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Devastating floods in Pakistan

- ① Introduction
- ② Climate Change Drivers
- ③ Issues in flood management
- ④ Solution for avoiding future floods in Pakistan
- ⑤ Conclusion

Introduction

In Pakistan monsoon
Strong ^{monsoon} ~~monsoon~~ season particularly began
on 26th June 2025. As of 12 Sep
2025, heavy rains and flash floods
have resulted in several deaths,
mass evacuation and crops loss.
All over the Pakistan flash flood
and heavy rain showed drastic
damages and human losses. This is
due to change in climate and
weather patterns due to global
warmings and this is also

due to man-made activities and governance failures.

② Pakistan's Changing Climate and flood risks

Climate Change Driver

Rising temperatures: In 2010 there was $+0.18^{\circ}\text{C}$ increase in temperature and now $+1^{\circ}\text{C}$ increase in temperature which increase moisture load and results in increase rainfall intensity. Means fewer rain but increase in intensity for a small period of time. For example flash-flood in Chakwal which received 400 mm of rain in 10 hours.

③ Monsoon Shift

There is shift in monsoon rainfall patterns. Southern ~~Punjab~~ provinces now receive more rainfall and northern provinces are drying out.

④ Extreme weather events

Non-riverine

Floods dominating now.

→ Soil saturation are run off decrease to 40 - 60%.

→ Top soil loss in salt range and barani areas

③ Urban Vulnerability

→ Karachi, Lahore,

→ Rawalpindi are facing chronic floods

⇒ Encroachments on drainage paths

⇒ Urban heat island effect worsen absorption

② Core Issues in Pakistan's Flood Management

① Governance vacuum and politicization of disasters

In Pakistan floods are treated as episodic tragedies rather a systemic governance failure. Political leadership lacks urgency and disaster response is reactive, fragmented and politicized. Instead of coordinated national actions parties are engaged in blame games

and deflect accountability

★ Case in Point

In Swat tourist died because of no early warnings and evacuation plans.

→ Officials misused term 'cloudburst' in Chakwal, and Buner, contradicting PMD's ^{technical} reports

→ Despite 1.5 million affected across Punjab and KP but no unified federal emergency framework was activated

B Enclaves and Urban Planning Failure

Unregulated constructions on natural drainage paths has turned cities into flood traps. Commercial interests override the ecological logic and building codes are violated routinely.

★ Case in Point

→ Karachi's Gujjar, Orangi and Mahmoodabad nullahs are blocked by development worsening urban flooding
→ In Lahore and Sialkot housing societies that

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are built on floodplains ~~forest~~
man evaluations after ~~river~~ and
Chenab overflowed.

① Institutional fragmentation and
lack of accountability
Disaster management is split across
departments - Environment, Education,
Police, PDMA - there is no clear
command structure. This dilutes the
responsibility and results in delay
response

*Case in Point

In KP many schools
and homes were damaged but there
was no civilian disaster force to
mobilize. ~~at~~

PDMA and NDMA are operating
in post disaster situation

② Inadequate weather monitoring
and forecasting

Pakistan have critically
underdeveloped weather infrastructure
According to WMO → world meteorological

organization guidelines, flat terrain requires one monitoring ^{station} ~~system~~ per 100 sq km and in hilly areas one per 50 sq km but there are only 85 station for 700,000 sq km a shortfall of thousands.

★ Case in Point

→ PDMA issued alert in Ravi and Sutlej, but 12-18 hours warning was not ~~enough~~ enough for evacuation in Gilgit and Multan.
 → In Swat, predictable weather patterns were ignored and there was no tourism advisories issued.

⑤ Ecological degradation and freshwater mismanagement

Deforestation, Soil erosion and loss water storage amplify floods risks. Pakistan can store water only for 30 days, compared to India's 220 days, leading to both drought and uncontrolled overflow.

★ Case in Point

In Gilgit, glacial

floods damaged many houses and cut off valleys like ~~Ghizer~~ Ghizer and Diamer.

→ In South Punjab millions of people were evacuated due to lack of retention infrastructure.

(F) Absence of ~~flat~~ Community mobilisation and public awareness.

Disaster preparedness is not embedded in public culture.

There is no local and tourists briefing on risks and no emergency drills.

★ Case in Point

In Swat no safety protocols were shared with tourists and locals

(4) Strategic Solutions for Flood management in Pakistan

(1) Climate Governance and Institutional reforms

Floods resilience begins with political will, institutional coherence and

performance-linked accountability. Pakistan must treat climate adaptation as national security priority.

