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## Inter-Provincial Water Sharing Conflicts in Pakistan

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Non-renewable natural resources like coal, gas, crude petrol etc, due to their economic values had been major source of conflict among communities, societies or nations.<sup>1</sup> With growing time and increasing resource-fed pattern of development they have also acquired political values. The possessor through their possession can easily regulate the development of the one who do not have or have it in limited quantity. Though the natural resources were not the main cause for two world wars but a demand for resources acted as a catalyst for wars. Those wars were triggered because then major powers wanted more and more colonies under them; which could provide raw materials to their industries. Even at present the United States of America's adventure in west Asia is covertly for establishing its suzerainty over the gas and oil fields in that region.

Unlike non-renewable resources the renewable resources had never played such significant role but now they too are gaining significance due to growing gap between their supply and demand. The renewable resource, which is all likely to result into a conflict is –water<sup>2</sup>. In past water has played a role during wars<sup>3</sup>, but never had been main reason for it. In recorded history, only war that had occurred over water was 4500 years ago between the city-states of Lagash and Umma in the Tigris-Euphrates region.<sup>4</sup> It is not that the quantity of water on planet earth is less rather it is the most ubiquitous resource on earth, but 97.5 percent of the world's water is too salty for human consumption and crop production. Even the rest of the fresh water, an estimated 35 million cubic kilometers (million cu km)/year, cannot be fully accessed; most of it is locked either in the ice cover of

<sup>1</sup> See Kennedy, Paul (1987) *The Rise and Fall of the Great Powers*: New York: Vintage

<sup>2</sup> Dixon, Thomas F. Homer "Environmental Scarcities and Violent Conflict: Evident From Cases" *International Security*, Vol 19, No.1 (Summer 1994) P.5-40.

<sup>3</sup> An early example to it is the intentional damming of the Tigris River in B.C.1700 by Abi Eshuh, grandson of Hammurabi, in an effort to prevent the retreat of rebels seeking independence. Then in 1573, at the beginning of eighty years war against Spain, the Dutch flooded the land to break siege of Spanish troops on the town Alknoor. In 1938 Chang-Kai Shek ordered the destruction of flood control dikes along Huang-He (yellow river) to flood the areas threatened by the Japanese army. see Gliciek, Peter H., (2006), *The World's Water 2006-2007*; Chicago: Island Press.

<sup>4</sup> Gliciek, Peter H., (2006), *The World's Water 2006-2007*; Chicago: Island Press.

Arctic and Antarctic regions or in deep underground aquifers.<sup>5</sup> Thus, the physically accessible fresh water potential of the world is only 90,000cukm/year. This amount represents just 0.26 percent of global fresh water reserves.<sup>6</sup>

Close to the two-thirds of available water known as *green water* evaporates back to the environment and responsible for rainfall and balancing the ecological system. Even the rest, known as *blue water*, which can be used cannot be fully utilized due to economic, technological and environmental limitations, spatial and temporal mismatch between fresh water availability and demand, and pollution-induced quality deterioration.<sup>7</sup> The spatial distribution is grave problem as water resources are not available where or when needed. Brazil with small fraction of global population has one-fifth of world's water resources whereas India and China, with more than a third of population have only one-tenth of global fresh water resources.<sup>8</sup>

The growing demand –supply gap due to geometrically increasing population and phenomenon of climate change is making this resource as a cause of conflict between the states and also among communities. In this on-going global phenomenon Pakistan cannot remain an exception. As an agricultural dominated economy with deep ethnic and regional fissures water has acted as a catalyst to increase the level of tension among the administrative units. This paper is an attempt to politically analyze the inter-provincial water sharing conflicts in Pakistan. The focus is mainly upon on two most important provinces of Pakistan- Punjab and Sindh.

### **Reasons for Water Conflicts in Pakistan**

There are two major river systems in Pakistan: rivers flowing into Arabian Sea and Endorheic river basin. The former comprises; Indus river basin, Lyari river ,Hingol, Hub rivers.Later comprises of: Mashkal, Siastan basin, Indus plain etc. Among all, it is river Indus ,alongwith its tributaries, forms Indus River System(IRS)<sup>9</sup>, is considered as the “lifeline” of Pakistan.Pakistan has the largest

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<sup>5</sup> Saleth, Maria R. and Ariel Dinar (2004), *The Institutional Economics of Water A Cross-country Analysis of Institutions and performance* Cheltenham, UK: Edward Elgar.P.3.

<sup>6</sup> As cited in Saleth, Maria R. and Ariel Dinar (2004), *The Institutional Economics of Water A Cross-country Analysis of Institutions and performance* Cheltenham, UK: Edward Elgar.P.3.

<sup>7</sup> Saleth, Maria R. and Ariel Dinar (2004), *The Institutional Economics of Water A Cross-country Analysis of Institutions and performance* Cheltenham, UK: Edward Elgar.P.3.

<sup>8</sup> *ibid*

<sup>9</sup> This system constitutes river Indus and its tributaries ,which are transborder rivers flowing in India,Pakistan after Afghanistan.It includes rivers;Jhelum,Indus,Ravi ,Chenab,Sutlej,Kabul and Beas.Out of it Jhelum,Indus and Chenab's water is being used by Pakistan.Sutlej,Ravi and Beas 's water is being used by India.River Kabul is a tributary ,which mainly flows in Afghanistan.

contiguous irrigation system in the world, which provides the backbone to its economy.<sup>10</sup> Therefore, provinces in Pakistan are in conflict over use of maximum quantity of water for their agricultural, industrial and domestic needs. Sindh, Balochistan, Khyber-Pakhtunkhwa (earlier known as North West Frontier Province) ,almost province-like unit, Gilgit-Baltistan<sup>11</sup> and federal territory of “Azad” Kashmir (Pakistan side of Kashmir) always allege that Punjab steals their share of water by diverting the water from river Indus and its tributaries to provide benefit to its farmers.

