prevailing in India, whose climate includes arid and semi-arid tropical areas, tropical and subtropical rainy areas with only a small part of the country having climate conditions comparable to England. Further, these rules were never adapted to the completely different patterns of water use, for instance with regard to irrigation accounting for the overwhelming share of water use.*

Under the Easements Act, 1882, a number of individual rights to surface and ground water arising from the ownership of immovable property were recognized.[6] However, Section 2 of the Act specifically recognizes that nothing in its provisions derogated from "any right of the Government to regulate the collection, retention, and distribution of the water of rivers and streams flowing in natural channels, and natural lakes and ponds, or of the water flowing, collected, retained or discharged in or by any channel or other work constructed at the public expense for irrigation."

When examined side-by-side, the Easements Act, 1882 and provincial irrigation laws distinguish between the water rights of an individual owner of immovable property and the water rights of Provincial Governments. The water rights of Provincial Governments are far wider than those of individual owners of immovable property, with the laws allowing for Provincial Governments to take the water from rivers and natural sources and to use that water for purposes other than those of riparian lands, provided, of course, that compensation be paid in the event of any stoppage or diminution of individual supplies.

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Figure 3: Illustrations of Section 7 of the Easements Act, 1882

*Illustration of the rights above referred*

(f) The right of every owner of land that, within his own limits, the water which naturally passes or percolates by, over or through his land shall not, before so passing or percolating, be unreasonably polluted by other persons.

(g) The right of every owner of land to collect and dispose within his own limits of all water under the land which does not pass in a defined channel and all water on its surface which does not pass in a defined channel.

(h) The right of every owner of land that the water of every natural stream which passes by, through or over his land in a defined natural channel shall be allowed by other persons to flow within such owner's limits without interruption and without material alteration in quantity, direction, force or temperature; the right of every owner of land abutting on a natural lake or pond into or out of which a natural stream flows, that the water of such lake or pond shall be allowed by other persons to remain with in such owner's limit without material alteration in quantity or temperature.

(i) The right of every owner of upper land that water naturally rising in, or falling, on such land, and not passing in defined channels, shall be allowed by the owner of adjacent lower land to run naturally thereto.

(j) The right of every owner of land abutting on a natural stream, lake or pond to use and consume its water for drinking, household purposes and watering his cattle and sheep; and the right of every such owner to use and consume the water for irrigating such land and for the purposes of any manufactory situate thereon: Provided that he does not thereby cause material injury to other like owners.

*Explanation*.-A natural stream is a stream, whether permanent or intermittent, tidal or tideless, on the surface of land or underground, which flows by the operation of nature only and in a natural and known course

Further, the riparian rights established by the Easements Act, 1882 apply between individuals only. They do not apply in disputes between individuals and the State. Section 2 of the Act clearly evidences the intention of the law to treat the Government's right to use natural waters at a higher level than personal rights. In water disputes between the State and riparian owners, the State has the upper hand.

What of the water rights of states in pre-Partition India? Whilst the law with respect to surface and groundwater as between individual riparian owners and between the a state and individuals was settled by these 19th Century Colonial laws, the water law vis a vis Provinces within pre-Partition India remained unclear into the early part of the 20th Century.

## 4. Inter-Province Water Adjudication

Increasingly ambitious irrigation projects conceived by Punjab raised concerns in other provinces and states. The lower riparian State of Bahawalpur, for instance, objected to Government plans to allocate water from the Sutlej River to the non-riparian State of Bikaner. Bahawalpur argued the diversions would affect the water supplies of other riparians. With no formal mechanism of inter-state water dispute resolution in the Colonial administrative system in place, the matter was settled through treaty: The Tripartite Agreement of 1921 is signed by the States of Bahawalpur, Bikaner and Province of Punjab, and is based on the principles of priority of existing use, recognition of claims of riparian owners, and equitable apportionment.[7]

The Government of India Act, 1919 – the first major constitutional reforms made by the Colonial Government – allowed limited representative government through a system of federal, concurrent and provincial legislative subjects. Both the central government and provincial governments could legislate on concurrent subjects, and both had exclusivity within their own domain.

Under the Government of India Act, 1919 "Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power"[8] was enumerated as a provincial legislative subject. However, a system of "diarchy" allowed some provincial

"reserved" subjects to be under the superintendence, direction and control of the central Colonial government. Water supplies, irrigation and canals, drainage and embankments, water storage and water power were all reserved subject.[9] So while water was a provincial subject that could be legislated upon by a provincial assembly, it remained de facto under the control of the Colonial government in Delhi.

With water a provincial subject, it is odd the Government of India Act, 1919 did not provide for a forum to adjudicate/resolve inter-provincial water disputes. One presumption that could be drawn from this omission was that, without any limiting provisions, the provincial nature of water under the Act meant any province within Colonial India was entitled to what it liked of the water supplies within its own boundaries regardless of its impact on other riparian provinces. That provinces did claim such entitlement most likely is due to the facts that water remained a reserved subject and irrigation infrastructure planning and finance remained in the hands of the Colonial administration where it could be centrally managed.

The lack of a formal constitutional mechanism for inter-provincial water dispute adjudication meant that later when additional hydropower and irrigation potential was identified in Punjab; and when it was thought such projects, if realized, would threaten the supplies flowing to Sindh and their inundation canals, there was no method to resolve disputes. However, the commissioning of the Lloyd Barrage (later Sukkur Barrage after Independence) in 1932 completely transformed the nature of Sindh's irrigation network by providing a perennial canal system with a cultivatable command area (in 1932) of 7,178,500 acres thereby neutralizing any potential concern of diminishment of supplies. With the barrage in place, its canals would flow all year as opposed to the inundation canals that only received waters when the Indus was in flood.

