



Sociology & Cultural Research Review (SCRR)

Available Online: <https://scrrjournal.com>

Print ISSN: [3007-3103](#) Online ISSN: [3007-3111](#)

Platform & Workflow by: [Open Journal Systems](#)

<https://doi.org/10.5281/zenodo.21979243>



Water Insecurity and Provincial Politics in Pakistan: A Comparative Study of Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan

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Abstract

Water has become one of the most politicized and contentious issues in the federal system of Pakistan. Although there exists the 1991 Water Apportionment Accord and the Indus River System Authority (IRSA), the four provinces of Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan still confront very distinct water issues and have distinct policies. The study conducts a comparative examination of water politics of the provinces by analyzing issues of groundwater depletion and inefficient irrigation in Punjab, inter-provincial allocation of water, seawater intrusion, and degradation of the Indus Delta in Sindh, floods, degradation of watersheds, and glacier melting in Khyber Pakhtunkhwa, and depletion of groundwater and drought in Baluchistan. Using various documents, reports, and secondary sources, the study asserts that such differences are not only the product of distinct hydrology but also arise due to the distinct reliance on agriculture and institutions of the four provinces and the different perceptions of equity and entitlement in light of the 1991 Accord. The analysis reveals that there are some constraints on the federal water governance system in Pakistan in terms of weak enforcement of regulations, lack of data transparency, and interprovincial distrust especially that between Punjab and Sindh. This study shows that in order to address the water insecurity of provinces, there is a need for institutional change which includes increasing the independence of IRSA in terms of regulatory activities, introducing climate-based allocation of water, regulating the use of ground water, ensuring environmental flows into the Indus Delta, and making plans at the federal-provincial level.

Keywords: Politicized, Water Apportionment Accord, Indus River System Authority, Seawater intrusion, Floods, Glacier Melting.

Introduction

Inter-provincial water distribution in Pakistan has always been an area of political conflict since the time of partition of the country in 1947. The rivers of the Indus Basin like Indus, Jhelum, Chenab, Ravi, Sutlej and the many tributaries of each river flow across Punjab, Sindh, Khyber Pakhtunkhwa (KP) and Baluchistan, thus forming a tangled network

of upstream-downstream relations and development aspirations. The inheritance of the pre-partition system of centrally-managed irrigation system by the post-partition Pakistan without reaching any agreement about water allocation among the provinces left room for future disputes. Inter-provincial water conflict in Pakistan is defined as the disagreements that take place between the provinces of Pakistan in relation to the management, allocation, and use of water from the rivers. These water conflicts are primarily characterized by the differences in the issues surrounding the distribution of water from the Indus River System. For instance, Punjab, which is an upper-riparian province, is perceived to exercise dominance in matters pertaining to the water flow compared to Sindh, which has in most cases complained about reduced water downstream. There is only one issue in Pakistani domestic politics that would have the ability to bring all three provinces of smaller size against the largest province at once; to resurrect the past injustices of colonial rule and pose challenge to the very foundation of the federation and that is the issue of water.¹ It is not merely a technical or hydro-logical issue but a socio-political phenomenon in which power, security, and identity connect with water management. In this light, hydro-politics is concerned with how states, provinces, institutions, and social groups negotiate, dispute, or cooperate over shared water systems, especially in basins where water is limited or unevenly distributed. The current study was conducted using a qualitative research design, and there is a need for integrated water resource management, policy reforms and building additional reservoirs to ensure water security in Pakistan in the long run.

Research question

1. How and why do water-related challenges and policy responses differ among Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan, and what do these differences reveal about provincial water politics and federal water governance in Pakistan?

Conceptual and Theoretical Framework

Hydro-politics is defined as the relationship between water and politics. It entails the competition, cooperation, negotiation, and governance by government, institutions, community and states over water resources. Hydro-politics takes place at different levels including local, provincial, national, regional and international levels.

Hydro-politics according to John Anthony Allan is defined as political management of scarce water resources through which competing actors seek to maximize economic, social, and political gains². Likewise, hydro-politics according to Mark Zeitoun and Jeroen Warner is defined as the study of the dynamics of power relationships associated with water allocation, governance and control. The main difference between the two definitions is that while Zeitoun and Warner approach hydro-politics as the management of water disputes, the definition provided by Allan emphasizes that the politics of power usually determines how much water goes to each individual or institution. Hydro-politics does not only involve interstate river disputes but also domestic disputes of water allocation between provinces, sectors, and social groups. In countries such as Pakistan that have federal structure, hydro-politics includes constitutional structure, governance of institutions, negotiation between provinces and political bargaining over water allocation.