Key actions

- ⇒ Establish climate emergency council under Prime minister
- ⇒ Create specialized climate resilience force trained in hydrology, logistics and disaster response — separate from police and military.
- ⇒ Decentralized NDMA into provincial climate units with autonomy and real-time coordination.
- ⇒ Link disaster governance to performance audits of district administrations
- ⇒ Digitize land records to prevent encroachment and corruption in flood-prone zones.

② Urban Planning and Drainage Rehabilitation
~~Urban~~ Cities must redesigned around ecological logic. Drainage system, Zoning laws and construction codes must reflect climate realities — not commercial interests

③

★ Key actions

- ⇒ Enforce Zoning laws to prevent constructions on floodplains and natural drainage paths
- ⇒ Launch drainage restoration projects in Karachi, Lahore and Sialkot.
- ⇒ Conduct annual pre-monsoon ~~etc~~ drainage ~~etc~~ audits and cleaning drives
- ⇒ Integrate green infrastructure (~~permeable~~ permeable pavements, rain gardens) into urban master plan
- ⇒ Clear illegal construction on stormwater corridors and nullahs.

② Disaster Response and Community Preparedness

Pakistan needs a culture of preparedness and public engagement. Community awareness, early warning systems and ~~etc~~ participation are essential.

★ Key actions

- Institutionalize community drills, evacuation protocols and multi-purpose shelters
- Launch national climate literacy campaign through media, schools and mosques.
- Use religious platforms to promote climate stewardship narratives.

→ Deploy SMS-based alert systems linked to PMD forecasts

→ Regulate tourism in vulnerable zones with safety codes, constructions bans and risks briefings.

④ Scientific Planning and forecasting infrastructure

Pakistan's weather infrastructure must meet global standards. Scientific planning should guide flood response, land use and resource allocation.

Key Action

→ Install automatic weather stations to meet WMO guidelines

→ Develop localized forecasting models and integrate them into district-level planning.

→ Train IMD staff in real-time hydrological modeling and public communication.

→ Establish a Pakistan Climate observatory for data-driven decision-making

→ Link forecasting systems to local governments, farmers and tourism department

⑤ Ecological restoration and water management

Natural buffers must be restored to absorb flood waters. Water storage infrastructure should be expanded to manage both droughts and overflow.

★ Key actions

- Restore wetlands, mangroves and floodplains to absorb excess water
- Scale up afforestation in riparian zones and mountain slopes
- Build small and medium dams & in flood-prone zones
- Promote rainwater harvesting and upgrade canal systems
- Invest in watershed management and slope stabilization using climate finance

⑥ Climate Resilient Agriculture and Social Protection

Agriculture must adapt to climate shocks. Farmer needs insurance, resilient inputs and access to early warnings and safety nets.

* Key Actions

- Introduce crop insurance schemes for flood-prone districts
- Provide subsidies for climate-resilient seeds and farming inputs
- Link farmers to early warning systems and community shelters
- Expand social safety nets for displaced and vulnerable population
- Promote flood-resilient farming techniques and climate-smart irrigation.

⑦ Climate Finance and Global Diplomacy

Pakistan must mobilize international support through strategic diplomacy and credible project pipelines. The country's vulnerability must be leveraged into global action.

* Key Action

- Build institutional capacity to access loss and damage fund, Green climate fund and bilateral aid.
- Submit bankable adaptation proposals

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- backed by scientific data
- Align with low-emitting vulnerable nations to demand fairer climate finance
 - Advocate for climate justice in multilateral forums (CoP, UNGA, G77)
 - Use climate diplomacy to unlock technology transfers, concessional funding etc.

Conclusion

Floods in Pakistan are mix of natural hazard and human negligence. While heavy monsoon, glacier melting are beyond control, poor planning, deforestation and weak infrastructure amplify the damage. To protect lives and the economy, Pakistan must invest in sustainable water management, deforestation and climate-resilient infrastructure. Proactive planning to day can prevent another disaster like the 2022 and 2025 floods.

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India's Unilateral Suspension of IWT & Islamabad Policy

- ① Introduction
- ② Impacts of Suspension
- ③ Legal & Diplomatic Context
- ④ Policy Options for Islamabad
- ⑤ Conclusion

① Short Summary of the factual move:-

After the Peshawar attacks India announced that it was putting the Indus water treaty on hold and hinted at taking an even tougher position, possibly ending the treaty altogether. This move is highly unusual because IWT, signed in 1960, has survived many past conflicts and political tensions and has always been seen as a practical way for both countries to manage shared rivers peacefully.