Major reason for growing water conflicts throughout the globe is the increasing demand of limited resource. The increase in demand is due to increase in population, which requires more water for their use. This use is both direct as well as indirect. Direct use of water means use of water for domestic consumption and irrigation. Indirect use of water means use of water to produce food. More people mean more food, which requires more water to irrigate crops. As the number of people is increasing they need more industrial goods for their consumption this also need more water because the industrial production process too requires water .Besides this consumption problem the water supply is being badly affected by the phenomenon of climate change. Failure to manage uneven distribution of rainfall, seasonal deluge and depletion of glaciers, are adversely affecting the availability of fresh water. The per capita availability of water in Pakistan was 5210 cubic meter in 1951, it reduced to 1100 cubic meter in 2006<sup>12</sup>. In 2010 it was 1038 cubic meter and is being projected to be 877 cubic meter by 2020<sup>13</sup>. Some global warming projections have been estimated a decrease in the water availability in the Indus river system to a staggering 40 percent by mid-century, which if it were to happen would threaten the very

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<sup>10</sup> Imran Ali “Political Economy and post-2000 Development in Pakistan” in Jetly, Rajshree (ed) (2009) *Pakistan in Regional and Global Politics* : London, New York and New Delhi: Taylor & Francis Group. P.235-261.

<sup>11</sup> According to Gilgit-Baltistan (Empowerment and Self-Governance) Order 2009; Gilgit-Baltistan will have a Governor as Pakistan has in the other four provinces. The leader of the legislative assembly will be known as chief minister; the Assembly will have 33 members, of whom 24 are to be directly elected and have powers to legislate on 61 subjects. The territory will have its own Chief Election Commission and Public Service Commission. This arrangement is almost what provinces in Pakistan have, sans the formal constitutional status. See Subramaniam, Nirupama “Measures for Gilgit-Baltistan Generates Suspensions” *The Hindu*, 1 September, 2009.

<sup>12</sup> “Water Availability vs Population Growth” [www.wapda.gov.pk](http://www.wapda.gov.pk) accessed on 25 April 2012.

<sup>13</sup> “Population Growth Will Reduce Water Availability” *Xinhua* 28 June 2010.

survival of a population already swollen beyond sustainability.<sup>14</sup> According to Water Stress Index developed by Mallin Falkenmark Pakistan, is already a water stressed country and by 2020 it will fall in category of country with acute water shortage<sup>15</sup>. That situation will further aggravate the water conflicts among the provinces.

There is also a problem of different treatments meted out by the provinces in Pakistan due to the phenomenon called “Punjabisation of Pakistan”<sup>16</sup>. Under its burden even the logical and legal demands of the other provinces have been either overlooked or being ignored. Punjab has attained this status because of the key role it has played in throughout post-independence Pakistan’s history. It is home to Pakistan Army, which has wielded power directly for two and half decades and indirectly for longer still.<sup>17</sup> Even during the civilian regimes; the region has been of pivotal importance. During her first (1988-90) ministry, Benazir Bhutto found to her cost that a national administration in Islamabad could be undermined by a hostile provincial government in Lahore.<sup>18</sup>

It plays important role economic growth of Pakistan and others are ,more or less, fully dependent upon it. It constitutes around fifty six percent of population of Pakistan. The massive irrigation projects introduced by the British in the late 1880s ensured the west Punjab would be the bread basket of Pakistan, just as it had been of British India. Green Revolution technology introduced in the 1960s.Pakistan’s agricultural output grew from 7.7 billion in 1960 to Rs 12.2 billion in 1969-70.In 1976-7 the Punjab was producing 76 percent of country’s output of major crops and 67 percent of the food grains output.<sup>19</sup>Even today Punjab is bread basket of Pakistan and also industrially developed than other provinces.

Due to its political status and economic importance it uses maximum resources of Pakistan. This dominance has been more oftenly challenged by the others. East Pakistan (now Bangladesh) dis-membered due to this and also Balochis have

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<sup>14</sup> Imran Ali “Political Economy and post-2000 Development in Pakistan”in Jetly,Rajshree(ed)(2009) *Pakistan in Regional and Global Politics* :London,New York and New Delhi:Taylor & Francis Group.P.235-261.

<sup>15</sup> Mallin Falkenmark, “Global Water Issues Confronting Humanity,” *Journal of Peace Research* 27 No.2(May 1990);177-190.

<sup>16</sup> Samad,Yunus ,Pakistan: From minority rights to majoritarianism in *Fault Lines of Nationhood* by Gyanendra Pandey & Yonus Samad(2007); New Delhi:Roli Books Pvt Ltd

<sup>17</sup> Ian Talbot “The Punjabisation of Pakistan :Myth or Reality?” in Jafferlot,Christophe,*Pakistan :Nationlism Without Nation*;New Delhi,Manohar Publication.P.51-62.