¹Rahul M Lad., and Ravindra G. Jaybhaye. "Water Politics in Pakistan: The Internal and External Dynamics." *Water Policy* 27, no. 1

²J. A. Allan, *The Middle East Water Question: Hydropolitics and the Global Economy*

Theoretical perspectives

Realist Perspective

The realists believe that water is a strategic resource that affects the state's power and security. Countries strive to gain maximum control of river systems for securing their agriculture, production of electricity, and development. In this way, water becomes a tool of national interest.

Liberal Institutionalism

According to liberal institutionalists, international institutions, treaties, and cooperation decrease conflicts through dialogue, information exchange, and management. Examples include the Indus Waters Treaty and the Indus River System Authority (IRSA).

Political Ecology

Political ecology studies the relationship between unequal distribution of political and economic power and natural resources distribution. Water scarcity does not only occur due to natural reasons; it also happens because of poor governance and other issues.

Historical Institutionalism

Historical institutionalists say that decisions taken in the past lead to path dependency in institutions which keep on affecting current policies. Historical Institutionalism can be considered as a useful approach to study hydro-politics of Pakistan since the old institutions of irrigation still affect current water distribution³.

Methodology

This research adopts a qualitative research method to explore the problems of interprovincial conflict, water shortage, and governance problems in Pakistan. The research design is descriptive and analytical in nature using secondary data sources, like books, journal articles, policies, government reports, and institutional papers such as Indus Water Treaty and IRSA. The data will be analyzed using thematic analysis to find any commonalities regarding policy fragmentation, distrust among provinces, and other institutional issues, whereas content analysis of policies will help in finding any gaps and contradictions that exist.

Punjab's Groundwater Depletion, Irrigation Inefficiency

Punjab is Pakistan's most populated, agriculturally significant, and politically influential province and provides about 60 percent of the total agricultural produce of the country, with around 72 percent of the irrigated land of Pakistan. But underneath its agricultural bounty lurks one of the most severe and fastest-growing water crises in South Asia the groundwater depletion from Punjab's aquifers at a level that jeopardizes the agricultural productivity of the province which is the foundation of its economic predominance.

Poor governance institutions, ineffective regulations, and growing agricultural water demands, where the five primary crops, namely rice, wheat, cotton, sugarcane, and maize, consume 85 percent of the total water resources but account for only less than 5 percent in the GDP generation, have led to uncontrolled extraction of groundwater in Punjab. The 80.3 billion cubic metres annual recharge of the upper Indus plain have now been outstripped by

³Paul Pierson, *Politics in Time: History, Institutions, and Social Analysis* (Princeton, NJ: Princeton University Press, 2004), 17–53

the extractions, and climate variabilities, including a decrease in surface water irrigation area by 19 percent during 2003-2021, have further contributed to this crisis⁴.

Groundwater constitutes 90 percent of the domestic water needs in the countryside as well as over 50 percent of agricultural water, particularly in Punjab. The province provides around 60 percent of the nation's agricultural output, of which over 50 percent relies upon water supplied by private tubewells. Groundwater extraction without proper regulation in Punjab has decreased the groundwater table and also polluted water sources. The Indus Basin aquifer, crucial for the country's water supply, is one of the most exploited underground water resources worldwide.

Irrigation systems in Punjab are plagued with inefficiencies. The irrigation system in Pakistan was constructed over a hundred years ago during colonial rule and has not been modernized until now. Over 40 percent of the water in Punjab's irrigation canals is lost because of seepage, evaporation, and poor maintenance of the distribution system. The discrepancy between the huge size of the irrigation system and its inefficient operation has made Punjab not only the province with the highest water availability but also the most wasteful of the Indus Basin provinces.

Punjab's Policy Response

In response of the aforementioned dual crises of water table depletion and inefficient irrigation, Punjab has devised two broad frameworks of laws and policies.