Shortly after the commissioning of the Sukkur Barrage, the landmark constitutional reforms under the Government of India Act, 1935 introduced an inter-provincial water dispute forum. Water remained a subject of provincial legislative domain,[10] but the Government of a Province could complain to the Governor-General if it appeared to them "the water from any natural source of supply . . . have been or are likely to be, prejudicially affected" by either any executive action taken or law passed or by the failure of any authority to exercise their powers."[11] The Governor-General, in turn, was to forward the complaint to a Commission for adjudication. The inclusion of this adjudicatory mechanism can be seen as evidence that, as between themselves, Provinces could now not, in fact, exercise full control over water resources within their territories. Their usage would now be circumscribed by a decision of the Governor-General based on the report of the Commission appointed to adjudicate the complaint.

The forum was activated by a complaint filed by Sindh – now a separate province free from the administrative control of the Bombay Presidency – that the effects of the proposed Bhakra Dam Project in Punjab, when superimposed on the Thal, Haveli and various other storage and link projects would cause serious damage to Sindh's inundation canals. The Government of India appointed Mr. Justice Benegal Narsing Rau as head of an Indus Commission in 1941 to look into the matter. In its Report filed in 1942, the Rau Commission found "that where there is a treaty or agreement between the parties, that in itself furnishes the best means of ascertaining their mutual rights." But, what would be the case if there was no agreement or treaty?

The Commission considered the doctrine of sovereignty, English Common Law governing riparian owners and the principle of equitable apportionment and found the doctrine of sovereignty and principles of Common Law to be in "conflict with the manifest intention" of the Government of India Act, 1935. The Commission described the doctrine of equitable apportionment, where "every riparian State is entitled to a fair share of the waters of an inter-

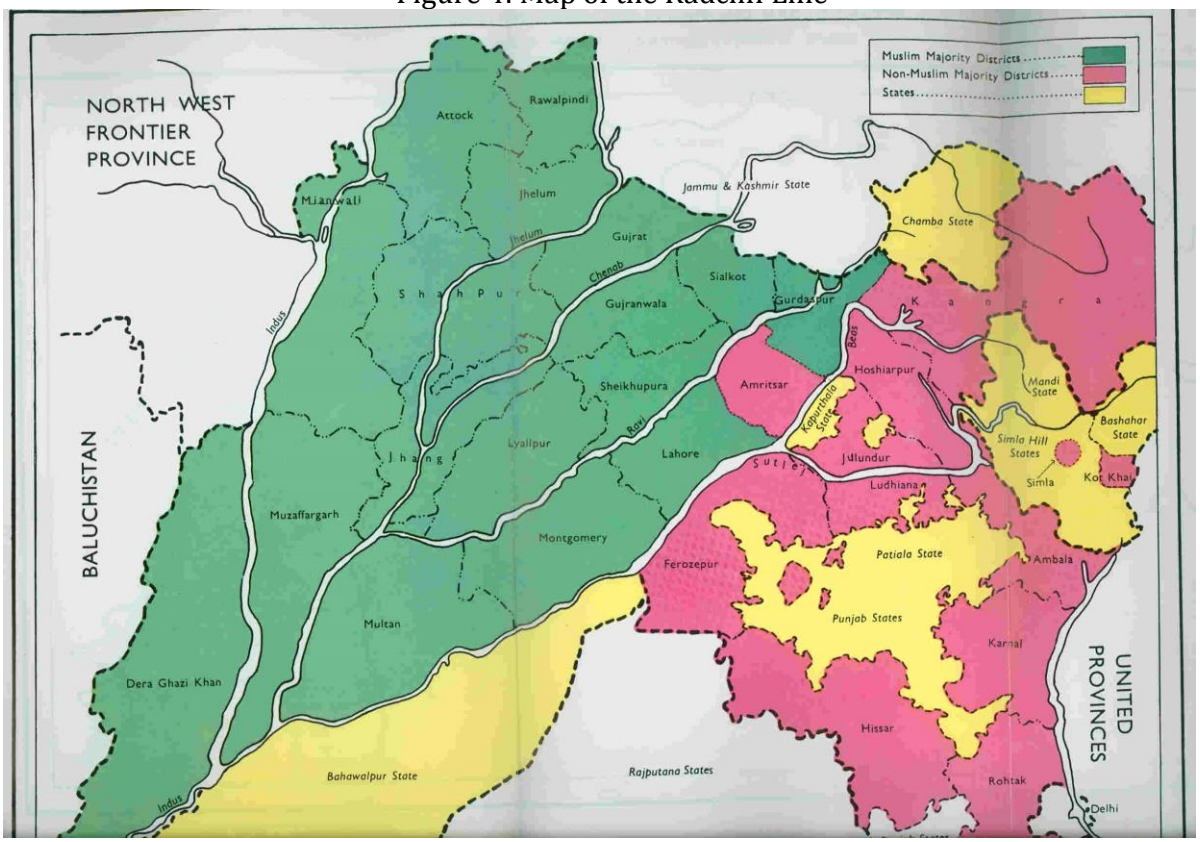
State river. What is a fair share must depend on the circumstances of each case; but the river is for the common benefit of the whole community through whose territories it flows, even though those territories may be divided by political frontiers."[12] In applying the principle of equitable apportionment to the facts before it, the Commission ruled that Bhakra Dam must be so operated as not to cause material damage to the canals of the downstream province of Sindh.

Pursuant to the recommendations of the Rau Commission, representatives of pre-Partition Punjab and Sind worked out a plan providing for, amongst other things, the construction and regulation of Bhakra Dam on the Sutlej River, of barrages across the Indus at Kotri, Gudu and Taunsa, and of links up to a capacity of 19,300 cusecs from the Chenab to the Sutlej. An agreement was worked out between1943 and 1945 and the "Sind Punjab agreement" was signed in 1945 by the chief engineers of the two provinces subject to agreement of the two provincial governments on financial issues- the amount the Punjab was to pay Sind toward the construction of the barrages at Guddu and Kotri made necessary by the proposed increased withdrawals upstream. Partition took place before final agreement between the provinces could be reached.

## 5. Partition

Partition had two major impacts on water in the sub-continent. First, it created an upper and lower riparian relationship on the largest contiguous surface water irrigation network in the world. Secondly, it fundamentally reordered the Sindh-Punjab water sharing paradigm. The first impact resulted in the overshadowing of the Sindh complaint against Punjab with the negotiations leading to the Indus Waters Treaty in 1960. Once the Treaty was signed and the Indus Basin Development Works completed, there was again a fundamental reordering of the water relationship between Punjab and Sindh.

