

REPORT

Inter-provincial Water Issues In Pakistan

Final Recommendations Report

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PILDAT is an independent, non-partisan and not-for-profit indigenous research and training institution with the mission to strengthen democracy and democratic institutions in Pakistan.

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INTER-PROVINCIAL WATER ISSUES IN PAKISTAN

PREFACE

Recent floods during the summer of 2010 and the ensuing deaths and destruction has once again highlighted the question of water resources management and inter-provincial differences on the subject in Pakistan. Pakistan seems to be facing the cycles of extra-ordinary dry and wet spells. Drought like conditions prevail for a few years and then floods hit the land leading to severe losses in both cases. The question is being asked that can there be a way to manage the cyclic surpluses and shortages to the advantage of the end users? As the energy costs are shooting through the roof and Pakistan has started facing the worst electricity shortages of its history, the need to generate economical and clean electric power through hydro-electric projects is being emphasized. But the proposed solutions are not without controversy.

There has been divergence of views among the provinces about the desirability of instituting water development projects. Since river Indus and its tributaries are the life line of almost all provinces of the country, the dwindling flows in the rivers have given rise to provincial tensions on the question of sharing this resource which was once considered infinite. Although Pakistan is lucky that its provinces had agreed to sign a unanimous Water Apportionment Accord in 1991, there have been varied interpretations of the accord leading to serious disputes between the provinces. Perceived or real failure to implement the accord in letter and spirit has weakened the mutual trust of the provinces. Punjab and Sindh differ on the interpretation of Water Apportionment Accord 1991; Sindh strongly opposes the construction of water reservoirs especially the Kalabagh Dam on river Indus because it apprehends that it would lead to the pilferage of its share of the river Indus. Khyber Pakhtunkhwa is unable to make use of its allotted share of water from river Indus and it objects to the construction of Kalabagh Dam on the grounds of its perceived or real adverse effect on the agriculture and infrastructure of Khyber Pakhtunkhwa. Balochistan, being a lower riparian to Sindh, accuses Sindh of holding back its due share of Indus River water. As the time will pass, it is anticipated that water availability in a normal year will further go down leading to further strain on agriculture-based economies of the four provinces and on inter-provincial harmony. Experiences from similar disputes in other countries indicate that merely administrative, technical, judicial or political solutions do not work unless a broader understanding and agreement emerges among the water users and their representatives. An informed dialogue based on facts and figures and knowledge of each other's position and grievances has been found to be one of the most effective ways to address inter-state and inter-provincial water disputes.

It is in this context that PILDAT has initiated the process of dialogue among various segments of all the four provinces notably Water Experts, Parliamentarians, provincial assemblies members and media persons. This report contains final recommendations from the series of roundtable discussions PILDAT held with water experts, Parliamentarians, provincial assemblies members and media pers in Islamabad and at the all provincial capitals. This report aims to present the recommendations on inter-provincial water issues in Pakistan that may be used for agreeable solutions for better policy initiatives and options.

Acknowledgments

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Disclaimer

PILDAT has made every effort to ensure the accuracy of the contents of this report. PILDAT, however, does not accept any responsibility of any omission or error as it is not deliberate. The content of this report does not reflect the views of PILDAT or the British High Commission, Islamabad.

Islamabad
March 2011

Abbreviations and Acronyms

CCI	Council of Common Interest
GDP	Gross Domestic Production
IRSA	Indus River System Authority
KP	Khyber Pakhtunkhwa
MAF	Million Acre Feet
MNA	Member of the National Assembly
MPA	Member of the Provincial Assembly
MQM	Muttahida Qaumi Movement
NA	National Assembly
NWC	North West Canal
PB	Provincial Assembly of Balochistan
PBW	Provincial Assembly of Balochistan Women Reserved Seat
PML-N	Pakistan Muslim League Nawaz
PPPP	Pakistan Peoples Party Parliamentarian
PSW	Provincial Assembly of Sindh Women Reserved Seat
PS	Provincial Assembly of Sindh
WAA	Water Apportionment Accord
WAPDA	Water and Power Development Authority