- 1) The Punjab Groundwater Act of 2019 is designed with an objective to regulate water consumption, however, excess extraction continues to remain unchecked owing to ineffective enforcement mechanisms and high-cost irrigation techniques are opposed by the people.
- 2) The Punjab Water Policy of 2021 complements this legal framework as it defines the key priorities of regulating groundwater, improving irrigation infrastructure and managing urban water supply in Punjab, realizing the fact that water future of Punjab is dependent upon fundamental reforms in surface and groundwater management in Punjab.
- 3) Nonetheless, the policy enforcement continues to be weak due to lack of institutional and political will. The primary problem with Punjab's water governance lies not in the lack of policy frameworks but the existence of a continuous and persistent gap between policy formulation and policy enforcement, which is caused by political interference, energy subsidies encouraging excess extraction and opposition from the agricultural lobby⁵.

Sindh's Inter-Provincial Water Allocation, Seawater Intrusion, and Indus Delta Degradation

Sindh is positioned to be in the worst shape in Pakistan's hydro-politics context. Being the lowest downstream province in the Indus basin, Sindh has to depend entirely on what water is left behind after all other upstream provinces and users are satisfied. It can be argued that the structural vulnerability of Sindh in terms of water has been a defining feature of water politics since partition. Furthermore, the decades of damming by upstream provinces,

⁴Government of Punjab, "*Punjab Water Policy 2021*", PUNJAB WATER RESOURCES COMMISSION RULES, 2021

⁵Government of Punjab. "*Punjab Water Act 2019*". Lahore: Government of Punjab, 2019.

including inter-provincial disputes and institutional failures, have resulted in Sindh getting less than its entitled water share.

The irrigation agriculture of Sindh has always suffered from recurring shortage of water amounting to 40-45 percent of the required quantity. According to Water Apportionment Accord 1991, Sindh is supposed to receive 42.64 percent of the total available water resources in the country and 10 MAF as minimum water flow rate at Kotri Barrage in order to prevent seawater intrusion into the Indus delta. However, this minimum water requirement has never been met as IRSA data reveals that in 12 out of 25 years after the Accord was signed, water flow rate fell below 10 MAF⁶.

Inter-provincial disputes, in particular between the upper riparian province of Punjab and the lower riparian province of Sindh, have become characteristic of the present situation. The accusation made by the people of Sindh against their fellow countrymen from Punjab is that Punjab draws more than its allotted quota, especially when it comes to the dry season when there is little water flowing through. As a result of such water over-use, the agriculture of the lower provinces experiences severe loss, and the ecosystem of the Indus Delta deteriorates rapidly due to the invasion of seawater which penetrates for more than 100 kilometres. One more aggravating circumstance in the situation is the technical failure which consists in the lack of an independent telemetry system controlling water flow at certain barrages and headworks⁷.

The ecological effects of the chronic water shortage in the Indus Delta are dramatic and almost impossible to fix shortly. The area of mangroves which once occupied 263,000 hectares is reduced to 75,000 hectares only. Coastal communities which for hundreds of years relied on the ecosystem of the Delta find themselves displaced because of the lack of fishing resources.

Sindh's Policy Response

- 1) In response of the aforementioned interrelated crises, the Sindh Cabinet endorsed the Sindh Water Policy on July 22, 2023, which is viewed as revolutionary in the history of Sindh irrigation since British colonial times. Prior to the adoption of this water policy, the Sindh Irrigation System was subject to two laws, namely, the Sindh Irrigation Law of 1879 and the Sindh Water Management Ordinance of 2002.
- 2) The Sindh Water Policy will ensure the sustainability of the ecological support attributes of ecosystems, build their resilience against floods and droughts, guarantee the full spectrum of benefits derived from water resource utilization and make the best economic use of the canal command or river basin. Being a tail-end province, Sindh is most impacted by water utilization and construction of new irrigation infrastructure and, therefore, needs careful vigilance while implementing the Water Apportionment Accord⁸.

Khyber Pakhtunkhwa Floods, Watershed Degradation, Glacier Melt

Khyber Pakhtunkhwa has a unique standing when it comes to water governance in Pakistan because it is both the water-richest province and one of the worst governed provinces when it comes to water governance. Since the province through which the upper Indus River

⁶Indus River System Authority (IRSA). *Annual Water Distribution Reports*. Islamabad: IRSA, 1991–2016.