<sup>18</sup> *ibid*

<sup>19</sup> *ibid*

fought civil wars and still fighting against the Punjabi-dominated, state establishment for their right to use indigenous natural resources. Sindhis too in past had raised this issue. G.M.Syed, a politician who once supported the Pakistan movement and the two nation-theory became a trap for Sindhis, instead of liberating Sindh, it fell under Punjabi-Mohajir domination and until his death in 1995 he called for a separate Sindhi “nation” implying a separate Sindhi country.<sup>20</sup>

As Ernest Gellner maintains; reason for nationalism is the denial of economic resources by a dominant region or group to the others. This leads to a revolt by the deprived group or region against the dominant groups. They use racial or ethnic inferiorities as a reason for this sort of discrimination. Their discontent can find “national” expression: the privileged are manifestly different from themselves, even if the shared “nationality” of the under-privileged starts off from a purely negative trait, i.e. shared exclusion from privilege and from the “nation” of the privileged. It is in these situations that ‘culture, pigmentation, etc. become important : they provide means of exclusion for the benefit of the privileged and a means of identification etc.,for the under-privileged (...).<sup>21</sup>

Homer-Dixon argues that the resource war leads to tensions and competition among the groups. He also maintains that the ruling elite’s behaviours towards others lead to resource conflicts.<sup>22</sup> In Pakistan all of the state’s resources are effectively placed at disposal of the landed elite. If the poor want to save themselves or access these resources they could only do so through feudals in their district. The system in Pakistan at the best times is based on political patronage<sup>23</sup>.

Finally, as a praetorian state there is a deficit of democratic-decentralization in Pakistan, this leads to feud among the provinces on the issue of water sharing. Regionalism is growing very strongly due to this deficit of

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<sup>20</sup> Cohen,Stephen P.(2005)*Idea of Pakistan* :New Delhi:OUP.P.212.

<sup>21</sup> Gellner as cited in in Jafferlot,Christopphe,*Pakistan :Nationalism Without Nation*;New Delhi,Manohar Publication.P.10.Also see Gellner,Earnest,(1964), *Thought and Change*,London:Weidenfield and Nicholson.

<sup>22</sup> Water Conflicts in South Asia :Managing Water Resource Disputes *Within and Between* Countries of the Region (S.Ayub Qutub ) Umesh Parajuli ;Project Implemented by Global Environment and Energy in the 21<sup>st</sup> Century (GEE-21) and the School of Advanced International Studies,Johns Hopkins University (SAIS); Sponsored by the Carnegie Corporation of New York.

<sup>23</sup> Shah,Muhammad Azeem Ali, “Lessons from the 2010 floods in Pakistan”*Seminar* Issue No.626 October 2011.

democratic-decentralization. The civil-society has failed to engage into a serious debate over the issue of water, which gives ample space to the politicians to exploit parochial and regional sentiments<sup>24</sup>.

### **Constitutional and institutional arrangements to address water conflicts.**

Constitutionally, Pakistan has a federal system of government, where both federal and provincial government shares power. But in practice it's the Federal Government, which dictates its terms over the provinces. The main reason for it is the Pakistan has been mostly under the military rule, which requires a Unitarian system to hold its power. In its Constitution, a Council of Common Interests (CCI) is prescribed to formulate and regulate policies for matters in Part II of the Federal Legislative List such as railways, mineral oil, natural gas and the water & power development authority<sup>25</sup>. The Federal Ministry of Water and Power is responsible for water sector policy formulation. This ministry has set up an autonomous agency, The Water and Power Development Authority (WAPDA), for the development of water resources, including main dams; barrages link canals, public tube wells and drainage projects, across the country. However, WAPDA retains the management of the multipurpose reservoirs on the Indus and its tributaries and operates them in consultation with the Indus River System Authority (IRSA) and Provincial Irrigation Departments (PIDs) according to the water rights and seasonal allocations to the provinces<sup>26</sup>.

In an effort to, theoretically, decentralize the administration of water resources Asif Ali Zardari-led civilian government has passed Eighteenth amendment in 2010. This amendment has tried to constitutionally resolve the increasing inter-provincial water conflicts by inserting provisions like:<sup>27</sup>

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<sup>24</sup> Habib, Zaigham (2005), "Water: issues and Politics in Pakistan" *South Asian Journal*, issue no.8 pp-35-43.

<sup>25</sup> 1973 Constitution of Pakistan 1973 Retrieved from [www.mofa.gov.pk/Publications/constitution.pdf](http://www.mofa.gov.pk/Publications/constitution.pdf). Accessed on 11 March 2011.

<sup>26</sup> Water Conflicts in South Asia :Managing Water Resource Disputes *Within and Between Countries of the Region* (S.Ayub Qutub ) Umesh Parajuli ;Project Implemented by Global Environment and Energy in the 21<sup>st</sup> Century (GEE-21) and the School of Advanced International Studies, Johns Hopkins University (SAIS); Sponsored by the Carnegie Corporation of New York.

<sup>27</sup> Eighteenth Amendment to Constitution of Pakistan, 2010. Retrieved from [www.comparativeconstitutionsproject.org/files/pakistan\\_2010.pdf](http://www.comparativeconstitutionsproject.org/files/pakistan_2010.pdf). Accessed on 22 May 2010.

Article 157 (i) “Provided that the Federal Government, prior to taking a decision to construct or cause to be constructed hydro-electric power stations in any Province, shall consult the Provincial Government concerned and;  
(3) In case of any dispute between the Federal Government and a Provincial government in respect of any matter under this Article, any of the said Governments may move the Council of Common Interests for resolution of dispute.”

