

PILDAT LEGISLATIVE CAPABILITY BUILDING PROGRAMME

# PROCEEDINGS

BRIEFING SESSION FOR  
PARLIAMENTARIANS

## ISSUES OF WATER RESOURCES IN PAKISTAN

October 08, 2003  
Hotel Marriott, Islamabad

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## Abbreviations and Acronyms

<b>ACE</b>	Associated Consulting Engineers
<b>ANP</b>	Awami National Party
<b>DFID</b>	Department For International Development
<b>GDP</b>	Gross Domestic Product
<b>IRSA</b>	Indus River System Authority
<b>IWASRI</b>	International Water logging and Salinity Research Institute
<b>IWMI</b>	International Water Management Institute
<b>MAc</b>	Million Acres
<b>MAF</b>	Million Acre Feet
<b>MW</b>	Mega Watts
<b>NESPAK</b>	National Engineering Services of Pakistan
<b>NWFP</b>	North West Frontier Province
<b>PIDAs</b>	Provincial Irrigation & Drainage Authorities
<b>SPDC</b>	Social Policy and Development Centre
<b>WAPDA</b>	Water and Power Development Authority
<b>TOR</b>	Terms of Reference
<b>U/S</b>	Upstream
<b>WHO</b>	World Health Organisation
<b>WTO</b>	World Trade Organisation

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PILDAT offers its special thanks to the distinguished speakers at the briefing session who contributed to the understanding of parliamentarians by presenting available perspectives on the issue. The speakers include Lt. Gen. (retd.) Zulfiqar Ali Khan, Chairman WAPDA; Mr. Haji Mohammad Adeel, Vice President ANP; Mr. Abrar Kazi, Member of Awami Tehreek Sindh and Secretary Sindh Water Committee; Mr. Shams-ul-Mulk, Chairman Pakistan Water Partnership, former Chairman WAPDA and Former Provincial Minister NWFP; Mr. Shah Mahmood Qureshi, MNA and former Federal and Provincial Minister and Dr. Kaiser Bengali, Managing Director, SPDC. PILDAT also acknowledges the time, presence and views of the session chairs Senator Dr. Abdul Hafeez Shaikh, Federal Minister for Privatisation and Investment and Engr. Illahi Bakhsh Soomro, Former Speaker National Assembly.

We especially acknowledge the interest and participation of parliamentarians displayed at the briefing, both through their presence and their active participation.

PILDAT once again offers its special thanks and acknowledgement to the Associated Consulting Engineers ACE Pvt. Ltd., a private engineering consulting firm renowned for its expertise on water-related issues, for its support in preparing the draft of the briefing paper. PILDAT also thanks the honourable members of the steering committee, involving distinguished experts and politicians from all four provinces, created to evaluate and guide the process of a balanced and concise briefing paper on the issue. PILDAT also thanks WAPDA for its help in providing certain figures and confirmation of certain data related to the briefing paper.

### Disclaimer

PILDAT has made every effort to ensure the accuracy of views, discussions and presentations in compiling and editing of this report. PILDAT, however, does not take any responsibility of any omission or an error since it is not deliberate. The views expressed at the briefing session and represented in this report are those of the resource persons and participants and do not necessarily represent the views of PILDAT and / or its supporters.

## Executive Summary

**P**ILDAT briefing session for parliamentarians on the topic of **Issues of Water Resources in Pakistan** was held so to bring the crucial issue of water resources in perspective for parliamentarians, and to urge them to take up the issue in parliament: the legitimate forum of national consensus building.

The briefing session presented the issue in its available perspective for the benefit of the participants. Chairman WAPDA presented the federal government's view point on the issues of water resources in Pakistan while representatives of Awami National Party, NWFP, Awami Tehreek Sindh and a former chairman WAPDA and former provincial minister NWFP presented their perspectives on development of additional water resources in the country. While the major issues were highlighted in the first session, the second session involved veteran parliamentarians and experts to present their views on the way forward towards resolving these issues.

The major points highlighted during the briefing sessions were that there is a level of extreme distrust between the provinces of Sindh and Punjab on the issues of water in particular and between provinces in general which need to be resolved immediately. While the federal government and the Punjab Government insist that additional reservoirs should be built, voices in Sindh contend that adequate water is not available to build storages. Conservation and better management of available water resources were offered as strategies to be taken up immediately.

