

Water crisis in Pakistan and its Remedies

1) Introduction

- a. Global water security Report (2023)
- b. Thesis statement

2) Causes of water crisis

- a. Lack of dams construction
- b. No proper canal system
- c. Mismanagement of resources

d. Dispute between the provinces

- Kalabagh dam

e. No proper function of ^{Nature} Disaster Management Authority (DMA) (NDMA)

f. Political instability

3) Source of water

a. Indus River

b. Terbela dam Dam

c. Mangla dam Dam

d. Chashma Barrage reservoir

e. Industry

4) Impact on economy

5) Recommendation

a. Chashma dam

b. Kalabagh dam

c. Gomal Zam dam

d. Water management

- e. Provide alternate source of energy
- f. Equal distribution of water among provinces

b) Conclusion

The latest UN report 'Global Water Security 2023 Assessment' places Pakistan in the critically water-insecure category, indicating that the country is facing a water emergency that requires immediate attention. Since 1947, Pakistan has facing water insecurity among the provinces. In 1960, Pakistan-India sign the Indus Water Treaty (IWT) brokered by the World Bank. Equal distribution of Rivers, in which Pakistan, (Indus River, Chenab, and Jhelum), India (Ravi, Bias, and Sutlej). After independence Pakistan stuck in water security crisis due political instability, lack of good governance, controversy among

provinces, and mismanagement of resources, which lead the Kalabagh dam, Tarbela dam, and Mangla dam. In these, discussing the political instability, mismanagement of resources: both dams and canal, controversy among the provinces and no proper management, while in contrast their sources and some recommendation.

Firstly, dams plays a profound role in the water security crisis, storing water and then following it both are relevance for human resources and for ~~the~~ land resources.

But unfortunately, Pakistan has lack of dams to store the water so artificial ruins and the rivers, such as The Indus River, Chenab River, and Jhelum River, which play a significant role for Pakistan water management resources. The Tarbela dam and the Mangla dam both play essential role but their capacity

are not much more for the entire
province. However, lack of government
accountability in the water management
resource diverted and erode the
dams and the canal systems.
Although, a unawareness through education
make the system more worse for
the water crisis. No proper policies for
the creation of dams and creating
misperception about the dams on so-
cial media, which leads the wa-
ter scarcity and controversy about
the provinces. Creating ~~and~~ propaganda
and disadvantage to the Kalabagh
dam lead the ~~is~~ controversy among
the government and the provinces, also
affect the water system. Moreover,
these erode the human energy resources
and affect the Pakistan economy, because
it plays a core role in making the
hydropower which generates electricity which
which ~~help~~ is beneficial to both for
human resources and for the economic
economic sectors.

Canal system plays a substantial role in irrigating lands which enhance the human resources and eliminate the poverty. Lack of dams is the ultimate source of eliminating the canal system.

However, misuse of water resources

management creates the canal issues.

Everyone has ~~are~~ using the water resources for their own purpose individually.

Individually irrigating lands creating the scarcity of water in the form of canals, which leads to

conflict among people and the

provinces which eliminate and

break the canal system for

personal gain. This will create

and enhance a huge amount

of water scarcity which the

affect the water management

system. Although, illiteracy among

public will create these issues

and lead to canal dispute

among the public and the

prominence, after soon it ^{will} affect the entire Indus water treaty (IWT) between the Pakistan-India, which degrade the ~~entire~~ ^{whole} Rivers. Moreover, these ~~entire~~ ^{entire} individual purpose, lack of proper system, mismanagement of water resources and the controversy among ~~for~~ public and government will ~~can~~ create and devastated the dams and canal system which directly affect the water security in a nation.

Similarly, proper management ~~will~~ ^{can} enhance the water capacity and capability but in contrast, mismanagement of the ~~the~~ water has erode the water capacity and will affect the security of water. Lack of accountability in the government and a local government ^{has} ~~will~~ create these issue that will directly affected the water management system and creates a tension in a region and regional. However, lack of awareness in

public and no proper platform given
by government or local government
to the people have raise in
creating mismanage of the water
that will devastated the dams system,
canal system, and the irrigation system.
Although, these all are come from
lack of accountability, bad policies
of the government, and the
political instability which eliminate
the proper use of water and
creates a tension in the public,
which leads the protest and
unrest in banning the water
management system. Moreover, the
federal government and provincial govern-
ment plays a significant role
in creating all these issue
which affected the entire
water system. Thus, it has devastated
the agriculture sector and the
economic system which has a
key element for the human
resources.