⁷Dawn. "Sindh's Unending Sea Intrusion." *Dawn*, April 24, 2023.

⁸Government of Sindh, Irrigation Department. *Sindh Water Policy 2023*. Karachi: Government of Sindh, July 22, 2023

along with its tributaries passes through before reaching the plains of Punjab, KPK is the headwater province of the water system of Pakistan. The mountains and glaciers of Khyber Pakhtunkhwa are the ultimate source of water that the entire nation relies on. However, paradoxically enough, in the water-abundant province of KPK, the taps tend to run dry. As the third most populated province in the country, KP faces a host of challenges in water management and governance despite being a water-rich province. Nearly seventeen percent of the population does not have access to clean drinking water sources. The efficiency of agricultural use of water is also relatively low at fifty percent due to wastage of water in fields. Approximately one point eight million people are considered to be vulnerable to health problems caused by frequent floods and degradation of water quality⁹.

The climatic aspect of the water scarcity in KPK is quite serious. More than 45 percent of water supply to the Indus Basin is attributed to the melting of snow and glaciers in the Himalayas. The fast retreat of glaciers is manifested through the vanishing of glaciers in the locality, consistent with the worldwide trends. In future, the melting of glaciers due to increasing global warming is forecasted to cause an increase in the river flow by 40 percent. Yet, the normal flow of the Indus River is anticipated to reduce by more than 60 percent in future. Therefore, there exists a strange paradox for KPK where fast melting of glaciers causes increased water supply in form of catastrophic floods yet reduced glacial supplies that provide water in dry periods.

Degradation of the watersheds due to deforestation, overgrazing, and expansion of human habitation in the mountains has significantly decreased the ability of the KPK uplands to retain their natural water, thereby increasing flood during the monsoons and droughts during dry spells. The potential of KPK for hydroelectric power generation is immense. The important run-of-river projects like Tarbela, Warsak, and the ongoing Dasu project in Pakistan are all present in the rivers of KPK however, KPK has always received a very poor royalty percentage of the generated electricity.

Khyber Pakhtunkhwa Climate Resilience

The provincial government of Khyber Pakhtunkhwa has made great strides in terms of integrating policies regarding water and climate change.

- 1) The Climate Change Policy of 2022 and Water Act of the same province. The provincial government has been emphasizing the building of flood resilient infrastructure and watershed protection in mountainous regions.
- 2) The Water Act of KP 2020 and Water Policy of KP 2020 together form an integrated approach to watershed management, flood mitigation, hydroelectric power generation, and climate resilience, which has been further being implemented by the International Water Management Institute in two pilot districts of Charsadda and Mansehra¹⁰.

Baluchistan Groundwater Depletion, Drought

The Baluchistan province is the largest in the whole of Pakistan, constituting 44 percent of its land mass, while it is populated only by 5 percent of the population. Moreover, the province holds the smallest amount of water among all the provinces, according to the

⁹Government of Khyber Pakhtunkhwa. *The Khyber Pakhtunkhwa Water Act, 2020*. Act No. XXV of 2020. Peshawar: Government of Khyber Pakhtunkhwa, 2020.

¹⁰ Government of Khyber Pakhtunkhwa. “*KP Water Policy 2020*.” Peshawar: Government of Khyber Pakhtunkhwa, 2020.

1991 Water Apportionment Accord, which is 3.87 MAF. Furthermore, Baluchistan is the province which suffers most from the impact of climate change as it is exposed to the worst droughts and depends most on underground water which is being depleted rapidly without having an alternative.

Baluchistan is an arid province where there are seasonal surface water supplies. Besides, Baluchistan province is home to the oldest Karez water supply system, which has been working for many years as a defense mechanism against droughts. It is estimated that 33 percent of about 3,000 Karez systems in Baluchistan have survived until today. The Karez system has contributed in transforming the agrarian landscape of the region. Nonetheless, droughts that began from the 1960s caused reduced recharge into the groundwater utilized by the Karez system due to increased needs. The farmers installed tubewells with help from the provincial government through energy subsidies.