Figure 4: Map of the Radcliff Line[13]



The Indus Treaty and Indus Basin Development Works completely changed the dynamics of the irrigation network running through Pakistan and its provinces. Instead of sharing the waters flowing through the tributaries of the River Indus, the Indus Treaty divided the rivers of the Indus Basin. The waters of the three Eastern Rivers (the Ravi, the Beas and Sutlej) were for the use of India; and India is under an obligation to "let flow" the waters of the three Western Rivers (Indus, Jhelum and Chenab). The Treaty's Financial Provisions dealt with the Indian contribution of £62,000,000 for to a Development Fund to be used by Pakistan to construct irrigation replacement works made necessary as a result of this river sharing arrangement. The replacement works constructed by Pakistan included 8 link canals (of 400 miles to transfer water from the Western Rivers to areas formerly irrigated by the Eastern Rivers); two storages (the Mangla Dam (opened 1965) on the River Jhelum and the Tarbela Dam (opened in 1976) on the Indus); power stations, 2,500 tubewells and other works to integrate the river and canal system.[14]

As a result of Partition and the Indus Waters Treaty, the integrated canal network established during the Colonial period was essentially cut in half. In the case of Pakistan, the waters of the Western Rivers had to be diverted by link canals and transferred to the Eastern Rivers and the network of canals supplied by them. A new water system emerged, separated from India by the Treaty. The sources and amount of water in this system was different from the flows of the integrated pre-Partition system. And in the decades since the Treaty, India has also developed irrigation and storage capacity on the Eastern rivers within its jurisdiction. What remained the same, however, was the demand for the limited water available in the new system.

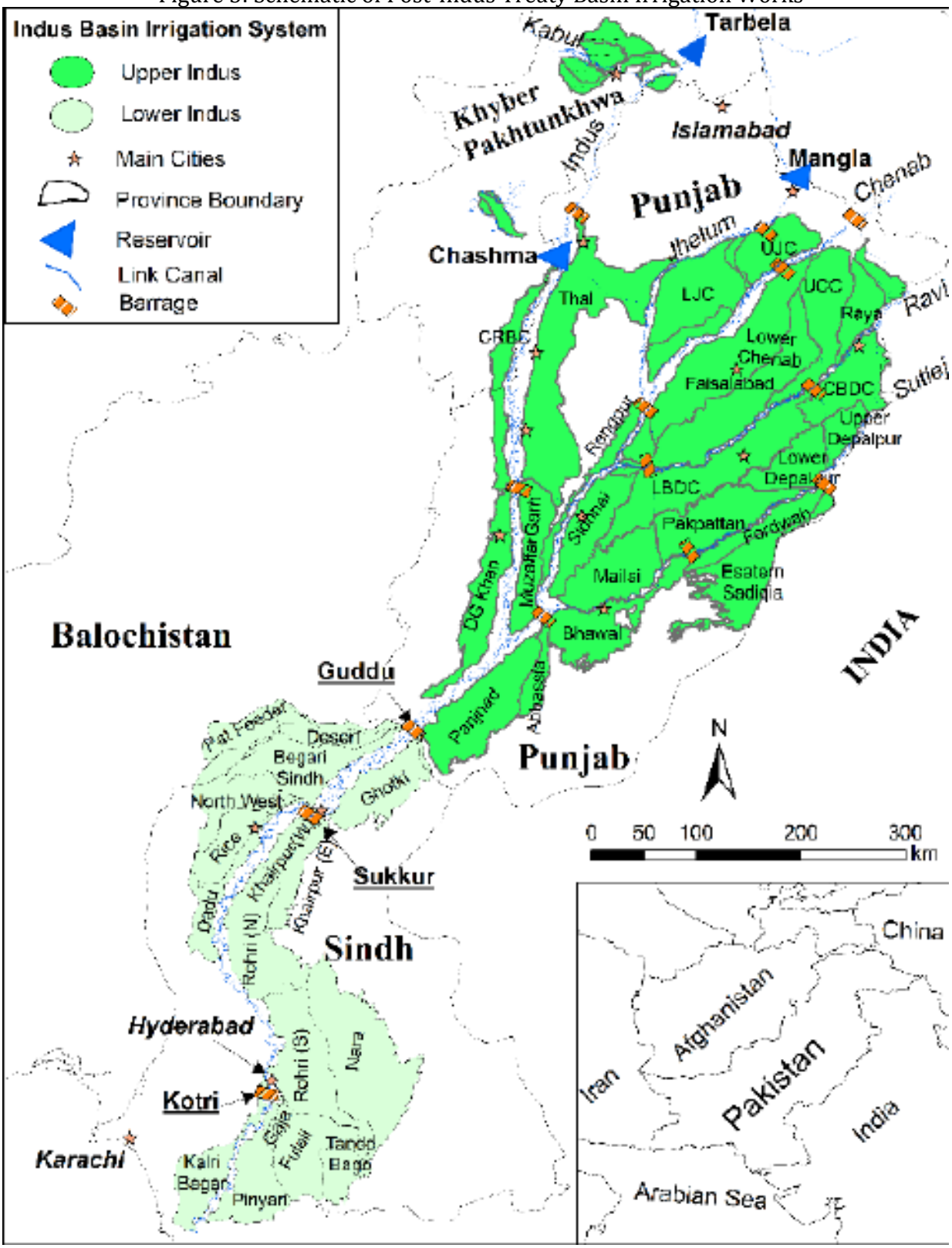
## 6. The One Unit Scheme and the de facto Centralization of Water

The inter-provincial adjudicatory mechanism provided for in the Constitution of 1956 was never invoked. Presumably because of the imposition of the "One Unit Scheme" earlier in 1954. This Scheme essentially dissolved the four provinces and Tribal areas in the western wing of Pakistan and merged them all into a West Pakistan; and the province of Bengal was dissolved into East Pakistan. The One Unit Scheme was done away with in 1970.