These amendments have also tried to strengthen, the weak structures of CCI, to resolve inter-provincial water conflicts in Pakistan.

### **Past and Present Inter-Provincial Water Conflicts in Pakistan.**

Economic developments, in present Pakistan, hinged principally on the emergence of an extensive network of perennial canals, taking off from the Indus and its western tributaries in the province of Punjab and Sindh. Constructed from the mid 1880s these canals transformed hitherto arid and barren land into an agricultural zone that is of crucial value to and indeed underwrites the contemporary Pakistan’s economy.<sup>28</sup>

Water from the Indus River System (IRS) is being used as political weapon by the rulers since colonial days. Due to loyalty of Sikh soldiers in suppressing 1857 war of Indian independence and other British wars, colonial rulers rewarded them by setting up canal colonies in Indus basin of Punjab, where the retired soldiers could be settled. The waters of the five rivers were harnessed in an ambitious irrigation development. The transformation of 6 million acres of desert into one of the richest agricultural regions in Asia was seen as stupendous engineering feat that was seen as colonial government biggest achievement<sup>29</sup>. This was also an attempt by the colonial government to establish loyalty among the soldiers staying in that area and dilute the rising tide of nationalism. As Sir Charles Aitchison maintained that “ It is of greatest importance to secure for these tracts manly peasantry capable of self-support and of loyal and law-abiding disposition”<sup>30</sup>. But in early decades of 20<sup>th</sup> century these colonies too came under impact of growing nationalist movement and revolts took place there too. Afterwards the British changed their policies. In 1914 Michel O Dwyer developed the scheme for grant of land in colonies to the ‘landed gentry’. Their holders were to provide natural

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<sup>28</sup> Imran Ali “Political Economy and post-2000 Development in Pakistan” in Jetly, Rajshree (ed) (2009) *Pakistan in Regional and Global Politics* : London, New York and New Delhi: Taylor & Francis Group. P.235-261.

<sup>29</sup> Talbot, Ian “Punjab Under Colonialism: “Order and Transformation in British India” *Journal of Punjab Studies* Vol 14 No.1 2007 PP 1-10.

<sup>30</sup> As cited in Talbot, Ian “Punjab Under Colonialism: “Order and Transformation in British India” *Journal of Punjab Studies* Vol. 14, No.1 2007 PP 1-10.

leadership to the settlers. Seven and half percent of Lower Bari Doab colony were reserved in this way. The main beneficiaries were large land holders such as Noons and Tiwanas, who were loyalist military contractors to the Raj<sup>31</sup>. This process has led to emergence of feudals in Punjab, who were dependent upon waters from Indus to enrich and support their lavish life-styles. And thus conflict for getting more water through diversion projects began.<sup>32</sup> After the British left the subcontinent and Pakistan came into being in 1947, the water from the IRS still occupied same importance and is being still a source for inter- provincial confrontation in Pakistan.

For the first time in 1901, the issue of water conflict between Punjab and Sindh came to the fore, when the Indian Irrigation Commission prohibited Punjab from taking even a drop of water from Indus without the approval of Sindh<sup>33</sup>. Then in 1919, the then government of British India issued the Cotton Committee report; where in, it prohibited Punjab from undertaking any projects until Sukkur barrage was completed and water needs of Sindh were determined<sup>34</sup>. In 1925, Lord Reading, then British Viceroy of India, rejected Punjab's request for Thal canal from Indus considering the undue deprivation of Sindh's lower riparian rights. In 1937; however, the Anderson Commission allowed Punjab to withdraw 775 cusecs of water on experimental basis from Indus for Thal canal<sup>35</sup>. This happened even with the absence of Thal canal in the terms of the commission and clearly constituted a direct violation of the viceroy's orders of 1925. In 1939, Sindh lodged a formal complaint with the government, under the Government of India Act of 1935. Consequently, in 1941, the Rao Commission recognized the injustice that was meted out to Sindh, recommended construction of two new barrages in Sindh on Indus, and ordered Punjab to pay 20 million Rupees of the construction cost of these barrages to ameliorate Sindh's losses due to the actions of Punjab<sup>36</sup>. Under the guidance of the Rao Commission, a committee comprising of the chief engineers of Punjab and Sindh came out with an agreement in 1945, known as "Sindh- Punjab Agreement." It resolved the distribution of the waters of all Indus basin rivers between Punjab and Sindh. Essentially, this agreement recognized

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<sup>31</sup> ibid

<sup>32</sup> ibid

<sup>33</sup> Memon, Altaf(2002), *An Overview of the History and Impacts of the Water Issue in Pakistan*, retrieved from [www.worldsindhi.com](http://www.worldsindhi.com), accessed on 28october 2009.

<sup>34</sup> ibid

<sup>35</sup> ibid

<sup>36</sup> ibid



Sindh's supremacy over the Indus River and nothing upstream could be changed or built without her formal consent and approval<sup>37</sup>.

