



Conflict Factsheet

Conflict over the Indus Waters in Pakistan

Type of conflict
Sub

Intensity
2

Conflict Locality
Pakistan

Time
-ongoing

Countries
Pakistan

Resources
Water

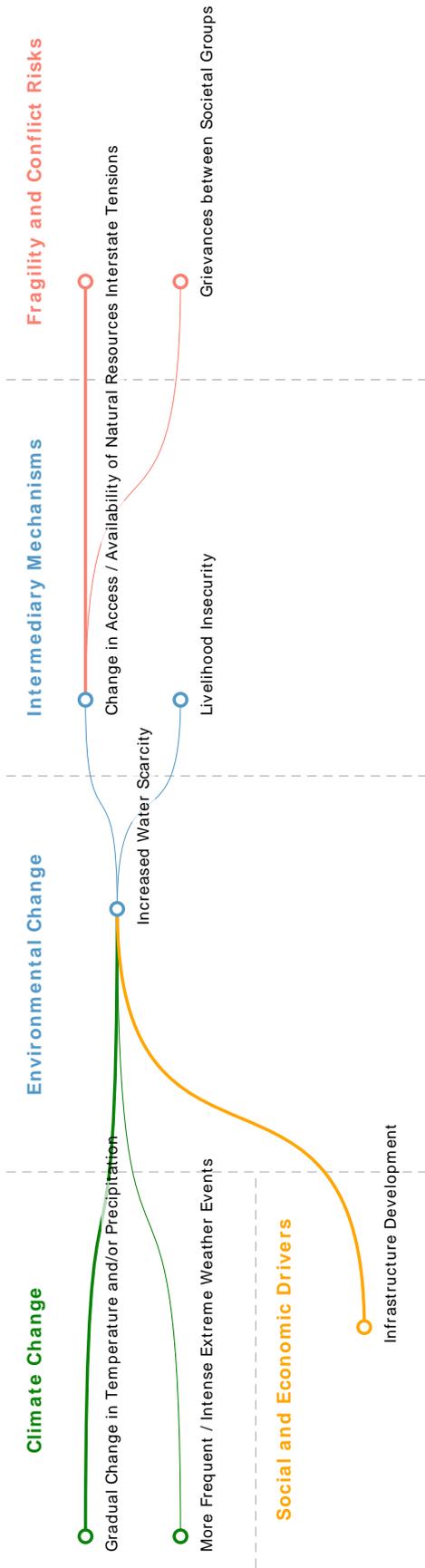


Conflict Summary

Conflicts between provinces and communities over water distribution and access continue to challenge hydropower development in Pakistan. While several authorities and institutions are in place to oversee and regulate the distribution of water between provinces, issues remain on how benefits and risks are to be shared. Problems related to corruption, mistrust and inefficient water management practices also need to be resolved to help Pakistan tackle its growing water insecurity.



Conceptual Model



Context Factors



Water



Water-stressed Area



Conflict History

Conflict over water distribution and management is a continuing challenge to hydropower development in Pakistan and has led to conflicts between provinces, whilst generating discontent amongst citizens with the government. Much of these disputes are centred on the construction of dams on the Indus river basin, and stem from a power asymmetry between upstream and downstream riparians, where there is a tendency for the former to over-extract water in times of shortage (IUCN, 2010). In the absence of detailed benefit sharing plans between regional states, politicians fear that proper compensation will not be paid (Alam, 2019; Mustafa et al., 2017).

At the same time, the Indus is the main source of irrigation for Pakistan's agriculture – a sector that employs around 13% of the country's population and more than 50% of the rural population (FAO, 2020). As a result of rising population and industrial activity, Pakistan has become increasingly water scarce and suffers severe energy shortages. Although water scarcity has often been attributed to mismanagement, climate change has also played a role (Diamond, 2014).

The case for hydropower development in Pakistan

The Pakistani government argues that the extension of hydropower to meet energy demands is central to the country's intended nationally determined contribution to climate change mitigation (INDC) as set out in the Paris Agreement (UNFCCC, 2016). Dam construction is also presented as a way of controlling floodwaters for disaster risk reduction and as a way of adapting to climate change, which has become a priority given predictions of increasingly unpredictable monsoon seasons (Feyyaz, 2011). Monsoonal rains often swell the banks of the Indus River, causing devastating flooding. This occurred in 2010 when floods caused at least 2,000 fatalities and wiped out 1.1 million hectares of crops (Farmer, 2010).

Moreover, climate-related water stress has been used as an argument in favour of construction. Water availability during the winter cropping season has been dwindling across Pakistan (Feyyaz, 2011), suggesting a need for additional water storage capacities.