Political instability, mismanagement of the water resources, and the personal interest creates issue among the provinces and regional. The Kalabagh dam is the main cause of rising disputes among the ~~previ~~ federal government and the provincial government. In addition, the Kalabagh dam on Indus Rivers will reduced the water capacity and creates water scarcity. Moreover, different social activists say that the Kalabagh dam has no relevance for the KP and the rest of others provinces. Although, these misperception plays an important role in creating the dispute among each provinces. However, the political status plays a substantial role in creating these issue for individual benefit. Every political leaders have serve their duty individually for personal gain where they belong. These create the

unrest situation and triggered to leads the uncomfortable condition among the of the federal and provincial government. In addition, the Isakbegi dam has the significant for UP which cover almost their irrigated lands but due to political instability it affect the energy resources and the irrigated lands. So, these political instability, individual struggling, lack of domestic policies for water management have devastated devastate and eridicate the water resources.

The more government provide facilities to Natural Disaster Management Authority (NDMA) the more they work on water scarcity. Lack of facilities to NDMA will affect the energy resources. The more affect the energy resources, the more enhance the water scarcity. Lack of proper relief by government to facilitate the NDMA that facilitate the water energy resources. In addition, lack of accountability

has affect the proper condition on the energy management, which lead to erode the availability of water. These will decrease the agriculture sector which has the core significance in energy resources. However, the immediate funds to the energy sector which has the ultimate cause in enhancing the water security and eradicating the water @ capability.

Although, these will lead down to the ~~uncertainty~~ government to the uncertainty which ~~or even~~ creates the mistrust on the governance system. Moreover, the economic sector which plays a central role in these has the ultimate cause in the energy sectors. Provincial debt ~~will~~ has creates these tension.

Political instability has a core significance in these sectors. Personal interest, lack of literacy skills, unaccountability, and interference come from political instability which

disrupt the energy management system that devastated the water capability. However, bad policies for the water management which has the ultimate cause for the water crises. These can lead down the system in the highly disputed arena. Although, which creates an ~~however~~ among political status that affect the governance system which caused for the water resources management. However, the more political instability caused for the water crises, the more it affect the agriculture and industrial sector; the more these two affected, the more the economy will be downfall. So, these economic downfall has erode the the water capability which unrest and ~~criticism~~^{criticism} in a country.

The Indus Rivers has the capability in enhancing the water capacity through out the country. Increasing

energy source for agriculture sector and industrial sector. However, these sectors have improve the livelihood life. Providing water for the irrigation system and ~~at~~ cultivating such like, crops, wheat, and rice which have the core element eradicating the poverty by selling and exporting those. Although, the Indus River has the ability capability to store the water in the form of dams which have the substantial role in providing the electricity and energy for the technology in the form of power plant. In addition, these enhanced the economic condition of the country which eliminate the poverty and providing an opportunities for the people. Moreover, these will strong the governance system, increase justice on the system, and ensure the reinforce of the water management system.

Tenbela dam is the highly hydro-electric energy produced power plant with the capacity of 4,888 MW. This energy power plant has the immense source for the industrial and agriculture sectors of the country. In addition, majority of the population are highly dependent on these two sectors. However, these provide most of the employment opportunity, in which people grow their families. Immense storage water has produce electricity which become beneficial for the irrigation system in the form tubwell to irrigate the land, which plays a crucial role in the agriculture exporting domestically. Although, the more capitalized these two sectors on the behalf of Rivers and Dams, the more economy improve and the more the country will improve their technological advancement.

Mangla Dam is one of the largest dam in Pakistan constructed in 1961 during the Ayub Khan era. It has the capacity of storing water with the ~~low~~ capacity of 1,000 MW and located on the Jhelum River. However, it has the capability to control the flooding and flow it into the Indus River. While also has the capability of producing electricity which have beneficial for agriculture sectors and industrial sectors. Although, these two sectors have enhance the energy products and provide an opportunities for the jobs employment with the help of dams giving them an electricity. Moreover, dams protect us from flooding and providing us an products in the form of protecting building collapsing and equipped, and products like, water for irrigating lands and for industrial.

Similarly, the Chashma Barrage reservoir has the water storage reservoir for energy located on the Indus River. It has 184 MW installed capacity for energy resources. However, Chashma Barrage plays a substantial role for the energy resources, linkage with the Jhelum canal which have a multiple source for irrigation and agriculture sectors. Although, it has the essential source for the industrial and ~~flood~~ for flooding control system. The recent flood in KP and Punjab, dams and Barrages playing a significant role storing water capacity and decreasing the flooding flow which cause for collapsing building, diverting lands resources, and evacuating people. Moreover, these control and protect the agriculture sectors, industrial sectors, and building collapsing from floods, while erode their flow capacity in the form of storing water and then releasing it.

into the rivers.