As a result of One Unit, the Irrigation Departments of Punjab, Sindh and (the then) NWFP were reorganized. All were merged and a single Secretary Irrigation, West Pakistan oversaw one Chief Engineer, who in turn was assisted by four Additional Chief Engineers. The entire West Pakistan was divided into nine regions.

The 1954-1970 period of the One Unit Scheme also saw the passage of the West Pakistan Water and Power Development Authority Act in 1958. This Act envisaged the establishment of a *West Pakistan* Water and Power Development Authority ("WAPDA"). The WAPDA Act was subsequently amended in 1979 to substitute the word *Pakistan* for West Pakistan; and its original name reflects again the provincial nature of water regulation within the Constitutional framework. However, in this period, WAPDA was instrumental in executing the Indus Basin Replacement Works envisaged under the Indus Waters Treaty, 1960, and the major storage reservoirs and electricity produced therefrom were very much WAPDA's responsibility. This increased WAPDA's de facto role in water management in the Indus Basin. It's also important to recall the development of irrigation infrastructure during the One Unit period did not benefit from any provincial inputs (as there were no provinces). The infrastructure put in place during this period did not take into account, for example, any lower riparian concerns Sindh may have had.

Figure 5: Schematic of Post-Indus Treaty Basin Irrigation Works




The WAPDA Act was passed in 1958 to "provide for the unified and co-ordinated development of the water and power resources of [15][Pakistan]"[16] and confers onto WAPDA vast powers to frame and execute schemes for, amongst other things, irrigation, water-supply and drainage, and the recreational use of water throughout Pakistan (or what was previously the territorial limits of West Pakistan under the One Unit).[17]

The reorganization of provincial Irrigation Departments and passage of the WAPDA Act, 1958 during the period of One Unit essentially saw provincial control over water resources within Pakistan be absorbed into a single entity. As operator of the massive storage dams and irrigation works constructed during the Indus Basin Replacement Works, WAPDA controlled water for irrigation, water supply and drainage throughout Pakistan.[18] For the first time in its history, the Indus Basin could be said to be *integrated and controlled,* in law and in fact, by a single entity. "WAPDA was a young, expanding and powerful organization entirely responsible for the Power Sector and execution of all Replacement Works. Major new projects in the Water Sector (along with anti-waterlogging and salinity measures) were also assigned to WAPDA. The transfer of principle responsibilities from the Irrigation Department to WAPDA reflected on the morale and performance of the [provincial] Irrigation Department[s]."[19]

## 7. Water Under the Constitution of 1973

After the independence by bloody secession of Bangladesh in 1971, the Constitution of the Islamic Republic of Pakistan was adopted on 23 March 1973. Unlike the Government of India Act, 1935 and the Constitution of 1956 and their Federal, Concurrent and Provincial Legislative Lists, the Constitution of 1973 divided the executive and legislative responsibilities of the Federation and Provinces on the basis of a Federal and Concurrent Legislative List only.[20] Residual subject, namely subjects and matters not enumerated in either of the two Lists were deemed to be of the Provincial domain. By granting greater provincial legislative autonomy, the Constitution of 1973 can be considered a step towards the provincial autonomy that was one of the demands of the Independence movement.

In the paragraphs below, the key provisions of the Constitution dealing with water are considered.

### i. Water as a Subject of Provincial Domain

The Federal Legislative List in the 4th Schedule of the Constitution of 1973 consists of two parts, with 59 subjects in Part I and 13 subjects in Part II. Nowhere does water, as defined in the Government of India Act, 1935 or the Constitution of 1956, appear in the Federal Legislative or Concurrent Legislative List.[21] However, this does not mean Parliament and the Federal Government do not have any Constitutional responsibilities with respect to water. Items 20 and 21 of Part I of the Federal List mention maritime shipping, navigation, lighthouses and the provision of safety on shipping. Not exactly irrigation or hydropower, but scales of water nevertheless. Part II of the List mentions institutions managed by the Federal Government as well as all regulatory bodies established under Federal Law. WAPDA is an institution managed and administered by the Federal Government and so is the Indus Rivers System Authority ("IRSA") established under the Indus River Systems Authority Act passed by Parliament in 1992. Thus even though "water" is not explicitly mentioned in the Federal Legislative List, Parliament and the Federal Government do have power with respect to other scales of water.

The Constitution of 1973 also provides for the Provinces to confer legislative authority onto the Federation and to allow them to pass laws on otherwise provincial subjects. Under Article 144 of the Constitution, Parliament may make a law on a subject not mentioned in the Federal Legislative List if any of the Provincial Assemblies pass a resolution requesting it to do so.[22] The power under Article 144 has been exercised in the past. The Seeds Act, 1976 and National Disaster Management Act, 2010 are both examples where provincial legislative subjects were made subject of Federal law after resolutions from Provincial Assemblies were passed to this effect. In both cases there were strong administrative arguments for the integrated management of seeds and disaster recovery and relief, respectively. Presently, despite the

news of water scarcity that has become so topical in 2018, no Provincial Assembly elected under the Constitution of 1973 has ever passed a resolution requesting Parliament to pass a law on the subject of water, irrigation or water storage etc.

It bears mentioning that the Concurrent Legislative List was abolished by the Constitution (Eighteenth Amendment) Act, 2010 (the "18th Amendment") and, presently, Parliament and the Federal Government have legislative authority over only the subjects mentioned in the Federal Legislative List and over some matters related to criminal law, procedure and evidence. While the 18th Amendment is yet another step in granting provincial legislative autonomy, it is pointed out that it does not impact water governance, as the subject of water has always been one of provincial legislative domain since Partition.

### ii. Role of the Council of Common Interests Over Water Resources

The present Constitution also borrows from the Government of India Act, 1935 by providing that complaints between Provinces as to interference in their natural sources of water be referred to an adjudicatory forum. In the case of the Government of India Act, 1935, this was the Governor General. In the Constitution of 1973, it is the Council of Common Interests ("CCI"). The CCI comprises the Prime Minister, four Chief Ministers and three members of the Federal Government and reports to Parliament.