The briefing session also highlighted that a political consensus on the issue of water resources is required. It noted that parliamentarians, being the representatives of the people of the country, are better equipped to bring about long-lasting resolutions to issues of the country. The parliamentary committees on water and power need to be mobilised to take an active role in this regard. The constitution of 1973 and the Water Accord of 1991 were highlighted as examples of such political consensus that have a lasting value and acceptability in the country. It was stressed that the issues of water resources require an urgent resolution through fostering of trust and confidence between provinces over these issues.



## Background

### PILDAT Legislative Capability-building Programme

The PILDAT Legislative Capability-building Programme focuses on building the capability of elected legislators so as to better equip them towards an effective discharge of their duties. The Programme has been formulated in consultation with present and veteran legislators, opinion leaders, analysts and academicians to cater to the specific policy-making and analytical needs of Pakistani legislators at all levels.

### Briefing Session on Issues of Water Resources in Pakistan

PILDAT, under its Legislative Capability-building Programme, held a briefing session for parliamentarians on the topic of **Issues of Water Resources in Pakistan** on October 08, 2003 at Hotel Marriott, Islamabad.

In Pakistan, availability of water resources and their development has been slowly turning into a crisis situation and has reached a level of inter-provincial conflicts which immediately need to be addressed. The challenge lies in raising the political will to implement water-related commitments; water professionals need a better understanding of the broader social, economic and political context, while politicians need to be better informed about water resource issues. The briefing session was held to highlight these issues for the benefit of parliamentarians.

PILDAT had prepared dossiers / information kits for the benefit of participating parliamentarians which included copies of the briefing paper especially prepared for parliamentarians on the Issues of Water Resources in Pakistan, both in English and Urdu languages; copies of the papers and presentation of speakers/resource persons and other information relating to the briefing session. The dossiers/information kits were especially prepared to provide the parliamentarians with factual and concise information on the subject that can be of use to them during discussion in the parliament and to strengthen their knowledge-base on the issue.

The briefing session had eight (8) Speakers/Resource Persons assigned to two (2) sessions. Complete programme of the briefing session is attached as **Appendix A**.

The briefing session had 48 MNAs and 16 Senators belonging to 10 political parties as participants. Complete list of participating MNAs and Senators, with their party province and gender profiles are attached as **Appendix B**.



# Session 1

## Issues of Water Resources in Pakistan

### Welcome Remarks and Introduction

#### Mr. Ahmed Bilal Mehboob

Executive Director, PILDAT



**M**r. Ahmed Bilal Mehboob, Executive Director PILDAT, warmly welcomed the session chairs, participating parliamentarians, speakers at the session and the observers.

Presenting a rationale for holding the briefing session on Issues of Water Resources, he said that availability of adequate water resources in the country has become a crucial issue and a political flashpoint. Not only is there need to understand the issue in its available detail and understand differing points of view, but it requires urgent consensus-building and senate and

national assembly committees on water and power should play an active role in this regard. PILDAT believes that Parliament is the legitimate body for consensus building. Hence the briefing session is held for parliamentarians to present the issue in its available detail, introduce available perspectives on it as well as provide a platform to parliamentarians to discuss this issue.

The briefing session, he said, is not a political meeting but a serious effort for an informed discourse. The programme includes two parts: the first dealing with Overview of the Issues and the second on the Way Forward.

PILDAT, he informed the participants, is committed to strengthening democracy and democratic institutions through building the capacities of elected legislators towards a better discharge of their duties. A completely independent and non-partisan research and training institute, PILDAT values and enjoys the trust of all political parties and sets its own agenda. After the initial seed funding by overseas Pakistanis, he explained, PILDAT has been funded by a variety of international development agencies, including UNDP, FNS, FES, DFID, The World Bank and IRI, etc. **Appendix C** carries his complete presentation.

## Issues of Water Resources in Pakistan: An Overview

**Lt. Gen. (Retd.) Zulfiqar Ali Khan**  
Chairman WAPDA



**L**t. Gen. (Retd.) Zulfiqar Ali Khan said that some of the main issues of water sector in Pakistan include decreasing levels of water; water escapage to sea, irrespective of its quantity; the need for building additional reservoirs; mining of underground water and seepage in our irrigation system, etc.

