

Thematic Session 1

Legal Aspects of Indus Basin Water

Chair: Hon'ble Mr. Justice Mian Saqib Nisar, Chief Justice of Pakistan

Recommendations Prepared by Moderator: Ms. Simi Kamal

The Indus Basin is the world's laboratory for irrigated agriculture. But no organization is currently tasked with ensuring the integrity of the basin:

- 1) Name a custodian organization.
- 2) Benefit-sharing consensus and construct on water agreed upon by all.
- 3) National Task Force on Water.

We need to move beyond the 60s. Genuine lack of clarity on Pakistan's stand vis-à-vis the Indus Water Treaty but at the same time there is no other document around which India and Pakistan actually talk:

- 1) It is practical that we continue to work under the Indus Water Treaty.
- 2) Look to top class Pakistani negotiators and, where necessary, engage well-known international experts to continue to defend Pakistan's interest and push the boundaries.
- 3) Engage the other co-riparians of the Indus Basin, i.e. Afghanistan and China.
- 4) Improve telemetry and other technologies for better implementation of both the Indus Water Treaty and the Water Apportionment Accord.

International experiences of our own show us that within Pakistan:

- 1) Need to keep up with changing water scenario and evolve laws and agreements based on solid data and good communication.
- 2) Address riparian concerns by designing water infrastructure suitable to geography – where we cannot build big dams such as the vast plain areas of Pakistan we can install other kinds of infrastructure.

Thematic Session 2

Construction of Dams and Reservoirs

Chair: Hon'ble Mr. Justice Gulzar Ahmed, Judge Supreme Court of Pakistan
Co-Chair: Mr. Shams ul Mulk, Former Chairman, Water & Power Development Authority (WAPDA)

Recommendations Prepared by Moderator: Dr. Pervaiz Amir

1. Take a basin approach; create an institution to handle this and reinvigorate WAPDA to its past glory and mandate.
2. Dams on Indus and below Indus are vital for Pakistan's economic future and survival and will guarantee its economic future and survivability.
3. Sedimentation challenges need to be addressed and recognized.
4. Investments in modern Geographic Information Systems (GIS), data collection, drone monitoring and modelling should be taken up as strategies.
5. Groundwater mapping of each and every part of Pakistan should be done on a priority basis using heli-borne technology.
6. Pakistan must establish a clear benefit sharing basin addressing upstream Diamer-Basha and Downstream Delta, which should be spelled out for all.
7. Incentivize private sector investment in generation, transmission, and distribution of hydropower and market-based water management services.

Thematic Session 3

Financing of Dams and Reservoirs

Chair: Mr. Sartaj Aziz, Economist & Former Minister

Co-Chair: Mirza Asif Baig, Former Commissioner for Indus Waters for Pakistan

Recommendations Prepared by Moderator: Dr. Pervaiz Amir

1. A high-level committee should be set up to ensure financing and management in a strictly professional manner and ensure technical oversight of the Diamer-Bhasha Dam and water infrastructure.
2. Undertake economic and financial costing of water.
3. Apart from crowd financing, funds can be sought from international banks, surcharges on utility bills, bonds (domestic and foreign currency), shares and Public Sector Development Programme (PSDP) financing.
4. Suppliers' foreign exchange credit can help to meet 30% of the costs, whereas the balance of 70% can be raised locally over five to seven years.
5. Financing plan and different alternatives such as multilateral guarantees, local market & export credit agency loans and bond markets etc. for specific purposes;
6. Establishment of Debt Management Office within Ministry of Finance to manage international financing which would serve as a single point of contact to manage international relationships with the lending community

Thematic Session 4

Groundwater, Water Recharge and Water Pricing

Chair: Hon'ble Mr. Justice Umar Ata Bandial, Judge Supreme Court of Pakistan

Hon'ble Mr. Justice Ijaz Ul Ahsan, Judge Supreme Court of Pakistan

Co-Chair: Mir Zafarullah Khan Jamali, Former Prime Minister of Pakistan

Recommendations Prepared by Moderator: Dr. Mansoor Hashmi

Groundwater, Water Recharge and Water Pricing:

1. An institution for proper management of ground water in Pakistan.
2. Conservation of water – medium term actions; Preparation of the groundwater atlases at the village level showing depth to water table, quality of water for irrigation and drinking purposes at different depths; further, provincial legislation to have on-farm-water-storages to avoid over irrigation, rainwater harvesting, promoting aquaculture
3. Conservation of water – long term actions:
 - District Gov. to take up the implementation of PIDA's policy to ensure farmers' participation in the surface and groundwater policy
 - Feasibility of Inundation-canal-lakes along rivers to guide floodwater to other water bodies to recharge aquifers, facilitate aquaculture and to create recreational spots;
 - Management of water-tables allowing shallow-wells/centrifugal pumps to function as facilitators for quality and quantity restrictions
 - Along with artificial ground water recharging, natural recharge should be allowed from the future off-channel provincial reservoirs to store floodwater-share, developing tanks/lakes/water-banks along the canal system to ensure water control
4. Creation of a proper legal framework/legislation and an institution to manage, create and implement proper water policies
5. Establish a Ground Water Authority to monitor, regulate and appropriately price water for industrial and commercial sectors
6. Identifying critical ground water zones and placing appropriate pumping limits on farmers
7. National demands centric regulations for sugarcane and rice crops
8. Strict compliance with measures to treat waste water by industries before discharging water into aquifers
9. Rainwater harvesting and other recharge measures should be taken at all levels
10. Integrated Water Resource Management (IWRM) should be implemented and regulated on ground water basins.
11. Floodwaters should be diverted and used for recharging of wetlands and storage.
12. Including export of water intensive agricultural commodities and water intensive industrial exports in Pakistan's water policy
13. Measure and monitor industrial use and pollution of ground water which should be incorporated in the industry survey along with imposition of obligations for payment of ground water in the industrial sector (e.g. Katas Raj case)

Thematic Session 5

Water Governance and Management

Chair: Hon'ble Mr. Justice Umar Ata Bandial, Judge Supreme Court of Pakistan

Hon'ble Mr. Justice Ijaz Ul Ahsan, Judge Supreme Court of Pakistan

Co-Chair: Mir Zafarullah Khan Jamali, Former Prime Minister of Pakistan

Recommendations prepared by Moderator: Erum Khalid Sattar

1. Look at Groundwater and Surface water as one single resource within a basin and take a “basin” approach in governance and management
2. Put money and effort in obtaining data and develop excellence in data availability and information service available to all water users
3. Water systems should generate the funds that can be used for leveraging long-term financing for water infrastructure
4. A proper system of water allocation needs to be made which emphasizes on who gets water, when, how and what quality of water most importantly in cases drought.
5. Only one national department should be competent and autonomous enough to deal with all water related issues in-order to achieve the best possible outcomes.
6. Corruption serves as an impediment towards the progress of water security, any institution which deals with water governance should be duly monitored.
7. The development and implementation of policy, legislation and strategies should be consultative and include the views of all stakeholders. The laws made should rest on the principles of equity, sustainability and efficiency.
8. Canal leakage and irrigation seepage should be managed and controlled through a proper mechanism so that maximum use of water can be obtained.
9. The Water Information Act in Australia is a good example by which reliable water information is accumulated and shared for proper water governance from which guidance should be sought.
10. There should exist a water sharing initiative.
11. Reducte the cost of risk management by considering the establishment of high, medium and low shares by relying on trusted “bank account like” accounting systems that have hydrological integrity which include credit water allocations as they are made, debit use as water is taken and at the appropriate exchange rate record transfers as they are made.