Final Recommendations Report

INTER-PROVINCIAL WATER ISSUES IN PAKISTAN

Executive Summary

Water plays an extremely important role in the economy of Pakistan which chiefly depends on Agriculture, accounting for 24% of national GDP, 48% employment and 70% of country's export. Due to rapidly increasing population, and reduction in the storage capacity of Tarbela, Mangla and Chashma, per capita water availability of surface water is fast dwindling to 1000 cubic meters which is a threshold for a water scarce country. Main reason for lack of consensus on construction of storage dams aiming at increasing the water availability in addition to cheap hydro power is deep rooted distrust especially between Punjab and Sindh regarding water distribution under 1991 WAA. The two provinces interpret the accord differently, which is a classic example of upstream, downstream rivalry. These differences are likely to increase with the passage of time as water availability will reduce due to further sedimentation of reservoirs and climatic changes causing frequent droughts and floods. Sindh's other arguments against construction of new reservoirs is that adequate water is not available for new dams. Other experts have a different view. They contend that worldwide water experts recommend that for proper water management of river basin, there should be 40% storage of the annual water availability while we have only 8%.

Very high floods in August 2010, on the other hand, caused colossal losses to Pakistan's agricultural economy and infrastructure worth billions of dollars. Question arises whether it was possible to mitigate the losses had we had some storages which could have also increased water availability for agriculture beside providing cheap electricity avoiding current energy crises.

PILDAT, as a first step, invited water experts from all provinces to prepare a briefing paper containing viewpoint of all the sharers. These experts met three times and came up with a background paper to be discussed in round table discussions before the federal and provincial Parliamentarian and media. Although, provinces especially Sindh and Punjab maintained their position, but there were a number of water distribution related aspects on which consensus was achieved. For example:

- Telemetry system should be made functional and should be under the control of IRSA
- Weather forecasting system should be improved
- IRSA's technical capability should be enhanced
- IRSA should be under the administrative control of Cabinet Division directly responsible to the CCI
- IRSA should have financial autonomy
- There should be monthly water audit to point out any irregularities or water theft
- IRSA should have powers to impose penalties for violation of accord, and
- Provinces unable to use their share of water for want of infrastructure should be authorized to sell it to other provinces, etc.

This background paper was presented to MNAs and senators and national media in Islamabad and MPAs and provincial media in each provincial capital. At all the occasions, the briefings were well attended. At the start of east roundtable briefing, experts from each province gave presentations highlighting their point of view about the implementation of the WAA and the construction of new reservoirs. Key recommendations from briefings and consultations can be summed-up as follows:

Recommendations

1. Necessity to have water reservoirs for proper water regulation and for cheap electricity was by and large recognized. However, consensus among the provinces before launching any such projects is necessary.
2. Telemetry system for accurate measurement of flow and its online availability to all shareholders is necessary.
3. For cheap electricity, besides hydel and coal, other renewable sources of energy should be given due attention.
4. To remove the mistrust on water distribution and achieve consensus on storage dams, multi stakeholder dialogue, represented by farmers, water experts, and elected representatives duely supported by research and accurate information should continue.
5. Electronic media and the civil society should play a positive role to present factual information to the public.

Introduction

In a bid to create a better understanding and consensus among provinces on water issues and to open the way for dialogue, PILDAT arranged a series of Roundtable Discussions on **Inter-Provincial Water Issues in Pakistan** for the Parliamentarian, Members of the all Provincial Assemblies and Key Media representatives from January 2011 to February 2011 in Islamabad, Lahore, Karachi, Quetta and Peshawar.

For a more constructive policy dialogue around internal water management involving more diverse stakeholders at provincial and federal level, three (3) roundtable discussions with Water Experts & Policy Makers from the 4 provinces & the federation were also held to present the issues in their available detail so as to provide concise and objective information to all stakeholders on inter-provincial water issues in Pakistan and to enable them to understand the issues more meaningfully and recommend agreeable solutions for better policy initiatives and options.

PILDAT unveiled four (4) Papers and Case Studies to facilitate informed discussion. These include:

1. Background Paper: **Inter-Provincial Water Issues in Pakistan**: Prepared and published in English, Urdu and Sindhi languages;
2. Briefing Paper (Updated): **Issues of Water Resources in Pakistan**: Prepared and published in English, Urdu and Sindhi languages;
3. Case Study: **Inter-State Water Disputes among the Riparian States: The Case of Cauvery River from Peninsular India**: Prepared and published in English, Urdu and Sindhi languages;
4. Case Study: **Inter-State Water Disputes and Interlinking of Rivers in India**: Prepared and published in English language

**Recommendations from
Roundtable Discussion with Parliamentarians
Islamabad: January 04, 2011**

The following recommendations were put forth by the participants at the Roundtable discussion on Inter-Provincial Water Issues in Pakistan on Tuesday, January 04, 2011 at Islamabad.