He said that in the year 2025, population of Pakistan will be 225 million. Our water reservoirs kept increasing till 1976 and started decreasing after construction of Tarbela and by year 2025 will be 98 MAF. It is important to know per capita availability of water which in 2002 was 1350 cubic meter and in 2012, would come to somewhere at

1000, which is a threshold in the world of water shortage. In 2025, it will be 550 cubic meters per capita, which will be 50 per cent of the minimum accepted requirement of water, he explained. On the one hand, our population is increasing and on the other, we have water shortage. There is 22 million acre feet agricultural land which cannot be irrigated due to the shortage of water. In Sindh, such a land is 3.6 million acre feet, in Punjab it is 4.3 million acre feet, in NWFP it is 3 million acre feet and in Baluchistan, it is 11 million acre feet, he informed.

Speaking on availability of water, he said that available water was 141 MAF, and after it was used above rim stations and 106MAF went in the canals, 111 MAF was used and 35 MAF was left. Other issue is that how much water went below Kotri. Using slides made with the data provided by the Sindh's Irrigation Department from 1976 2003/04, he said that on an average 35.20 MAF of water has gone into the sea per year.

Speaking on the capacity of water reservoirs, he said that when Tarbela, Chashma and Mangla reservoirs were built, their combined capacity was 18.37 MAF but due to siltation 25 per cent storage capacity of these was wasted by 2002, which stands at 4.58 MAF. By the year 2025, around 8 MAF, 43 per cent of the capacity, more than the capacity of Kalabagh Dam or Basha Dam will be wasted due to siltation. After 1976, since after Tarbela, no reservoir has been built in Pakistan. Even when these reservoirs were built, their combined capacity to store water was only 13 per

cent of the total available water. Taking the example of the US, he said that if for instance, the availability of water in the rivers is 100 MAF, their storage capacity is 200 MAF, so as to meet the needs for water when there is a shortage after few years. Our situation is that if there is 100 MAF water available, we can store only 13 MAF water. Our total capacity is 18 MAF, since our water figure availability is 141 MAF, he explained.

We only generate 5000 MW Hydal power, which is 16 per cent of our capacity of 40,000 MW. The worst thing that happened to the country, he opined, was the mix of Hydro and Thermal energy. At one time, 60 per cent of our energy was generated through the Hydal system and 40 per cent was thermal, which was made up of oil and gas and there was stability in the prices. Today, unfortunately, due to various reasons, only 29 per cent of our electricity is Hydal and 71 per cent is thermal. Due to this reason, not only price structure but all Hydal-thermal mix was disturbed and our industry cannot compete. Now, we need to improve this mix by increasing our Hydal power generation.

The government planned that by 2025, we will create 26 MAF of storage capacity and generate some 30,000 megawatts of cheap electricity. We have 32,000 kilometers of canals in all the provinces, so the plan is to make small heads in private sector for local people. The government also wants to encourage private sector, whether outside or inside the country, to participate in this and we believe that this will support national economy and will help in poverty alleviation. All these plans include remote areas such as Satpara, Gomal Zam dam, Mirani dam, Kachhi canal, Raineer canal and Thal canal projects, etc. As far as Hydro power is concerned, our growth is about 6 per cent per year and there will be decrease in availability of electricity in 2006. Hence the mix of Hydro and Thermal power generation needs to be fixed. On-going Priority Hydropower Projects are not big ones, i.e. Jinnah (Indus) 96 MW, Malakand-III (Swat) 81 MW, New Bong/UJC 97 MW, Golan Gol (Chitral) 106 MW, Allai Khwar (NWFP) 121 MW, Khan Khwar (NWFP) 72mw, Duber Khwar (NWFP) 130 MW and Pehur High Level 10 MW. No contract has yet been awarded as the funding has to be taken care of. Cumulatively, these are projects of 2,300 to 2,400 MW. All

projects, except for Neelum-Jhelum, are scheduled to finish by 2007. We hope to complete these projects within estimated cost and time-span, he said.

Terming Kala Bagh Dam and Bhasha Dam as controversial issues, he said that he hoped to learn from the ensuing discussion after he presents facts and figures on these. Bhasha Dam is around 400 km away from Islamabad. Its salient features are that it is a concrete gravity dam, which is a newer technology relatively. Its live storage capacity is 7.34 MAF. Bhasha Dam's height is 908 feet and its power generation capacity is 3700 MW. The approximate cost of the Dam is US \$ 5 billion and the construction period will be 7 years. Its current status is that the preliminary investigations and preliminary feasibilities have been completed. Feasibility Report/Submission of PC-I is scheduled for June 2004, PC-I Approval for Dec 2004 and detailed design is scheduled for Dec 2006. Preparation of tenders, advertising and award, he said, will begin in January 2005 - December 2005. Construction will commence in 2006 and will be completed by 2013, he said.