The function of the CCI is to "formulate and regulate policies in relation to matters in Part II of the Federal Legislative List and shall exercise supervision and control over related institutions."[23] This gives the CCI the power to formulate and regulate policies over WAPDA and IRSA, as both fall within the scope of Item 3 of Part II of the Federal Legislative List being an institution administered by the Federal Government.

The power of the CCI to adjudicate water disputes between the provinces comes from the standalone Article 155 of the Constitution of 1973, the original text of which is reproduced entirely below:

***155. Complaints as to interference with water supplies.***

*(1) If the interests of a Province, the Federal Capital or Federally Administered Tribal Area, or any of the inhabitants thereof, in water from any natural source of supply have been or are likely to be affected prejudicially by –*

*(a) any executive act or legislation taken or passed or proposed to be taken or passed, or*

*(b) the failure of any authority to exercise any of its powers with respect to the use and distribution or control of water from that source,*

*the Federal Government or the Provincial Government Concerned may make a complaint in writing to the Council.*

*(2) Upon receiving such complaint the Council shall, after having considered the matter, either give its decision or request the President to appoint a commission consisting of such persons having special knowledge and experience in irrigation, engineering, administration, finance or law as he may think fit, hereinafter referred to as the Commission.*

*(3) Until Parliament makes provision by law in this behalf, the Pakistan Commissions of Inquiry Act, 1956, as in force immediately before the commencing day, shall apply to the Council or the Commission as if the Council or the Commission were a commission appointed under that Act to which all the provisions of section 5 thereof applied and upon which the power contemplated by section 10A thereof had been conferred.*

*(4) After considering its report and supplementary report, if any, of the Commission, the Council shall record its decision on all matter referred to the Commission.*

*(5) Notwithstanding any law to the contrary, but subject to the provisions of clause (5) of Article 154,[24] it shall be the duty of the Federal Government and the Provincial Government concerned in the matter in issue to give effect to the decision of the Council faithfully according to the its terms and tenor.*

*(6) No proceedings shall lie before any court at the instance or any party to a matter which is or has been in issue before the Council or of any person whatsoever, in respect of a matter which is actually or had been or might or ought to have been a proper subject of complaint to the Council under this Article.*

The text of Article 155 has been amended over time. By virtue of the 18th Amendment, the word "reservoir" has been added after the words "natural source of supply" found in Article 155(1). It is unclear whether this addition refers only to natural reservoirs of water or extends to man-made reservoirs as well. If the latter is true, this addition could give the Provinces or Federal Capital the right to make complaints on the management of storage reservoirs such as Mangla and Tarbela. By virtue of the 25th Amendment, the words "Federally Administered Tribal Agency" were omitted from Article 155(1). The result of this omission is that the Provinces or Federal Capital may make complaints to the CCI in relation to their interests or the interests of any inhabitants of a Province or Islamabad only. But what of the interests of persons outside a Province, or Federal Capital? The Federally Administered Tribal Areas may have been absorbed into the province of Khyber Pakhtunkhwa, but this omission raises questions of the rights of the inhabitants of territories such as Gilgit-Baltistan, which is neither a Province nor the Federal Capital but which is the upper Riparian of the River Indus and several of its smaller tributaries and has a population of 1.8 million.

Several important points need to be noted as arising from Article 155. Firstly, the CCI cannot undertake to adjudicate a water dispute suo motu. A complaint must be made either by a Province or the Federal Government. Upon receiving a complaint, the CCI may either decide on it itself or refer it to a Commission to be appointed by the President of Pakistan. The Commission has statutory powers in relation to summoning witnesses and evidence, and its report is to be considered by the CCI before it renders its decision on the complaint. The report of the Commission is not binding on the CCI, but it is clear that whatever the decision of the CCI, it is to be followed in letter and in spirit by the governments involved. Lastly, a decision of the CCI cannot be challenged in any Court of law, and no individual may seek a legal declaration that any matter should or should not have been considered by the CCI.

Article 155 and the process it envisages for inter-province water dispute adjudication provides a fairly comprehensive procedure for having the Provincial water rights adjudicated if such rights are threatened or endangered by the actions of another Province or Federal Capital. The CCI's Constitutional role in water adjudication must also be seen in light of the de facto centralization of water regulation during the One Unit period. It is clear that the Constitution of 1973 once again reaffirms the provincial nature of water de jure; as well as the need for a democratic mandate for referring water regulation to Parliament for legislation and Federal control.

The CCI's role in dispute adjudication under the Constitution of 1973 has been activated once in the past. In its third meeting held on 31 December 1976, the CCI discussed the setting up of a commission on the division and water sharing from the Indus river system.[25] Accordingly, in 1977, the President of Pakistan formed a Commission comprising the Chief Justice of Pakistan and the Chief Justice of the four High Courts as members[26] with a direction to examine the

issue of water apportionment between the provinces and to file its report to the CCI within 90 days.[27] However, the period of 90 days expired before this Commission could submit its report, which has since neither been formally submitted or considered under the procedure provided for in Article 155 of the Constitution. More recently, in its meeting in May 2018, it is reported that the "Sindh chief minister complained that his province was not being given it due share in water set in the 1991 water accord and because of this Sindh was facing drought like conditions and it farmers suffering."[28] The CCI is reported to have formed a committee under the chairpersonship of the Attorney General to file a detailed report of its findings but no decision has been taken by the CCI on this complaint yet.