Chaudhry Naseer Ahmed Bhutta, MNA
(PML-N; NA-127, Lahore-X, Punjab)

1. The water distribution mechanism needs to be reviewed so that the disputes among the provinces could be resolved.
2. We are supposed to come up with a mechanism to cope with the scarcity and abundance of water as in 2010 floods.
3. The experts should resolve these disputes among the provinces.
4. It has transpired from the discussion that we should save water which is escaping to the sea and use it for boosting agriculture.
5. Telemetry system should be reactivated.
6. Alarming rate of population growth warrants immediate resolution of water dispute respecting each others point of view.
7. Besides power generation through hydel and coal; wind, solar, etc. should also be explored.

Mr. Kishan Chand Parwani, MNA
(PML, 341 Non-Muslim-IX, Sindh)

1. Confidence building should be ensured before the construction of dams.
2. Change in IRSA Act by Gen. (Retd.) Pervez Musharraf to have Federal Member of IRSA also from Sindh was not correct.
3. Only experts can explain why a dam cannot be constructed at Katzara near Skardu.

Mr. Shams-ul-Mulk, Former Chief Minister, Khyber Pakhtunkhwa Province / Former Chairman, Water and Power Development Authority-WAPDA, Khyber Pakhtunkhwa

1. If constructed, Katzara Dam, will take 20 years to fill. Our power markets Karachi, Peshawar, Lahore and Faisalabad demand that hydel generation should be

closer.

2. Katzara dam would also annihilate whole Balti culture. It would be an environmental disaster.

Senator Suriya Amiruddin
PPPP, Balochistan

1. During 2010, the flood water was diverted towards Balochistan which completely devastated Jafferabad and Naseerabad districts which should not have been done.
2. In other area of Balochistan, where ground water is main source of agriculture, water level has gone very deep. So we deserve more water share from Indus.
3. KP and Balochistan's share was increased in the Accord but this water does not exist.
4. Kalabagh Dam should be constructed only through consensus.

Ms. Parveen Masud Bhatti, MNA
(PML-N, NA-281, Punjab-IX)

1. Chairman WAPDA should be able to suggest ideas for resolving water dispute and construction of dams in Pakistan.

Dr. Attia Inayatullah, MNA
(PML, NA-305-Punjab-XXXIII)

1. We need to have a national needs-assessment programme. The regulatory framework for ground water usage is also missing. On-farm water management should also be given due attention to save precious water.
2. Dealing with floods and droughts due to the climate changes is a great challenge. We are fast becoming a water-starved country due to low storage capacity. We need to stop India from water terrorism against Pakistan.
3. The stakes are high and we need to have an active conflict resolution mechanism. We have shown political will and we need to show more in resolving water disputes.

Ms. Fauzia Ejaz Khan, MNA
(MQM, NA-317- Sindh-X)

1. Three provinces have objected to the construction of Kalabagh Dam. We have seen protests in various

parts of the country, which is due to mistrust among provinces. We need to remove this mistrust.

Mr. Shakir Bashir Awan, MNA
(PML-N, NA-70, Khushab-II, Punjab)

1. By not constructing any big dams since 1971, we have become a water-starved country. In order to save our future, we need to construct storage dams.
2. We should sit together and listen to each other's view and then try to reach consensus for building new dams

**Recommendations from
Roundtable Discussion with Members of**

**Provincial Assembly of the Punjab
Lahore: January 18, 2011**

The following recommendations were put forth by the participants at the Roundtable discussion on Inter-Provincial Water Issues in Pakistan on Tuesday, January 18, 2011 at Lahore.

Rana Muhammad Iqbal Khan, MPA
Speaker of the Provincial Assembly of the Punjab
(PML-N; PP-184, Kasur-X)

1. We have a very good canal system in the world. Punjab has been sacrificing its rights but not recognized. Punjab does not want to usurp anyone's rights but in the same time it does not want to relinquish its own.
2. We should put in sincere efforts to safeguard our homeland and shun our differences.
3. We are faced with war on terror, energy and gas crisis and dearness. We should find ways and means to end differences on the distribution of water among the provinces.

Ch. Javed Ahmad, MPA
(PML-N, PP-228, Pakpattan-II)

1. Constructing dams for storage and hydel power is a national issue. Opposition of dams in Sindh is due to misinformation and mistrust which should be removed.
2. Per capita and per acre water availability in Sindh is higher as compared to other provinces which is causing water logging.
3. The problem of fast depleting underground table in many areas also needs due attention.