The industrial sectors have the are
role in energy managing and providing
their economies throughout the country and
the worlds. Providing opportunities and
eliminating the poverty in the form
jobs and goods. However, exporting go-
ods through privatisation have promoting ma-
tual cooperation and national integration,
while enhancing economies. Although
these mutual cooperation, national integration,
and exporting goods have reinforce
governance system throughout privatisation.
Good governance system plays an imp-
ortant role in stabilizing the economy
which has the key role in
energy resources. Moreover, industrial
sectors have the backbone of the
economy in technology and military
advancement, in which have government
defend its energy resources by these
military capability and technological adv-
ancement.

Bad governance, lack of accountability

accountability, mismanagement of the resources, and political instability impact the economy. The recent flood in UP and Bihar have devastated multiple sectors; collapsing building, devastating road infrastructure, evacuating families from dangerous place to safety place, and loss of human livelihood. However, almost 35% of the lands have been devastated in Bihar, including families, goods and building infrastructure. So, these ruthless policies can lead the devastation and eroding economic sectors which have a significant role in enhancing the economy. Although, the economic sectors have a profound role in providing facilities and promoting technology. But the unconscious policies have lead there in affecting the water sources which have the beneficial role to reinforce the government. Moreover, affecting economy will lead the water crisis and economic crisis.

Making dams, like Chasma Dam has enhancing the water storage capacity. Chasma Dam has the capability of 189 MW power generation. However, these power generation can be used in the industrial and agriculture sectors. Although, storage water, protection protecting from floods have the one element for energy sectors. Furthermore, enhancing agriculture sectors and industrial sectors by dams have reinforce the economy. These both plays an important role in job employment and eliminating the poverty rate by proper working in industries and irrigations and by labours. Making goods and cultivating crops from industries and agriculture to exports will enhance the government more strong and erode the energy crises. Moreover, it improve and enhance the economic stability for better governance.

Similarly, the Kalabagh Dam has the proposed storage capacity is about 6.1 million acre-feet. The more water stored, the more civilian protect from floods. However, storing of water can produce and generate electricity. The Kalabagh Dam has the power generation capacity is about 3,600 MW. There can reinforce the economic condition of the country which have the capability to modernize the industries. Although, the economy has a profound role in agriculture sectors, providing facilities and reinforcing the irrigation system which can lead by eliminating food security and produced more products. Moreover, exporting these products is the ultimate way of promoting economy and attracting more investors. These can lead more economic integration with the collaboration of mutual understanding by exporting the products.

Gomal Zam dam has the
core significance of generating capacity
about 17.4 MW. However, producing
water about 191,000 acres of agri-
culture and in D.I. Khan and
Tank district. Boosts agriculture
in Southern Punjab while
providing clean hydroelectric energy
for industries. Although, it has
the capability of protecting livelihood
from floods. Storing capacity of Go-
mal Zam dam is 1.14 million acre-
feet. These helps in industrial zone
and irrigation to providing electricity
for proper work. Moreover, producing
goods and foods which have the
beneficial role for the livelihood
and for the government. Utilising these
for the exports and generating
more revenues which have plays
an important roles in the
economies. Thus, it has leads to
economic prosperity and enhancing
the water security by eliminating

the water crises.

Making good policies and providing multiple sources for water management system will enhance the capability of management system.

However, good governance and political stability plays a substantial role in the water management system.

Although, it will reinforced the disaster management system, agriculture sector, and the industrial system of the government. By providing foods from agriculture sectors, job employment from industrial sectors, and

protection from floods will stabilise the economic capability in improving the governance system and providing facilities in different institution.

Moreover, reinforcing water management system have increase and improve the livelihood life by irrigated lands, and eliminate the water scarcity in a country. There will leads the credibility on the system.

Similarly, making strong policies for more dams and providing more facilities for more growth in water management system. The Kalabagh Dam has the alternate source for water security in providing more facilities to it for their infrastructure building. Although, the technology plays a profound role in this building infrastructure of the Kalabagh Dams. Furthermore, the political stability having substantial role in providing facilities and making good policies for the water security. Extending dams by providing alternate source in the form of canal have increase the water capability and decrease the water scarcity domestically. Moreover, ~~the~~ these can lead natural relation domestically and provincially by distributing the water through canal system. Political stability and good governance

among provinces plays an significant
role in mutual relation and
cooperation. However, these can leads
equal distribution of water among pro-
vinces. Equal distribution of water among
provinces have made the water sec-
urity in the provinces and also
it has reinforce the mutual combination
and relation among through country.

Although, mutual cooperation and mutual
relation in the equal distribution
of water sources will enhance
the justice system on the government.

Thus, these system will give
assurance to people on the water
management system that will provide
them different kind of sources
in irrigating their lands and
taking benefit from it.