② Impacts of its Suspension

- ① Hydrological / agricultural impacts
Putting the treaty on hold does not

stop river water ^{from} flowing right away but if ~~it~~ India starts taking actions on its own — like diverting water, suddenly releasing dam water, hiding river data or building new canals — it could disrupt the water supply that Pakistan's farmers depend on.

This in turn would hurt crop planting and harvesting seasons and affect people's livelihoods in rural areas.

This thing ^{will} also increase the chances of flood and droughts.

③ Economic and fiscal Impacts

Disruptions to irrigation and hydropower coordination can reduce agricultural output and electricity generation. This results in increasing import needs, food prices and fiscal stress in Pakistan. Markets and investor confidence may react negatively if the dispute looks persistent.

④ Legal / normative order and international precedent

A unilateral suspension sets a dangerous

precedent for bilateral treaty erosion between hostile neighbours.

If accepted, it weakens reliance on treaty dispute-resolution mechanisms globally and incentivizes unilateral responses to ~~security~~ security incidents.

① Security and Escalation Risk

Water disputes can become security flashpoints. If Pakistan perceives existential threat to its water security, political pressure could push Islamabad toward retaliatory measures (diplomacy, legal or even conflict). That raises escalation risks between two nuclear-armed neighbours. This in turn increases regional instability.

② Humanitarian and Political Consequences at home

Any real or perceived water shortage will have domestic political costs in Pakistan (rural discontent, protests) increasing pressure on Islamabad to show result quickly - which can narrow policy options.

③ Legal and Diplomatic Context (What the treaty provides)

The Indus water treaty contains bilateral mechanism (Permanent Indus Commission) and dispute-resolution routes (~~Mutual effort, and of Arbitration~~) historically used to resolve technical disputes. The treaty has also been administered with world bank involvement in the past. Suspending or withdrawing the treaty is legally fraught. Unilateral suspension is inconsistent with treaty text and customary treaty practice. This is giving Pakistan legal grounds to challenge the move in international arena.

④ Policy options for Islamabad

Consider and prioritized list of practical policy options Islamabad should ~~adopt~~ in response to India's suspension of the Indus water Treaty.

⑤ Diplomatic Action (Top Priority - Immediate)

→ Raise the issue globally through UN, world bank, OIC and friendly countries

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to highlights the treaty violation.
Build international pressure and create
a formal record of India's actions.
A practical and quick way to
Implement using existing diplomatic
channels.

② Legal Response (High Priority - Short term)

In voke Indus Water Treaty mechanisms
(Permanent Indus Commission, Neutral
Experts or Arbitration). file international
legal complaints and preserves hydrological
data as evidence. The goal is to
keep the issue within international
legal framework and prevent unilateral
control. This will strengthen's Pakistan's
case and maintaining treaty protection.

③ Domestic Water Management (Short to medium term)

- Prioritize water use for drinking
and key crops
- Upgrade canal systems and expand
Storage through small and medium
dams.

To ensure water security even during reduced ~~rain~~ inflows. This will directly benefit citizens and reduces the dependency.

④ Strengthen Monitoring and Transparency (Medium Term)

→ Use ~~star~~ satellites and sensors for real-time water tracking and share data publicly. This thing will expose any upstream manipulation and build international credibility. It is technically achievable with global partnerships.

⑤ Agricultural Adaptation (Medium Term)

→ Promote drought-resistant crops, efficient irrigation and crop diversification. To reduce vulnerability of farmers and protect food security. Build resilience using local initiatives and existing programs.

⑥ Regional and Climate Cooperation (Long term)

→ Propose a South Asian water Council

for data sharing and joint projects
→ seek climate finance for dams,
watershed management and sustainable
farming. To institutionalize cooperation
and attract global financing. This
turns crisis into opportunity for
long-term stability.

⑤ Conclusion

India's suspension of
the Indus water treaty marks a
serious challenge to regional stability
and Pakistan's water security. Islamabad
must respond with a balanced and
strategic approach — combining diplomatic
engagement, legal action and domestic
preparedness. Strengthening water infrastructure,
improving monitoring systems and ensuring
efficient water use can reduce
dependency and enhance resilience.
At the same time, Pakistan should
continue to advocate for regional and
international cooperation. By pursuing
pragmatic policies, Islamabad can
protect its national interests while
promoting long-term stability in South Asia.