Mr. Muhammad Tariq Amin Hotyana, MPA
(PPPP, PP-278, Bahawalnagar-II)

1. We need to remove mistrust among provinces about the water sharing. Opposition from KP against Kalabagh dam is not understandable as it will bring vast areas under irrigation in D.I. Khan.
2. Political will is lacking regarding construction of dams. We could have constructed Kalabagh dam through referendum in early 1990s.
3. Lack of trust is bound to aggravate water disputes and its resolution should be given highest priority.

4. We should hold talks with Afghanistan regarding water storages and sharing of water of Kabul River.

Ms. Anjum Safdar, MPA
(PML-N, W-304, Punjab)

1. We should have think tanks to resolve water disputes among provinces. We need to launch media campaign to reach consensus on the contentious issues regarding water distribution
2. We should think that why we have failed to convince Sindh on the construction of Kalabagh Dam.

Rao Irshad Ali Khan, Chairman Indus River System Authority-IRSA, Government of Pakistan, Punjab

1. Private Media has been propagating that Kalabagh Dam is the recipe of disaster for Sindh and nobody has ever tried to clarify the situation. We need to put in sincere efforts to remove mistrust among provinces.

Mian Muhammad Ali Laleka, MPA
(PPPP; PP-281, Bahawalnagar-V)

1. We should develop consensus on contentious issues and settled disputes among provinces.

Malik Muhammad Abbas Raan, MPA
Chairperson, Standing Committee on Irrigation and Water,
(PP-201, Multan-VIII)

1. We are here to discuss most important issue of water sharing among provinces. The poor people of Pakistan owe us a lot of things and we should come up to their expectations.

**Recommendations from
Roundtable Discussion with Members of**

Provincial Assembly of Sindh
Karachi: January 19, 2011

The following recommendations were put forth by the participants at the Roundtable discussion on Inter-Provincial Water Issues in Pakistan on Wednesday, January 19, 2011 at Karachi.

Mr. Muhammad Idrees Rajput, Former Secretary Irrigation and Power Department, Sindh

1. As many as 111 MAF water went downstream Kotri during last 10 year. Maximum per year was 25.3 MAF and minimum 0.286 MAF.

Mr. Muhammad Amin, Member Indus River System Authority-IRSA, Government of Pakistan, Balochistan

1. IRSA has to take its decisions according to 91WAA which says provinces are supposed to meet drinking water requirements from their share.
2. Sindh may approach Balochistan for construction of Hingol Dam from where water can be supplied to Karachi.

Rao Irshad Ali Khan, Chairman Indus River System Authority-IRSA, Government of Pakistan, Punjab

1. IRSA is only a regulatory body and construction of dams is not within its purview. Smaller dams are no substitute for big dams. They cannot increase water availability for our vast irrigation system which is facing shortages a main reason for water disputes. Moreover, small dams cannot meet our energy requirements.

Syed Khalid Ahmed, MPA
(MQM, PS-122 Karachi XXXIV)

1. Why IRSA should allocate 1200 cusecs for augmenting Karachi water supply under K-4 project, which is a matter of life and death for Karachites.
2. IRSA should perform its duties to remove misperceptions about the construction of Kalabagh Dam.
3. We should be ready for future challenges due to climatic changes. If Kalabagh dam cannot be constructed we should construct small dams.
4. Provinces should be compensating on losses due

to water shortage.

5. There should be fair representation of provinces in institutions such as IRSA.

Mr. Rehan Zafar, MPA
(MQM, PS-104 Karachi XVI)

1. Why we are pressing for the construction of Kalabagh Dam as it has been rejected by the peoples of Sindh.
2. Drinking water situation is critical in Karachi and we should look in to it immediately.

Mrs. Firdous Hameed alias Farheen Mughal, MPA
(PPPP, PSW-140)

1. Small dams can also help in water storage and power generation.
2. The disputed dams should not be constructed.
3. Punjab is using the water of Sindh, therefore, we should not dream of the construction of Kalabagh Dam.

Mrs. Shahnaz, MPA
(MQM, PSW-155)

1. While ratio of sharing water shortage is laid down in the accord, why only Sindh is subjected to bear the water shortage. Each province should share the shortages equally.