After partition of India in 1947, Pakistan came up as a sovereign state. The partition of country also led to partition of resources. Now the Indus was not a free flowing river rather it gained a status of a trans-border river flowing between India and Pakistan.<sup>38</sup> Hence the resources were to be shared between them. But this sharing or division could not immediately done because when the British Act of Parliament was passed on July 18, 1947, the boundary between the two new dominions was not demarcated and so it was impractical to deal with the allocation of waters<sup>39</sup>. To remedy the legal vacuum created by the partition, the chief engineers of East Punjab (India) and West Punjab (Pakistan) signed a Standstill Agreement on December 20, 1947 providing, *inter alia*, that until the end of the current *rabi* crop, on March 31, 1948, the status quo would be maintained with regard to water allocation in the Indus Basin irrigation system. The authorities in East Punjab refused the renewal of the agreements upon expiration and on April 1 1948, halted the supply of water to several canals in Pakistani territory<sup>40</sup>. While Pakistan criticized the incident and called India's action "Machiavellian duplicity", India relied on the fact that the agreements had simply lapsed and stated that the proprietary rights in the waters of the rivers in East Punjab continued to be vested in East Punjab (India), and that West Punjab (Pakistan) could not claim rights to any share of those waters<sup>41</sup>. After losing its own water to India, Punjab targeted Indus to siphon off its waters in violation of the existing agreements between Sindh and Punjab. Punjab constructed a link canal called as "Bambanwala-Ravi-Bedian (BRBD) link canal" without the consent and approval of Sindh in a clear violation of Sindh - Punjab Agreement of 1945<sup>42</sup>.

In this situation one option Pakistan had was to go for war and many advocated for it but the government avoided it. Finally both sides ready for dialogue. Following extensive discussions in an Inter-Dominion conference held in New

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<sup>37</sup> *ibid*

<sup>38</sup> Iyer, Ramaswamy (2008) "India's Water Relations with her Neighbours" lecture delivered at University of Texas Austin.

<sup>39</sup> Salman, M.A. Salman & Kishor Uprety (2002); *Conflicts and Cooperation on South Asia's International Rivers; a Legal Perspective*. Washington D.C.; The World Bank.

<sup>40</sup> *ibid*

<sup>41</sup> *ibid*

<sup>42</sup> Memon, Altaf (2002), *An Overview of the History and Impacts of the Water Issue in Pakistan*, retrieved from [www.worldsindhi.com](http://www.worldsindhi.com), accessed on 28 October 2009

Delhi on May 3-4 1948, a new agreement was signed (commonly called the Delhi Agreement) on May 4; 1948. Under the terms of that Agreement, East and West Punjab recognized the necessity to resolve the issues in the spirit of goodwill and friendship. Without prejudice to its own rights, the government of East Punjab granted to West Punjab the assurance that it would not suddenly withhold the supply of water without providing sufficient time for West Punjab to develop alternate sources. This arrangement was continued until the Indus Water Treaty was signed in 1960<sup>43</sup>. Sindhis complain that Dr. Saleh Qureshi, a Sindhi, was initially made a member of the negotiating team but was promptly removed when the One Unit was imposed before the serious negotiations began<sup>44</sup>. This they believe was to give water leverage to Punjab province in the treaty.

According to IWT, India has been allocated twenty percent of water from the IRS while Pakistan receives eighty percent. Pakistan got rights over rivers Indus, Jhelum and Chenab plus Kabul barring some limited uses for India in Jammu and Kashmir. India got the entire waters from three smaller rivers (Ravi, Beas and Sutlej), and some minor irrigation uses for Pakistan from four nullahs that join the river Ravi. India was also permitted to develop additional irrigation of 1.34 million acres in J&K. Further India is allowed 3.60 Million Acre Foot (MAF) of storage (0.40 MAF on Indus, 1.50 MAF on the Jhelum and 1.70 MAF on the Chenab)<sup>45</sup>. The treaty has dispute settlement body and there are mechanisms to resolve the dispute over water sharing.

According to the IWT Pakistan got funds from various donor countries including India and the World Bank to construct barrages, canals etc to utilize its share of water<sup>46</sup>. The government carried on various projects. Since then the whole problem has started. The provinces constantly blame Punjab for using those projects to divert their share of water for its own use.

In 1968, under the chairmanship of Akhtar Hussain, the Water Allocations and Rates Committee was constituted by the Governor of former West Pakistan, to review barrage water allocations, reservoir release patterns and drawdown levels and use of ground water in relation to surface water deliveries. The committee submitted its report in July 1970 and since then no attention was paid on this

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<sup>43</sup> Salman, M.A. Salman & Kishor Uprety (2002); *Conflicts and Cooperation on South Asia's International Rivers; a Legal Perspective*. Washington D.C.; The World Bank

<sup>44</sup> Memon, Altaf (2002), *An Overview of the History and Impacts of the Water Issue in Pakistan*, retrieved from [www.worldsindhi.com](http://www.worldsindhi.com), accessed on 28 October 2009

<sup>45</sup> Iyer, Ramaswamy R. (2005) "Indus Treaty: A Different View" *Economic and Political Weekly*, July 16, 2005; pp 3140-3144.

<sup>46</sup> Salman, M.A. Salman & Kishor Uprety (2002); *Conflicts and Cooperation on South Asia's International Rivers; a Legal Perspective*. Washington D.C.; The World Bank

report.<sup>47</sup> Again in 1970 Justice Fazl-e-Akbar committee was constituted to recommend apportionment of water of river Indus and its tributaries. This committee submitted its report in 1971. During the same period, ad hoc distribution from Chasma barrage and later Tarbela reservoir storage among the provinces was ordered<sup>48</sup>. No substantive decision was taken on the Fazl-e-Akbar committee recommendations and water continued to be distributed on ad hoc orders by the government of Pakistan. In 1977, the government of Pakistan established another commission comprising the chief justices of the High Courts of the Province, headed by the Chief Justice of Pakistan to examine the issue of water apportionment.<sup>49</sup> Then there was Justice Halim Commission set up to look into the matter.<sup>50</sup>

As a typical South Asian phenomenon, the recommendations made by these commissions were never tried to be implemented by the federal government and the whole effort of these commissions have been wasted. Few points out of various recommendations were tried to put into action to make an interim arrangements and not the final solution of the decades old water conflicts among the provinces of Pakistan.