The CCI has another important Constitutional role in water. In terms of Article 161(2) of the Constitution of 1973, the CCI is to determine part of the calculation of net-profits of hydropower generation earned by the Federal Government and to be paid to the Province in which the hydro-electric station is situated. One of the underlying reasons for the lack of progress in developing hydropower in the Indus Basin has been a basic distrust between the Provinces relating to the issue of distribution of profits from hydropower and benefit sharing with locally affected people. A Strategic Sectoral Environment and Social Assessment of Hydropower Development in the Indus Basin found "that in seeking to pursue an ambitious hydropower development plant, risks of delays caused by disputes relating to benefit sharing can be reduced by adopting progressive benefit sharing policies and agreement."[29]

The matter of hydropower benefit sharing was considered by the CCI in its 4th meeting held on 12 January 1991 where the Council decided the "methodology of calculation of net profits from bulk generation of electricity proposed by Mr. A.G.N. Kazi Committee should be adopted." Mr. A.G.N. Kazi was formerly the Deputy Chairman of the Planning Commission and had been mandated by the National Finance Commission in 1986 to head a committee to evolve the methodology for calculating net hydel profits under Article 161(2) of the Constitution. This A.G.N. Kazi Committee finalized its report, which ran into 59 pages, on 28 July 1987. The methodology so adopted by the CCI provides, in essence, "that net profits will be worked out by deducting from revenue establishment charges of the power house the operation and maintenance costs actually incurred, depreciation, interest and return actually paid on the net financing obtained for the power house after taking into account funds available in depreciation and reserve funds."[30]

The hydropower benefit sharing mechanism and formula as envisaged in the Constitution raises two issues. Firstly that the benefit is to accrue only to the province in which the power house of the hydroelectric facility is situated. In the case of Kalabagh Dam, for example, the power house is proposed to be situated in Punjab whereas the water catchment will lie primarily in the province of Khyber Pakhtunkhwa. Both provinces would be involved in the generation of hydropower but the hydropower benefit is due to only one. Surely a more equitable means of hydropower benefit sharing can be evolved in which all provinces get some share of the benefits of hydropower.

Secondly, the Kazi Committee Formula is now over 30 years old, during which time the proportion of energy produced in Pakistan from hydropower has shrunk considerably. This places stress on some of the underlying assumptions within the formula itself. Surely a more robust formula that takes into account the shifting energy mix would be more suitable.

### iii. Judicial Precedent on Water

The Superior Courts of Pakistan has also played an active part in recognizing and protecting rights related to natural resources and environmental protection. Below are two of the major categories of decisions that impact the Constitutional interpretation of water resources.

### a. Fundamental Rights

In Shehla Zia vs. WAPDA,[31] the Supreme Court of Pakistan interpreted the Fundamental Right to life guaranteed under the Constitution of 1973 to mean and include a clean and healthy environment. This 1994 decision led to the development of a vast corpus of environmental law by the Superior Judiciary.

The same year, the Supreme Court also declared the right to access clean drinking water part of the Fundamental Right to life and to a clean and healthy environment in West Pakistan Salt Mines Labour Union (CBA) Khewra, Jhelum vs. The Director, Industries and Mineral Development, Punjab, Lahore.[32]

### b. The Doctrine of Public Trust

Doctrine was first discussed in Sindh Institute of Urology and Transplantation vs. Nestle Milkpak Limited[33] in which Mr. Justice S. Ali. Aslam Jafri introduced the concept of the Doctrine of Public Trust thus:

*23. No civilized society shall permit the unfettered exploitation of its natural resources by anyone particularly in respect of the water which is a necessity of the life. Ground water is a national wealth and belongs to the entire society. It is Nectar, sustaining life on earth and without water, the earth would be a desert. I find myself in agreement with Principle to Stockholm Declaration, 1972 as reproduced above in para. 13 of this order that the natural resources of the earth, including air water, land, flora and fauna especially representative samples of natural eco-systems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate. . .*

*24. It is well-settled that natural resources like air, sea, waters and forests are like Public Trust. The said resources being a gift of nature, they should be made freely available to everyone irrespective the status. "Doctrine of Public Trust" as developed during the days of ancient Roman Empire, enjoins upon the Government to protect the resources for the enjoyment of the general public rather than to permit their use for private ownership or commercial purposes. Even under Islamic law certain water resources are to be protected from misuse and over exploitation…*

Briefly stated, the Doctrine stipulates all natural resources in Pakistan may be thought of as being kept in trust, where the trustee is the State, and beneficiaries the people of Pakistan. The Doctrine enjoins that natural resources are kept in trust for the benefit of Pakistan and Pakistanis, and are not to be consumed for any private or commercial purposes. This doctrine has been approved by the Supreme Court of Pakistan and has been applied in numerous cases.[34]

Considering the Doctrine was developed in a case involving the extraction of groundwater by a private company, it remains a powerful legal principle in understanding water and water rights.

The application of these judicial principles has deep meaning for the law relating to drinking water in Pakistan. In the areas of Pakistan where the source of drinking water is the aquifers, property ownership creates riparian rights over water that are at odds with the Fundamental Right [35]to access clean drinking water. And what business do companies have extracting and selling groundwater in environmentally disastrous plastic bottles when the aquifer they are depleting rightfully belongs in trust to the people of Pakistan and cannot and should not be used for commercial purposes? Has the state discharged its fiduciary duty under the Doctrine of Public Trust in allowing private water bottling companies to thrive?

## 8. CCI and IRSA

With the Indus Commission of 1977 inconclusive, the question of inter provincial water allocation remained unresolved until the Indus Apportionment Accord. The Accord was signed in Karachi on 16 March 1991 by the Chief Ministers of the Provinces and sets out a mechanism whereby an agreed upon amount of 114 million acre feet ("MAF") of storage water is to be allocated in predetermined amounts between the provinces. Pakistan has never had 114 MAF of storage capacity, and therefore the Accord should be seen as a political achievement aimed, amongst other things, to develop consensus on construction of the Kalabagh Dam[36] – which would have brought Pakistan's storage capacity at the time to 114 MAF. However, in the absence of a Kalabagh Dam, which was never built, water allocation under the Accord has been based on a contested system of allocation measures that include (i) a three-tiered allocation formula that protects historical uses in different water availability scenarios; and (ii) an exemption from shortage sharing for the "smaller" provinces of Balochistan and Khyber Pakthunkhwa.[37]

The Accord also stipulated the establishment of a regulatory authority – IRSA – for its implementation; and it is IRSA that determines the allocations under the Accord.