Agriculture contributes almost two-thirds to the provincial domestic product of Baluchistan and 60 percent of the work force, but the agricultural sector in Baluchistan faces water shortage, drought, and poor agricultural practices, making rural areas vulnerable. The sources of water in Baluchistan are underground water that constitutes 4 percent of the total water, water share of the Indus Basin that accounts for 39 percent of the total water, and floodwater that makes up 57 percent of the total water. Underground water is overexploited and needs a proper review, while the water share of the Indus Basin in Baluchistan is not optimally used and needs a proper policy.

The management of water resources in Baluchistan has been marked by ambitious policies and very poor implementation of those policies. Baluchistan is very forward thinking in adopting Integrated Water Resources Management (IWRM) approaches as early as 2006¹¹. Nevertheless, although the 2006 IWRM Policy has been developed after consultations with major stakeholders, it has never been implemented, and even one of its critical elements such as the elimination of subsidies for groundwater extraction has not received any approval from the provincial cabinet. The recent developments of the Water Act 2020 and the new Baluchistan IWRM Policy 2024 can be seen as another effort to resolve this governance issue, which is crucial to reverse the depletion of groundwater and solve problems of negative salt balances in irrigated lands¹².

Drying of the Karez Systems

In Baluchistan, what needs to be done is to conserve and upgrade the Karez system by measures that include determining the recharge zones of the Karez, enhancing groundwater recharge by using watershed management and aquifer recharge methods, and prohibiting the installation of tube wells in the Karez recharge zones. Rehabilitation of the Karez systems is more than just technical water management. It is an urgent requirement of Baluchistan's rural population for their very survival in the context of climate change. World Bank

There is little coherence between climate change policies and water policies in Pakistan's most vulnerable province, Baluchistan, which lacks coherent connections between its water policy objectives and climate change, although the latter poses serious risks for the former. The

¹¹Government of Balochistan, Department of Irrigation and Power. *"Balochistan Integrated Water Resources Management Policy 2006."* Quetta: Government of Balochistan, 2006.

¹²Government of Balochistan. *"Balochistan Water Act, 2020."* Quetta: Government of Balochistan, 2020.

number of droughts has risen considerably since 2000, but there is still inadequate funding of water harvesting measures that could make them climate resilient.

Constitutional Framework of water governance

Constitutionally, Pakistan has a federal system of government where both the Federal Government as well as the provincial governments share powers. Nevertheless, from the operational point of view, it is the Federal Government that prescribes its own terms to the provinces. The main reason behind it is that Pakistan has been dominated by the military rulers and hence there is a need for Unitarian system in order to maintain its grip. According to the constitution, a Council of Common Interest (CCI) is required for making policies for the matters in part II of the Federal Legislative List like railways, mineral oil, natural gas and water and power development authority. The Federal Ministry of Water and Power formulates the water sector policies. There is an autonomous body of the ministry called the Water and Power Development Authority (WAPDA). This body has been set up to develop water resources including dams, link canals, public tube wells and drainage projects in Pakistan. However, WAPDA manages multipurpose reservoirs on the Indus and its tributaries and runs them with the coordination of IRSA and PIDs based on water rights and seasonal allocation to the province¹³.

In 2010, Asif Ali Zardari created the Eighteenth Amendment in an attempt to supposedly decentralize the management of water resources. Article 157 (1), "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," is one of the provisions introduced to constitutionally address the growing interprovincial water conflicts.¹⁴ The amendments were intended to improve the structures of CCI to solve water conflicts in Pakistan.

Role of the 1991 Water Apportionment Accord and the Indus River System Authority (IRSA) in Provincial Water Politics

The Water Apportionment Accord (WAA) 1991 was signed between the four provinces of Pakistan on 16 March 1991 and ratified by the Council of Common Interests (CCI) on 21 March 1991, which was indeed a major breakthrough in the path of achieving national consolidation and provincial water distribution of Pakistan. Since the enforcement of Indus Water Treaty, ad hoc arrangements were being made for every season/period. There was an increasing need for the permanent solution of the matter of time. Thus, there were good displays of mutual goodwill and accommodation on the part of provinces in order to settle the long pending dispute of water apportionment, and Water Apportionment Accord was signed between the Chief Ministers and representatives of four provinces on March 16, 1991 in Karachi.