Finally, in 1991, Nawaz Sharif led government forced the Indus Water Accord to resolve all Indus water-sharing related conflicts. This accord was signed on 16<sup>th</sup> March 1991 at Karachi, in a meeting of the chief ministers of Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa. The Indus River System Authority (IRSA), with headquarters at Lahore, was established to monitor the distribution pattern among the provinces. According to the accord the three on-line reservoirs at Tarbela, Mangla and Chashma and inter-river link canals are the key structural facilities for Indus Basin water management. The allocation of reservoir water shared by provinces was centralized, using 'suggested operation criteria' established on a 10-day basis<sup>51</sup>. According to formula to distribute water

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<sup>47</sup> Mansur, Hasan (2002) 'Sindh's struggle for control of the Indus', *Himal South Asian*, Katmandu, 6 July 2002

<sup>48</sup> *ibid*

<sup>49</sup> *ibid*

<sup>50</sup> Feyyaz, Muhammad "Construction of Kalabagh" PILDAT paper retrieved from <http://www.pildat.org/construction/of/kalabagh/pdf.accessed> 12 April 2012.

<sup>51</sup> Water Conflicts in South Asia : Managing Water Resource Disputes *Within and Between* Countries of the Region (S. Ayub Qutub ) Umesh Parajuli ;Project Implemented by Global Environment and Energy in the 21<sup>st</sup> Century (GEE-21) and the School of Advanced

from IRS total water available in the system was estimated to be 114.35 MAF below rim stations. It was allocated as 55.95 MAF for Punjab, 48.76 MAF for Sindh, 5.78 MAF for Khyber Pakhtunkhwa, and 3.87 MAF for Balochistan<sup>52</sup>. The accord provided for the distribution of any surpluses and the shortages as well. The agreement left water discharge to the sea unresolved subject to a study; however, it allocated 10 MAF in the interim for discharge to the sea<sup>53</sup>.

Soon after the apportionment accord was signed it marred into controversy in 1994, when Sindh alleged that Punjab was not releasing its agreed quantity of water. Even Sindh was blamed for not releasing water to Balochistan<sup>54</sup>. It was alleged that Punjab continues to violate even this one-sided agreement with open connivance of WAPDA, IRSA, and the federal and Punjab governments. Sindh's share of water is being diverted to Punjab unabashed under one pretext or another<sup>55</sup>.

After the 1994 incident, the Ministry of Water and Power and WAPDA reverted to allocations on the basis of historical use, rather than accord. IRSA was dissolved in 1998, after the then Prime Minister announced controversial plans to build the Kalabagh Dam on the Indus River over the objections of NWFP and Sindh. The IRSA was revived in 1999, but as an agency attached to the Federal Ministry of Water and Power, with headquarters in Islamabad. In effect, it has been reduced from an autonomous inter-provincial bargaining arena to an executive agency for short-term operational decision-making<sup>56</sup>.

During the droughts of 2001 and 2002, IRSA failed to generate consensus over water allocation. Demonstrations in Sindh induced the President/Chief Executive(CE) to override its decisions. Technically, the resolution of such conflicts is a matter for the Council of Common Interests(CCI), but since it was

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International Studies, Johns Hopkins University (SAIS); Sponsored by the Carnegie Corporation of New York.

<sup>52</sup> Ministry of Water & Power (1991), Government of Pakistan, *Water Apportionment Act*, Islamabad. Retrieved from [www.boell-Pakistan.org/water\\_apportionment\\_accord\\_1991.pdf](http://www.boell-Pakistan.org/water_apportionment_accord_1991.pdf). Accessed 13 June 2011.

<sup>53</sup> *ibid*

<sup>54</sup> Mansur, Hasan (2002) 'Sindh's struggle for control of the Indus', *Himal South Asian*, Katmandu, 6 July 2002.

<sup>55</sup> *ibid*

<sup>56</sup> Water Conflicts in South Asia :Managing Water Resource Disputes *Within and Between* Countries of the Region (S. Ayub Qutub ) Umesh Parajuli ;Project Implemented by Global Environment and Energy in the 21<sup>st</sup> Century (GEE-21) and the School of Advanced International Studies, Johns Hopkins University (SAIS); Sponsored by the Carnegie Corporation of New York.

inactive ,the CE dealt with the problem at the apex. Subsequently, provinces have directly approached the Secretariat of the Chief Executive, much to the apprehension of IRSA<sup>57</sup>. Further demonstrating a declining trust in IRSA's ability to ensure that its decisions are implemented ,the government of Sindh decided to send inspectors to upcountry reservoirs to check storage and diversions in person. Increasingly during 2002, critical decisions were taken in the CE secretariat in consultation with provincial governors. In 2003, the situation changed again with the transfer of executive responsibilities by the President to elected governments at the Federal and provincial levels<sup>58</sup>.

In July 2010 on the issue of opening up Chashma-Jhelum (CJ) Link Canal, Sindh and Punjab came against each other. Sindh wanted reversal of the decision and removal of Shahfaqt Masood (a Punjabi) as a chairman, while Punjab stated it would not compromise with its due share of water. Later on the matter was resolved by an intervention by the Prime Minister Gilani. In a compromised arrangement Raqueeb Khan from Khyber Pakhtunkhwa was appointed as chairman of IRSA<sup>59</sup>.