Existing concerns

Opponents to dam development are generally suspicious of ideas of national development, citing regional disparities in both the economic development of Pakistan and the negative effects of large water projects. Sindhi politicians, for example, have been particularly outspoken in the past over the construction of large dams (e.g. Kalabagh Dam). Further conflicts date back to the development of irrigation canals by colonial authorities in the late 1900s and post-independence water allocations between India and Pakistan as agreed in the Indus Waters Treaty (Akhter, 2015; Mustafa et al., 2017; see also [Water conflict and cooperation between India and Pakistan](#)).

Within Pakistan, these political tensions are reflected in ideological differences between dominant political leaders in the various provinces. Some have noted a tendency in Sindhi and Balochistani politicians towards discourses of regional identity, equity and ecology, situating them in opposition to a presumably "national" "developmentalist" agenda in Punjab, which favours large-scale infrastructure and the rapid



modernisation of the country (Mustafa et al., 2017). Dams have thus arguably intensified tensions between regional blocks and worsened regional fragmentation (Akhter, 2015).

Dam development has also been contested at the community level. Some argue that the justification for dams to meet increasing water demands is drawn primarily from powerful landowners resisting limitations on their water use. Negative impacts are felt foremost by poorer downstream communities in cities like Karachi, who already lack access to sufficient drinking water (Pasha, 2018).

Large landowners downstream may also be affected, and while they may be compensated, some smaller landowners have reportedly felt that they were less likely to receive compensation for the loss of their livelihoods (Mustafa et al., 2017). The disparities in the distribution of risks and benefits of dams are reflected in the disputes between communities over their construction.

Taking climate change into consideration

Climate change is predicted to have multiple effects on water in Pakistan, which is already considered one of the world's most water-stressed countries (Kugelman, 2016). The Himalayan Glaciers, which feed the Indus basin, are predicted to diminish more in the coming years. This may increase water flow in the short run, but it would deplete groundwater recharge in the long term, thus potentially reducing de-facto energy production (Jayaram, 2016).

Meanwhile, heavy rains during the monsoon are predicted to become more irregular, bringing challenges for addressing potential flood risks (Stolbova et al., 2016). This could potentially affect dams' ability to block surges, and is also likely to aggravate tensions over water distribution and flow management along the Indus basin (Diamond, 2014; GPF, 2001).

Resolution Efforts

Authorities involved

Water and hydropower management in Pakistan is primarily the responsibility of the Water and Power Development Authority (WAPDA), which was established in 1958 under the WAPDA Act (Alam, 2019). Specifically, with regards to conflict mitigation surrounding the distribution of Indus water, the Indus River System Authority (IRSA) was established in 1992 to regulate and monitor the distribution of water resources between the provinces of Balochistan, Khyber Pakhtunkhwa (formerly the North-West Frontier Province, or NWFP), Punjab and Sindh (Government of Pakistan, 1992). Essentially, the IRSA is tasked to ensure compliance to the Water Apportionment Accord (WAA), which was signed in 1991 between the four provinces in the hope of remedying inter-provincial mistrust, and to establish water distribution guidelines (Imam & Lohani, 2012).

Decisions of the IRSA can be brought before the constitutional Council of Common Interests (CCI). The CCI brings provincial and federal government representatives together to discuss disagreements regarding all aspects of policy. Although the decisions of the CCI are binding, its decisions regarding Indus water distribution have been politically and legally challenged in the past. Institutions such as the CCI have



been plagued with inter-provincial bickering, and decisions made by them are sometimes disregarded by provinces, thus affecting institutional legitimacy ([Eurasia Review, 2013](#)).

Recent developments

Acknowledging an emerging water crisis, the Pakistani provinces signed a National Water Policy in 2018 with the objective of providing “an overall policy framework and guidelines for a comprehensive plan of action” ([Ministry of Water Resources, Government of Pakistan, 2018](#)). The Policy’s main targets between 2018 and 2030 include, among other things, the development of infrastructure which would increase water storage capacity (such as large dams), as well as increasing water use efficiency, real-time monitoring and data collection. This is based on the idea that the water needs of Pakistan as a whole are paramount and to be met by increasing storage through dams.

While the National Water Policy reiterates that transformational water infrastructure will be developed in an equitable way and that the WAA will be met, questions remain as to how it would solve ongoing distributional conflicts between provincial regions. This is because the Policy is neither within the mandate of the CCI nor a policy with respect to the WAPDA and IRSA. Thus, the Policy’s proposals, such as developing large dams, do not correspond to what can be implemented by the WAPDA or IRSA. As the Policy is not the product of an agreement between the provincial and federal governments, it does not provide a detailed formula for hydropower benefit-sharing and is thus not fit for addressing subnational disputes over large dams ([Alam, 2019](#)). Overall, it seems that conflicts will need to be further negotiated between the provinces.