Mr. Muhammad Shaharyar Khan Mahar, MPA
(PML, PS-10 Shikarpur cum Sukkur, old Shikarpur II)

1. Development of water reservoirs is in the interest of Sindh but it has apprehensions which should be removed.

Recommendation from
Roundtable Discussion with Members of

**Provincial Assembly of Balochistan
Quetta: January 21, 2011**

The following recommendations were put forth by the participants at the Roundtable discussion on Inter-Provincial Water Issues in Pakistan on Friday, January 21, 2011 at Quetta

Ms. Rahila Hamid Durrani, MPA
Minister of Prosecution Department
(PML, PBW 53)

1. We should work out present and future requirement of water in Pakistan.
2. The public should be taken in to confidence as to what sort of threats we will face in future if we did not address lingering disputes of water sharing.
3. The construction of dams and distribution of water are technical issues. The four provinces should sit together and find ways and means to resolve it.
4. Impartial engineers should be invited to resolve the issue.
5. We should not politicize issues.

Mr. Jan Ali Changezi, MPA
(PPPP, PB 2-Quetta II)

1. We should be able to resolve water disputes as we have done regarding 7th National Finance Commission and 18th and 19th Constitutional Amendments.
2. We should have to find indigenous solutions to our problems.

Mir Tariq Hussain Bugti, MPA
(PB 24-Dera Bugti)

1. If there is no consensus on Kalabagh dam we should construct other dams.
2. Water shortage should be equally shared by all the provinces.
3. Small dams can be constructed in various parts of Sindh and Balochistan.
4. We should also give due attention regarding conservation of water.
5. Water scarcity problem could be mitigated by recycling used water.

Mr. Shah Nawaz Khan Marri, MPA
Minister for Sports and Culture

(Independent, PB 23-Kohlu)

1. I feel that the Members of Provincial Assembly while passing resolution against Kalabagh Dam, were not fully aware of its benefits for Balochistan. They should have familiarized themselves about the project before passing any resolution against it.

**Recommendations from
Roundtable Discussion with Members of
Provincial Assembly of Khyber Paktunkhwa**

Peshawer: February 01, 2011

The following recommendations were put forth by the participants at the Roundtable discussion on Inter-Provincial Water Issues in Pakistan on Tuesday, February 01, 2011 at Peshawar.

Mr. Kiramat Ullah Khan, MPA
(PPPP, PK-7 Peshawar-7)

1. It is a great opportunity to discuss water disputes among provinces and find a way forward in the wake of the enlightened briefing by the experts.
2. Water is very important for any sort of life on earth. We are facing acute shortage of water and energy in the country.
3. Cheap electricity can only be generated through water.
4. Micro-hydel are very good source of cheap electricity in the country and should be started.

Mr. Israr Ullah Khan Gandapur, MPA
(PPPP, PK-67 D.I.Khan-4)

1. It is a common perception that Punjab exploits the situation. If Punjab shows flexibility then the situation may improve.
2. The projects aimed at development in KP are delayed due to multiple reasons which cause mistrust and thus deprivation in smaller provinces.
3. Water accord implementation is improper.
4. Punjab should show flexibility to minimize deprivation among smaller provinces.
5. The headquarters of IRSA is in Lahore, it should be changed.

Mufti Kifayatullah, MPA
(MMA, PK-55 Mansehra-3)

1. From the briefing it transpires that Punjab is using other provinces' water. How far is it true? There should be a proper and transperence system of water distribution among provinces.

Mr. Mohammad Amin, Member Indus River System Authority-IRSA, Government of Pakistan, Balochistan

- This is a misconception. Except for different

interpretation of water distribution, i. e. under Para 2 or under 14b, by Punjab and Sindh, other differences between the two are due to misconceptions and could be removed if two major provinces listen and appreciates each other points of view. Balochistan is however a sufferer as IRSA releases its share but Sindh does not deliver to Balochistan due to various reason.

Mr. Shams-ul-Mulk, Former Chief Minister, Khyber Pakhtunkhwa Province / Former Chairman, Water and Power Development Authority-WAPDA, Khyber Pakhtunkhwa

1. We have not gathered to lay blames on any of the provinces, but to discuss points of contention and look for resolving them.
2. It is a misconception that if Kalabagh dam was there the flood damages to Nowshera would have been even more. Flood peak at Tarbela was about 8 lakh cusecs out of which WAPDA stored 2 lakh at Tarbela while remaining was released downstream. The day this peak reached Kalabagh the reservoir level of Kalabagh, if constructed, would be 120ft below. As such there was no question that flood situation in Nowshera would have been worsened. The flood damages to Nowshera could be mitigated by constructing Munda dam on Swat River.