To pacify its growing inter-provincial water conflicts Pakistani establishment always blame India for diverting or stopping water from the IRS, which leads to reaching up of less amount of water to Pakistan. Hence the provinces get less amount of water for their use. This was denied by former foreign minister Shah Qureshi, who categorically maintained that Pakistan's mismanagement of water, leads to wastage of 35% of its Indus water share and so it is responsible for its own water woes.<sup>60</sup> But this does not make India free from blames, writing for Times of India, Sherry Rehman, former Pakistani cabinet minister, blames both India and Pakistan for the IWT crisis. She avowed that India can technically remain right side of the IWT if it builds hydropower dams on the rivers Chenab and Jhelum ,but it is not allowed to use storage and timing to render down stream farmers destitute nor to divert tributaries as indicated by the Kishanganga plan.<sup>61</sup> As the impasse over the Kishanganga project could not break down so Pakistan used arbitration clause of IWT and the verdict of arbitration body is still pending. John Briscoe, who has worked for more than 30 years on south Asia water management and conflicts, and is currently Professor at Harvard, has said that while there is no inherent conflict between India and Pakistan on the water issue, the dams that India is building will give it the ability to choke off water if it wanted to pressure its neighbour.” He has also

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<sup>57</sup> Ibid

<sup>58</sup> ibid

<sup>59</sup> Daily Times ,14 July,2010

<sup>60</sup> “Qureshi pleading India's case on water issue: JI” *The Nation* May 02,2010.

<sup>61</sup> Rehman, Sherry, “Peace Needs Working On” *Times Of India* May 17,2010

suggested that India should provide water flow data to Pakistan. He has also warned Pakistan against the heated rhetoric on water issue and slipping the issue in the hands of the terrorist groups<sup>62</sup>. In 2010, India allowed Pakistan to inspect several under construction Indian hydropower projects on the western rivers. The two nations have also agreed to set up a telemetry system to measure river flows.<sup>63</sup>

### **Controversial Multipurpose Projects**

In Pakistan the growing number of multipurpose projects to exploit IRS, is seriously affecting the flow of river water and posing threat to environment. One of the major complaints made by the provinces other than Punjab is that before partition, there was only one barrage, the Sukkur barrage, on the River Indus built in 1932. In the last sixty plus years, there are now 19 barrages and 43 canal systems with 48 off-takes on the Indus River System in Pakistan, creating world's largest contiguous man made system of 61,000 km of canals and 105,000 water courses, irrigating 35 million acres of land.. Three storage reservoirs were also built, Mangla on River Jehlum and Tarbella and Chashma on River Indus, with total storage capacity of 20 MAF. Additionally, 12 link canals were built to transfer water from western rivers to eastern rivers or to the tributaries of the River Indus<sup>64</sup>.

The first post- partitioned project was the construction of Mangla dam in Pakistan side of Kashmir. This created ruckus in Mirpur region because the Mirpuris considered it as a ploy to divert their legal water resources to Punjab and also to flood their region in order to check their demand for an independent Jammu & Kashmir by the Pakistani political establishment. To Pakistan Mangla is a vital asset, which brings many benefits: second only to mighty Tarbela as a source hydroelectric power, it also serves as the principal water-storage reservoir for the entire canal system of West Punjab. Mangla is thus critical to the success of the Pakistani economy as a whole<sup>65</sup>.

At present also the people inhabiting in Gilgit-Baltistan, Potohor and Mirpur have their share of complaints against the federal government. They are demanding their due share in the profits from hydel power generated from the region. A long standing wrangle over the Mangla dam has found new voice with the demand that Pakistan administered Kashmir(Pak) should get royalties just as

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<sup>62</sup> Briscoe,John "Troubled Water :Can a bridge built over the Indus" *Economic &Political Weekly* ;Vol XLV No.50.December 11-17,2010.pp 28-32.

<sup>63</sup> Kugelman,Michael "Safeguarding South Asia's water Security"*Seminar* Issue 626-October 2011.15-22.

<sup>64</sup> Memon,Altaf(2002), *An Overview of the History and Impacts of the Water Issue in Pakistan*,retrieved from [www.worldsindhi.com](http://www.worldsindhi.com),accessed on 28october 2009.

<sup>65</sup> Ballard,Roger " Kashmir Crisis: View from Mirpur";*Economic and Political Weekly* Vol.26.No.9/10 (Mar 2-9,1991),pp 513-517.

Khyber Pakhtunkhwa province is being duly compensated from the Tarbela dam. They are concerned also about two more power projects being constructed by Chinese companies on Neelum-Jhelum confluence and Kohala with a capacity of over 2,000 MW each. They fear that what they see as their just compensation will be looted from them<sup>66</sup>.

In August 2000 the federal cabinet of Pakistan approved the Vision-2025 programme to develop its water infrastructure. It has to be implemented in three phases. Under phase I of the three phase programme the government has given go-ahead to undertake detailed engineering and feasibility studies for Basha dam and the greater Thal canal, as well as for Kachi canal in Balochistan the Chasma right bank canal in Khyber Pakhtunkhwa, Thal reservoir project in Punjab and three projects in Sindh; Sindh riverine area development, thar canal and Sehwan barrage. The total cost of projects is estimated at \$11.71 billion. Priority hydroelectric generations project in phase I includes; Jinnah, Malankhand-III, Allai Khaman, Golen Gol, New Bong, Khan Khawar, Duber Khawar, and Pehur high level<sup>67</sup>.