The Indus Apportionment Accord was considered and approved by the CCI in its 4th and 5th meetings held on 12 January and 21 March 1991. The CCI also recommended the establishment of IRSA by law,[38] and accordingly Parliament passed the Indus Rivers System Authority Act in 1992 to establish IRSA to implement the Indus Apportionment Accord. In this manner, the approval by CCI of the Accord can be said to have led to the IRSA Act. However, the Accord is neither a policy in relation to WAPDA nor a decision on a complaint in relation to natural water resources referred to the CCI by a Province or the Federal Capital. One may therefore raise questions on how it came to appear on the CCI's agenda. Similarly, the preamble and text of the IRSA Act do not reference any exercise of Article 144 of the Constitution by the Provinces. It is therefore uncertain how Parliament could have passed the IRSA Act or can otherwise legislate on the subject of waters of the Indus Basin, or the apportionment thereof, without being requested through resolutions passed by the Provincial Assemblies.

## 9. Concluding Observations

This review of the development of water law in the context of constitutional development in Pakistan is but a drop in the ocean. There is so much more to study and understand. What follows are observations and questions about where we are to go from here.

Water law is underdeveloped in Pakistan. In a sense, there is no "water" law. Instead, there are numerous laws that contain an element relating to some scale of water. The question, therefore, is how to present this corpus in a coherent, understandable manner that addresses the water security issues. Areas that can be developed are provincial water laws, drinking water laws, laws in relation to health and sanitation to name a few. And within these areas, discussion on how other jurisdictions undertook reform, equity, gender inclusion and sustainability.

One aspect of water law and governance in Pakistan is clear: that there is no clarity on whether water is to be managed or governed centrally by the Federation, independently by the Provinces, or in some form of federalism yet to be negotiated. The Constitution of 1973, like its predecessors, looks at water as a subject of provincial control unless the Provinces resolve to let the Federation intervene. But the provinces have not done so till date. The fact that,

despite the furor over reports that Pakistan will "run dry by 2025", no Provincial Assembly has ever passed a resolution requesting Parliament to make federal laws with respect to water raises questions over the democratic mandate for integrated water management.

This puts the recently approved National Water Policy and Water Charter into some question. Both documents were reported to have been approved by the CCI earlier in 2018, weeks before the end of the PML-N Government's Parliamentary tenure. One may question the wisdom of *any* government adopting *any* policy mere weeks before the end of its term and a General Election. The cynical may even consider it a political gimmick. More generous commentators have hailed the Policy and Charter. Regardless of where the truth may lie, neither the Policy nor Charter are within the mandate of the CCI. They are not policies with respect to WAPDA or IRSA. They are not the outcome of a water dispute referred by a Province or the Federal Capital. They don't even provide a formula for hydropower benefit sharing. How did *this* document come to be on the agenda of *this* forum when it was never debated by any Provincial Assembly or placed before any provincial Cabinet?

If the central hypothesis of this essay is correct, regardless the merits of the Policy and Charter they don't carry the democratic mandate required of them by the Constitution of 1973. Documents like water policies, if at all, must be provincial in nature. Under the scheme of this Constitution, a successful National Water Policy would be the outcome of Provincial Water Policies or at the very least a democratic decision by elected Provincial representatives to confer the responsibility of water stewardship to the Federal level. They would be the outcome of a negotiated decision by the federating units of this Islamic Republic. They would carry a democratic mandate. The Present Policy, as it appears on the website of the Ministry of Water Resources,[39] bears the signatures of ten men. Can it be said to be representative of the Federation?

Overhaul is also required in the riparian water rights regime created by the Easements Act, 1882. Unregulated over-extraction of the Indus Basin aquifer is unsustainable and must be managed. But no form of management is possible if the property law regime recognizes the riparian rights of an individual owner of property over the needs of the collective. The Easements Act, 1882 is why it is possible for water bottle companies to extract large amounts of groundwater and sell it in indestructible plastic bottles and not pay a Rupee in tax or concession to the State. To take Cullet's earlier observation to its conclusion: it is ludicrous to suggest that in Pakistan, a country of over 200 million people, the right to underground drinking water belongs only to the propertied class! This is against the Doctrine of Public Trust.

The historical context of water law in this essay also reveals some contours of law relating to inter provincial water disputes. The Rau Commission Report quoted in this essay is an extraordinary document; and must be viewed as one of the foundational legal documents in relation to water law in South Asia. Partition birthed a riparian relationship between India and Pakistan that led to the Indus Waters Treaty. That much is obvious. What is less obvious is how Partition totally changed the meaning of the phrase "Indus Basin." It certainly redefined the relationships between Sindh and its upper riparian neighbors, and would no doubt have resulted in differing grievances and complaints. The One Unit period saw the de facto centralization of water management and the exclusion of provincial voices in water management. With so much that has physically changed in the Indus Basin since Partition, it is again noticeable that the Province of Sindh has never filed a complaint before the CCI in relation to water resources.

Ultimately, the question of inter provincial water dispute adjudication remains outstanding. The CCI mechanism has not been used enough to have generated precedent to study. We are

resultantly unable to articulate the water sharing relations between the provinces. Related to this is the issue of hydropower benefit sharing. Both are issues that are to be dealt with by the CCI. Both are fundamental issues of the federation. In this sense, water is fundamental to the federation of Pakistan. Our political future is ultimately tied to the decisions we make with this natural resource.[40]