Recommendations from Roundtable Discussions with Key Media Representatives

**Islamabad, Lahore and Karachi:
January 26 - February 15, 2011**

The following recommendations were put forth by the participants during Roundtable Discussions with Key Media Representatives in Islamabad, Lahore and Karachi from January 26, 2011 to February 15, 2011

Mr. Shams-ul-Mulk

Former Chief Minister, Khyber Pakhtunkhwa Province /
Former Chairman, Water and Power Development
Authority-WAPDA, Khyber Pakhtunkhwa

1. We are following the wrong path and we need to mend our ways immediately to come up with solutions of water issues. As a technical person I could only advise, the decision has to be taken by the decision makers.
2. Indian experts argue that Pakistan is not utilizing available water and throwing it into the sea.
3. Regarding construction of other dams on Indus, limited financial resources warrants that most feasible, less costly, and easy to construct dam should be constructed first and
4. Kalabagh dam fulfills these criteria. Another advantage of Kalabagh is that it is closer to the major power consuming industrial centers of the country.
5. Media and Civil society should expose their forces.

Mr. Zulfiqar Ali Mehtoo

Representative, Aaj NewsTV

1. Kalabagh Dam has been made controversial by successive regimes. IRSA should help develop consensus among provinces.
2. We should know about the forces bent upon making Pakistan lands barren. Why democratic as well as military governments have failed to evolve consensus on such vital issue?
3. The issue is of immense importance. People want construction of Kalabagh Dam as it will resolve our water and energy issues in the years to come. It is a national issue and we all should wake up from slumber. The civil society and NGOs should help resolve the issue.

Lt. Gen. (Retd.) Moinuddin Haider

Former Governor Sindh

1. Food, water, energy, security and law and order are global as well as regional problems. India would definitely stop our water if we continue to waste it. There are still barren and virgin lands in Pakistan but we are not benefiting from it.
2. When there were no Mangla or Tarbela dams, some quantity of water was available to provinces. But disputes have started arising after the construction of water reservoirs. We need extra water and reservoirs.
3. Water conservation is equally important but we are hardly bothering.
4. Releasing water downstream Kotri is also important.
5. We should create confidence building measures among provinces.
6. We should share shortages.
7. We can resolve disputes if we come up with open mind.

Rao Irshad Ali Khan

Chairman Indus River System Authority-IRSA,
Government of Pakistan, Punjab

1. It is misconception that only Sindh bears water shortage. There is a system of shortage sharing among provinces.
2. I suggest that we should construct Kalabagh, Bhasha, Akhuri, Munda dams besides off-channel reservoirs.

Mr. Aajiz Jamali

Reporter, ARY News TV

1. Do you think that we should concentrate construction of Kalabagh Dam? Why we shouldn't concentrate other dams?

Mr. Shameem-ur-Rehman, Daily Dawn TV

1. What would be the availability of water after India develops hydel stations on Chenab and Jhelum rivers. We should think about it.

Mr. Mohammad Amin

Member Indus River System Authority-IRSA, Government
of Pakistan, Balochistan

1. According to the agreement, India can construct hydel power stations on Jhelum and Chenab. Although hydel power station do not consume water

but, aggregate water storage capacity of power producing dams in India can deprive Pakistan of water during critical periods of cropping season.

Mr. Ilahi Baksh Soomro

Former Speaker, National Assembly of Pakistan

1. We should accept and respect the rights and responsibilities of each other.
2. We should resolve water disputes among the provinces amicably.
- 3.- The surpluses and shortages should be shared by the provinces as per the agreement reached among the provinces.
4. The construction of water reservoirs would definitely help us overcome our problems and shortages in water and energy.
5. Political forces are the right ones to reach consensus on there important issues and our recent old history is witness to this fact.