In January 2001 the federal government also approved phase II and phase III of the vision 2025 programme. Hydro projects under phase II include: raising of the height of Mangla dam to increase its reservoir storage and power generation capacity, Thal Reservoirs, Doylan, Neelkum-Jehlum, Kohali Matitan, Gulpure, Abbasian, Rajdhani and several combined cycle power generation projects. Phase III includes sixteen schemes, including Dasu, Pata, Tahakot, Bunji, Munda, Chakothi, Naran, Suki Kina, Patrind, Azad Pattan, Karol, Thar coal project, lakhna coal project and several combined cycle power generation projects. The world bank Asian Development Bank, China, Saudi Arabia and United Arab Emirates (UAE) are the main financing agencies and the countries<sup>68</sup>.

This drafted and the finalised Vision-2025 by the Pakistani federal government has been criticized by the federal provinces in general and Sindh in particular. The provinces feels that most of these projects have been designed to benefit the Punjabi military and civilian establishment and their lackeys and not the common man in Pakistan. They feel that by building so many projects Punjab will easily divert the water from various rivers to its own benefit at the cost of others. Even by the standard global practice it is not good for the health of the

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<sup>66</sup> Bukhari, Shujaat "An Election in PoK Highlights Issues Familiar to J&K" *The Hindu* Dated June 24, 2011.

<sup>67</sup> Rizvi, Shamim Ahmad (2001), WAPDA-Vision 2025, *Industry & Economy*; July 30-August 05, 2001.

<sup>68</sup> *ibid*

rivers to have so many dams. That affects the natural flows of water and also harms the animals living and depending on the rivers.

Kalabagh project is the most controversial multi-purpose project in Pakistan. Other than Punjab no other provinces find it beneficial therefore they are unanimously opposing its construction and commissioning. The site of the project lies in Mianwali district of Punjab bordering Khyber Pakhtunkhwa. If completed it will be 260 feet high, will submerge 35000 acres of land, will generate 3600 MW of hydel power, store 6.7 MAF water for flood control and supply 12.8 MAF water to Mianwali, Khushab, Dera Ismail Khan and Jhelum districts for irrigation<sup>69</sup>. In March 2011 three provincial assemblies-Sindh, Khyber Pakhtunkhwa and Balochistan- have passed a resolution against its commissioning<sup>70</sup>. The annual outflow of water into the Arabian Sea is considered a “waste” in Punjab, which feels that water can be used to irrigate Pakistani infertile lands. Punjab wants not just Kalabagh, but also two more large dams on the Indus, at Bhasha and Skardu/Katzarah. It feels that the Kalabagh site is the most favourable, compared to the other two, and that it should be built finally.<sup>71</sup>The Lahore Chamber of Commerce and Industry has estimated that the dam would produce enough energy to obviate the need to import twenty million barrels of oil.<sup>72</sup>

Another controversial multi-purpose project, which has been resolved, in Pakistan was Diamer-Bhasha. The empowered CCI has resolved the crisis over it whose construction was being bitterly opposed by Sindh. The opposition to the project has made the World Bank to withdraw itself from financing the project. But now, this project has been approved by the Council for Common Interest, in its first meeting, after getting more power through 18<sup>th</sup> amendment<sup>73</sup>. This project is expected to finish by 2019. Its storage capacity would be 6.4 million acre feet and would likely to produce 4,500 megawatt of electricity. It will be world’s highest roller compacted concrete dam. In this project Pakistan would be assisted

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<sup>69</sup> Abbasi, A.N.G and Kazi, A.M., “Kalabagh Dam: Look Before You Leap,”

<http://www.angelfire.com/az/Sindh/indus4.html>, February 23, 2000.

<sup>70</sup> Reported in Daily Times, 27 March 2011.

<sup>71</sup> Abbasi, A.N.G and Kazi, A.M., “Kalabagh Dam: Look Before You Leap,”  
<http://www.angelfire.com/az/Sindh/indus4.html>, Accessed on February 23, 2010.

<sup>72</sup> Vaughn, Bruce et al “Security and Environment in Pakistan” Congressional Research Service; Retrieved from [www.fas.org/spg/crs/row](http://www.fas.org/spg/crs/row). Accessed 26 March 2012.

<sup>73</sup> “Diamer-Bhasha Dam” [www.internationalrivers.com](http://www.internationalrivers.com) accessed on 24 Feb 2012.



by the World Bank and China. China in addition to funds will send 17, 000 of its workers engaged in building three Gorge dam, to build this dam<sup>74</sup>.

### **Conclusion**

Pakistan is facing grave problem due to inter-provincial water conflicts. The federal as well as the provincial governments have to utilize the available resources judiciously, without diverting and disturbing the flow of the IRS water. The multipurpose projects are also source of concern because they are being politically used to deprive others from using their indigenous resources. Pakistani establishment must look out for better form of management of their water resources instead of going for endless multipurpose projects construction over the IRS. Also Pakistan has to improve its water management infrastructure to store rain water and even flood waters. Their water management system was exposed during 2010 flood when barrages like Taunsa, constructed to meet such challenges, failed to stop it.<sup>75</sup>

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<sup>74</sup> ibid

<sup>75</sup> Shah, Muhammad Azeem Ali, "Lessons from the 2010 floods in Pakistan" *Seminar* Issue No.626 October 2011.

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