Aligning national and regional water legislations

Legal negotiations are often a key route to conflict resolution. However, water law is not well-defined in existing legal arrangements at the federal level in Pakistan, and is mostly restricted to the provinces, making it difficult for the federal government to oversee water-related issues such as sanitation, drinking water and water security, and how these can have differentiated implications for various social groups and regions ([Alam, 2019](#)).

Indeed, there have been calls for greater centralised governance on water issues in Pakistan, and for the IRSA to have greater executive powers. Neutral centralised governance specifically aimed at governing water in national interests, while remaining sensitive to local and regional concerns would be ideal in order to overcome inefficiencies created by inter-regional mistrusts ([Mustafa et al., 2013](#)). In addition, as national policy is often deemed to favour Punjab, conflicts may continue if national policies are not carefully aligned with provincial arrangements ([Alam, 2019](#)).

Dam projects are also highly contentious because they imply large discrepancies in the distribution of risks and benefits between different social groups and regions. Hence, the development of any new integrated legislation should also involve a clearer, more equitable framework for hydropower benefit-sharing between provinces, which could be a point for negotiation between the provinces ([Alam, 2019](#)). For example, more inclusive consultation and appropriate compensation could be afforded to communities that are disproportionately affected by dam constructions, such as those in downstream Sindh ([Hadi, 2019](#)).



Other recommendations for improvement

Pakistan's current policy approach towards water scarcity is oriented towards supply-side interventions such as dam constructions, but does not address the fundamental problem of water use inefficiencies and mismanagement, issues that are rife in Pakistan's water management sector. Thus, there should be a greater focus on sustainable water management and conservation practices that seek to improve water usage technologies and infrastructure to reduce water wastage (Mustafa et al., 2013).

In addition to poor water management, corruption has also left little trust in water management authorities, which is an obstacle to conflict resolution between upper and lower riparian regions, such as between Punjab and Sindh. Therefore, more attention should also be given in developing anti-corruption measures in water management and provision services to improve public accountability and avoid tensions from escalating (Mustafa et al., 2013).

Furthermore, existing water-related legislations should be updated to reflect changing current policies and practices. For example, water rights established by the Canal and Drainage Act of 1873, one of the most important legislations governing water management in the agricultural sector, should be updated to consider changing water availability and the difference of water access between upper and lower riparian states. Judicial power to enforce public accountability in adhering to the rights and regulations set out in the Act must also be improved to reduce corruption and improve public trust in government institutions regulating villages' water access (Mustafa et al., 2013).



Country Data in Comparison

Water scarcity

Country	Interval	Year
Pakistan		5.21264 1979

Intensities & Influences



INTENSITIES

International / Geopolitical Intensity



Human Suffering



INFLUENCES

Environmental Influences



Societal Influences



Violent Conflict

No



Resolution Success



Entry Points for Resilience and Peace Building

Mediation & arbitration

3

The Indus River System Authority (IRSA) is tasked to regulate and monitor the distribution of Indus water resources between provinces, to ensure compliance to the Water Apportionment Accord (WAA), and ultimately to mitigate conflict between provinces. Decisions of the IRSA can be brought before the Council of Common Interests (CCI), although its decisions have been politically and legally challenged in the past.

Treaty/agreement

1

The Water Apportionment Accord (WAA) was signed in 1991 between the four provinces of the Indus basin to establish water distribution guidelines and remedy inter-provincial mistrust. Furthermore, a National Water Policy was signed in 2018 to provide “an overall policy framework and guidelines for a comprehensive plan of action”, although its effectiveness is questioned by some observers because it is not considered to be under the mandate of relevant regulatory bodies.

Compensation

1

Compensation has been offered to communities affected by dam constructions, but is mostly afforded to large landowners downstream, with poorer and landless communities being marginalised. A clear framework in the distribution of benefits and risks between provinces and communities is still largely absent.

Strengthening legislation and law enforcement

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Corruption has left little trust in Pakistan’s water management authorities, which is an obstacle to interregional conflict resolution. Therefore, more attention should be given in developing anti-corruption measures in water management and provision services, as well as improving judicial power to improve public accountability and avoid tensions from escalating. Furthermore, existing water-related legislations should be updated to reflect changing current policies and practices.

Improving resource efficiency

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Water use inefficiencies and mismanagement are some of the main problems affecting Pakistan’s water management sector. Thus, there should be a greater focus on sustainable water management and conservation practices that seek to improve water usage technologies and infrastructure to reduce water wastage.



Resources and Materials

Conflict References

[Water conflict and cooperation between India and Pakistan](#)

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Further information

<https://factbook.ecc-platform.org/conflicts/conflict-over-indus-waters-pakistan>