**Recommendation from
Water Expert Roundtables
Islamabad: September 16 - December 23,**

2010

Results of detailed discussion amongst the water experts can be broadly divided into the following viewpoints:

1. One viewpoint is that the main cause of inter-provincial water disputes stems from the lack of trust and the perception of injustice to one province by the other. When supplies are abundant and every co-sharer gets water as per its requirement there is no dispute. When supplies are short of requirement and all co-sharers do not get proportional shortage as per para 2 of the 1991 Water Accord dispute crop up. This continuous violation, either real or perceived, has become firm. This controversy could be overcome by following the Accord in faith and spirit. For example, shortages should be shared by all co-sharers as their share in para 2 of the Accord, operating rules of link canals should be made with discussion and consensus. Similarly filling and operating rules of Mangla dam should be made with discussion and consensus.
2. Other experts feel that this route to creation of trust and confidence is totally subjective. Thus, it cannot be considered totally subjective and therefore not totally assured of success. There is another route that is worth mentioning. The whole controversy of choosing the "Historical" flows or the "Accord" flows starts from a regime of sharing shortages. Can we not replace such a regime with one of sharing surpluses? It is undoubtedly possible through a number of large reservoirs. After all hasn't all the stakeholders, without exception, benefited from Mangla and Tarbela reservoirs even after losing flows of Sutluj, Beas and Ravi rivers?
3. Balochistan, the only province which doesn't have direct link with Indus, has reservations on the method of working out availability at the start of each cropping season where anticipated water availability is reduced by about 15 maf in Kharif and Rabi in the name of system losses, before working out the provincial shares. This loss has increased many times during the past two decades due to excessive irrigation in Kacha areas and lack of transparency in canal head withdrawal data furnished by the provinces in absence of reliable Telemetry system. If these system losses are rationalized, water availability and
4. Thus the share of Balochistan will be close to what has been allocated to Balochistan in para 2 of the Accord and will be ready to share the shortages if any.

Although no consensus could be achieved between the provinces, but, by and large all the participants agreed on the following recommendations:

- I. IRSA's technical capabilities need to be enhanced and it should be directly placed under the administrative control of the Cabinet Division directly responsible to CCI for its decisions. IRSA's Budget needs to be enhanced with enhanced financial and administrative powers.
- II. Telemetry system should be made accurate and functional on priority basis and IRSA's staff should be trained to handle it independently. Security against vandalization should rest with the provinces and Wapda be responsible for maintenance of Head work and dams respectively.
- III. Both KP and Balochistan provinces should be provided with essential infra-structure to enable them to draw their full share of water under 1991 Accord. It was pointed out by some experts that KP cannot draw its future share without Kalabagh dam as irrigation in the southern part of KP would otherwise require pumping from river Indus, making it almost unfeasible proposition.
- IV. Provinces which cannot utilize their share of water, should be able to sell and trade in water at mutually agreed water price with any province willing to buy or trade it.
- V. 1991 Accord should be respected and followed in letter and spirit.
- VI. Annual water audit should be carried out to point out any irregularity or water theft and IRSA should have powers to impose heavy penalties, and money given to aggrieved province.
- VII. The Indus basin mathematical model should be updated and used by IRSA in water management. The impact of climate change on water availability should be carefully worked out to mitigate future

challenges.

- VIII. Weather forecasting system should be further improved for more reliable forecasting.
- IX. In view of the recent floods, a comprehensive study needs to be undertaken to determine operational procedures of existing reservoirs for minimizing floods damages in future. Similar study to indicate mitigation role of additional reservoirs
- X. Such as Bhasha, Munda, Akhori and Kalabagh together with Mangla, Tarbela and Chesma should also be initiated.
- XI. Dispute between Sindh and Balochistan is partly due to technical difficulties and partly due to serious law and order problem in the area. The technical difficulties at Sukkur barrage should be overcome either by increasing water way of NW canal and carrying out model studies to confirm or otherwise whether changing head of Warah branch from NW to Rice canal is the reason.
- XII. As many success stories are available, where stakeholders' involvement had really helped in resolving interstate and trans-boundary water issues, a multi stakeholder dialogue amongst all the co-sharers represented by farmers, water experts, and elected representatives supported by research and accurate information, was strongly recommended.
- XIII. Despite the advantage of having a water apportionment accord in place, the provinces remaining at loggers head, speaks eminently of something that is seriously missing in the way we have so far approached this problem. This should lead us to look at how others in similar circumstances have reached a more satisfactory outcome. If the focus is moved from sharing shortages to sharing benefits, it will open up new possibilities for reaching a win-win situation for all sides. It is a big challenge but in some ways it offers greater possibility to come to an agreed understanding provided transparency, equity and sincerity remain the drivers of the development and usage of Indus water basin together. To sum up, "When there is a will, there is a way". If there is will to resolve water dispute it can be achieved.



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