## References

[1] (1931) 293 U.S. 336
[2] Punjab was by no means a monolith. A number of Princely States also existed within the Basin that were not under Company control. But the need for management and legislation for water by the British can be traced to their assuming responsibilities over the region.
[3] See Figure 1, below.
[4] *Inundation canal* are long *canals* taken off from large rivers. They receive water when the river is high enough and especially when in flood. While Perennial *canals* are lined to dams and barrages to provide water throughout the year, and they irrigate a vast area
[5] Cullet, Philippe, "Groundwater Law in India: Towards a Framework Ensuring Equitable Access and Aquifer Protection", 26/1 Journal of Environmental Law (2014), p. 55-81 available at www.ielrc.org/contents/a1403.pdf at p. 3. Note, however, in Debi Pershad Singh vs. Joynath Singh (LR 24 IA 160), the Privy Council held that the local laws in India regarding the rights of riparian owners relative to each other in respect of the waters of rivers and natural streams were nevertheless *substantially the same* as the law in England.
[6] Section 7 of the Easements Act, 1882; see Figure 3 below.
[7] Iram Khalid and Ishrat Begun, "Hydropolitics in Pakistan: Perceptions and Misperceptions", South Asian Studies Vol 28, No. 1, January-June 2013, pp. 7-23, at p. 10 available at: http://results.pu.edu.pk/images/journal/csas/PDF/1_V28_1_2013.pdf
[8] Item No. 9, Part-II, Schedule II of the Government of India Act, 1919.
[9] Water was included in Item 7 of Part II of Schedule I to the Devolution of Powers Rules under the Government of India Act, 1919.
[10] In a further concession of power to locally elected legislatures, the Government of India Act, 1935 did away with "diarchy", thereby extending greater legislative autonomy to the provinces.
[11] Sections 130-132 of the Government of India Act, 1935.
[12] Report of the Indus Commission, Volume I (Government of India Press, Simla, 1942), at p. 33, available at https://archive.org/details/in.ernet.dli.2015.34651/page/n41.
[13] The Radcliffe Line shows Gurdaspur District as awarded to Pakistan. What the Radcliffe Award was officially announced on 15 August 1947, Gurdaspur was found to actually have been awarded to India.
[14] Salman, M.A Salman, "Bagliar Difference and its resolution process – a triumph for the Indus Waters Treaty?" Water Policy 10 (2008), 105-117, at p. 106. The 8 link canals and 2 storages can be seen in Figure 4.
[15] Substituted by the West Pakistan Water and Power Development Authority (Amendment) Ordinance, 1979 for "West Pakistan".
[16] Preamble to the WAPDA Act, 1958.
[17] Section 8, Ibid..
[18] With the exception of the Karachi Division, which was specifically excluded from the territorial applicability of the WAPDA Act, 1958.
[19] Asrar-ul-Haq, "Case Study of the Punjab Irrigation Department", International Irrigation Management Institute (1998), at p. 11.
[20] Article 142 of the Constitution of 1973.
[21] "Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power."
[22] The post-18th Amendment requires a resolution from only one Provincial Assembly. However, under the Constitution of 1973 as originally enacted, Parliament could only pass a provincial law if requested by resolutions passed by all *four* Provincial Assemblies.
[23] Article 154(1) of the Constitution of 1973.

[24] Article 154(5) stipulate the CCI shall make its own rules of procedure unless Parliament makes provision in law in this behalf.
[25] Ahmad Mehmood Zahid, "Institutional Analysis of Council of Common Interests: A Guide for Functionaries" (UNDP Pakistan 2013), at p. 20. The agenda of the meeting does not disclose whether this item arose from a complaint filed under Article 155 of the Constitution of 1973.
[26] Referred to as the Indus Water Commission, the Chief Justices Commission or the Anwar-ul-Haq Commission.
[27] Lead Update No. 219, "Legal Framework for Resolution of Water Conflicts in Pakistan – A Historical Perspective"3 January 2009, at http://www.lead.org.pk/water_governance/attachments/219.pdf
[28] 'CCI forms body to look into water shortage complaints' Dawn, retrieved from https://www.dawn.com/news/1410437
[29] "Strategic Sectoral Environment and Social Assessment prepared for the Ministry of Water and Power, Government of Pakistan (July 2014).
[30] Arbitration Award dated 9 October 2006 passed by former Chief Justice Ajmal Mian in arbitration titled Government of NWFP vs. WAPDA, at p. 40.
[31] PLD 1994 Supreme Court 693.
[32] 1994 SCMR 2061. See also Nazim UC Allah Bachayo Shore vs. The State, 2004 YLR 2077 (Sindh).
[33] 2005 CLC 424 (Karachi).
[34] See, for example, Muhammad Tariq Abbasi vs. Defence Housing Authority (2007 CLC 1358, Division Bench, Karachi), Arshad Waheed vs. Province of Punjab (PLD 2010 Lahore 510), In re: Cutting of Trees for Canal Widening Project, Lahore (2011 SCMR 1743), Chamber of Commerce and Industry in Quetta, Balochistan vs. Director-General, Quetta Development Authority (PLD 2012 Quetta 31), Maulana Abdul Haque Baloch vs. Government of Balochistan (PLD 2013 Supreme Court 641) and Young Doctors' Association vs. Government of Pakistan (PLD 2015 Lahore 112).
[35]
[36] Gareth Price et al., "Attitudes to Water in South Asia", Chatham House Report (June 2014) available at https://www.chathamhouse.org/publication/attitudes-water-south-asia at p. 87.
[37] Sattar, Robison & McCool, "Evolution of Water Institutions in the Indus River Basin: Reflection from the Law of the Colorado River" University of Michigan Jounral of Law Reform (Vol 51, Issue 4, 1998) p. 715 at p. 741.
[38] This decision was taken in the 6th meeting of the CCI held on 16 September 1991.
[39] Available at http://mowr.gov.pk/wp-content/uploads/2018/06/National-Water-policy-2018-2.pdf
[40] Other documents, quoted and referred in this essay, also provide excellent insight into water-law principles in our Indus Basin. The Haleem Commission Report provides most of the reasoning and calculations relied upon in the Indus Apportionment Accord. It also provides detailed insight into how the historical development of water rights in the provincial irrigation laws specifically excluded groundwater from consideration. Enthusiasts for integrated and conjunctive water use are again reminded their best intentions cannot hide the fact that conjunctive surface and groundwater use will require and overhaul in provincial irrigation laws. The Arbitration Award decided by former Chief Justice Ajmal Mian in Government of NWFP vs. WAPDA provides excellent insight into how the changing national energy mix (from mostly hydel in 1976 to increasingly dependent on fossil fuels) rendered benefit sharing formulas useless.