An independent panel of the Indus River System Authority (IRSA) was established as per the provisions of the Water Accord by means of a parliamentary legislation in the year 1991. This body was consisted of five members, one member from each province and one from the Federal Government. The tenure of chairmanship of the authority was one year and

¹³Government of Pakistan. "Apportionment of the Waters of the Indus River System between the Provinces". Karachi: Government of Pakistan, March 16, 1991.

¹⁴Government of Pakistan. "The Indus River System Authority Act, 1992". Act No. XXII of 1992. Islamabad: Government of Pakistan, December 6, 1992.

rotated among them. Its basic responsibility is to enforce the Water Accord. IRSA decides the share of available supplies of water for each province for each season as per the Water Apportionment Accord and then the WAPDA releases supplies as decided from the reservoirs¹⁵.

The operations of IRSA were fairly satisfactory for ten years, but during the last ten years, there have been shortages of releases from Mangla and Tarbela reservoirs due to the condition of droughts and sedimentation of the reservoirs. During this tough time, it was quite difficult for IRSA to fulfill the needs of all stakeholders and it had to face a lot of criticism. There was regional politics of water involved and even the accord itself was criticized especially by Sindh province.

Indus River System Authority (IRSA) Mandate and Limitations

IRSA's limited enforcement powers: While the responsibility of monitoring and regulating the water distribution falls to the IRSA, some scholars criticize the agency because it does not possess sufficient powers to enforce the rules and regulations and penalize provinces that breach their water allocations.

Deficits of transparency and trust: Provinces like Sindh have been complaining time and again that the flow data, canal withdrawal, and reservoir operations are inaccurate. Such complaints reveal mistrust among upstream provinces like Punjab and Khyber Pakhtunkhwa on the one hand, and downstream provinces such as Sindh and Baluchistan on the other hand.

Political dispute regarding the Accord: While some provinces like Khyber Pakhtunkhwa seek changes to the 1991 Accord because of claims that their quota of water was not delivered and they are being denied compensation by those provinces who allegedly consumed their water, others like Sindh oppose any attempt to amend the Accord and want the Accord to be strengthened.

Hydrology of climate change: The 1991 Accord has been made based on hydrological premises that do not factor in variability caused by climate change including flood, glaciers melt, and droughts.

Within the framework of this article, the 1991 Water Apportionment Accord and IRSA serve both as facilitators and obstacles in Pakistan's water governance regime.

Firstly, the Accord provides a legal basis and a quantitative approach for the distribution of water resources, thus avoiding conflicts over water division and setting up the starting point for negotiations. As for IRSA, it serves as a regulatory institution for everyday regulation, coordination of information and disputes resolution. Without these mechanisms, inter-provincial water policies would be much more difficult and unpredictable.

Secondly, the Accord and IRSA demonstrate current disparities and distrust between the provinces. First of all, the formula for water allocation that is based on historical data from 1991 cannot fully reflect current problems like aquifer depletion, inefficient irrigation, seawater infiltration, deterioration of Indus delta, flooding, watersheds deterioration, glacial melting and droughts. Secondly, the inability of IRSA to implement sanctions leads to the fact that adherence to the rules depends on political negotiations rather than legal requirements.

¹⁵Government of Pakistan. "The Indus River System Authority Act, 1992". Act No. XXII of 1992. Islamabad: Government of Pakistan, December 6, 1992.

Conclusion

This article argues, the water politics at a provincial level in Pakistan is characterized by an interrelation between hydrology, agriculture, institutionalization, and federal-provincial dynamics. Comparing Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan helps to understand the strengths and limitations of Pakistan's federal water governance framework. In order to achieve water security, it will require not only technological innovations but also political resolve and institutional improvements as well as commitment to equality, transparency, and cooperation of all parties involved in Pakistan's water sector. In this regard, this paper focuses on the 1991 Accord and Inter Provincial River Sanitation Authority (IRSA) that form the institutional context in which differences in water problems of Pakistani provinces are to be analyzed. Namely, Punjab is characterized by groundwater depletion and irrigation inefficiency, Sindh has allocation issues and delta degradation, Khyber Pakhtunkhwa has flood and glacier problems, while Baluchistan faces the challenge of chronic drought and groundwater crisis. The Accord and IRSA they provide a framework for cooperation but also expose the fragility of inter-provincial trust, the inadequacy of regulatory enforcement, and the urgent need for climate-sensitive, equity-oriented reforms.

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