Kala Bagh Dam is 203 kilometers away from Islamabad. It is an Earth Core Rock Fill type, with the gross storage capacity of 7.9 MAF and live storage capacity of 6.1 MAF. The dam's height is 260 feet and the power generation capacity is 3600 megawatt. Its cost will be US \$ 5 billion, but this needs to be updated. Two major modifications have been made in its original design, i.e. its maximum level was decreased from 925 feet to 915 feet to take care of apprehensions of some friends from the NWFP province that some of its areas will be affected. Due to this, live capacity of 7.9 MAF decreased to 6.1 MAF. Other modification was that it had space for canals on left as well as the right bank, which were taken out due to the apprehensions of our friends from Sindh. Now, it does not include any canals, he explained. The factual position is that its modern Flood Warning System will provide adequate warning against floods, so there is no possibility of flooding of Nowshera town and Peshawar Valley in case of unprecedented flood. Conservation level of Kala Bagh Dam is 915 feet and is lower than the lowest ground level of Mardan, Pabbi and Swabi SCARP areas so there is no apprehension that Mardan, Pabbi and Swabi

will be adversely affected, said Lt. Gen. (Retd.) Zulfiqar Ali Khan. The current status of Kala Bagh is that the Feasibility Report was presented in 1984 and PC-I was submitted in 1989, of which the approval is pending. Project Planning Studies are completed and the completion time will be 6 years, he informed.

Commenting on the main reservations of NWFP and Sindh about Kalabagh Dam on the possibility of flooding of Nowshehra Town and Peshawar Valley, he said that their apprehensions are derived from the super flood of 1929, due to which Nowshehra was flooded. However, he said, in 1929, it was not a normal flood but a glacier came into the river and blocked its flow, and when its pressure increased it busted, due to which many areas were flooded. If such a situation arises today, information and satellites are available for pre-warning. At present, 8 Pakistani monitoring stations are working upstream Tarbela who daily give report. Even if flood comes, we can control it through the storage capacity of Tarbela, he explained. Friends also said that drainage of Mardan and Pabbi will be affected. It is true that whenever we will make a big project, fertile land and people will be affected and we will have to pay this price as a nation. Approximately 27,500 acre land will be affected, out of which 3,000 acre is in NWFP and 24,500 acre is in Punjab. As far as affectees are concerned, we have figures of 108,101, out of which, approximately 42172 are in NWFP and 65929 are in Punjab. These figures need to be updated, he added. People will also get affected in the Bhasha Project but the resettlement plan would ensure proper compensation to the affectees. We have already constructed 2 model villages in Ghazi Barotha, he said for the resettlement of affectees.

He said that our friends from Sindh believe that that there will be no water available to fill Kalabagh Dam. The records of flow below Kotri are of the Sindh Irrigation and Power Department. Some water must flow below Kotri and the quantity of that can be determined, even then the conservative estimate is that 20 - 22 MAF water will be available, which will be equal to 3 Kalabagh Dams or 3 Bhasha Dams. The most important thing is that we have already lost around 4.5 to 5 MAF storage capacity and would lose 8 MAF storage

capacities from Tarbela, Mangla and Chashma. By building storage, we would be barely able to retrieve the capacity that we have lost due to siltation, he added.

Lt. Gen. (Retd.) Zulfiqar Ali Khan said that some people also think that Sindh will convert into a desert if Kalabagh Dam is built. He explained that after construction of Tarbela, water availability in Sindh increased from 35 MAF to 44 MAF which will further increase by 2 MAF after the construction of Kalabagh Dam. Some friends also think that fish production will decrease in Sindh. Showing the slides, he said that this data was taken from Sindh Government that in 1995, there were 283,000 ton fish production, which increased in 2001 to 315,000 ton.

Another issue that Sindh has on the Kalabagh Dam is that of royalty and that it will go to Punjab. There are various opinions on it, he said such as the royalty can go to a Federal Pool and provinces will get the same according to their shares. Sindh also suggests de-silting Tarbela to avoid construction of another dam, he added. Every year 200 million tons of silt comes into Tarbela and to remove it, 54,000 trucks of 10 ton capacity need to work 24 hours for 365 days to remove 200 million silt, which is not feasible, he said.

Water conservation is necessary through lining of canals for which we need to develop a proper strategy for the country, he said. He said that he has presented a comparison of two dams. Another option is of Akori Dam. Its construction can begin in 2004 and it has a capacity for storing 14 MAF of water, but hydropower generation of Kalabagh and Bhasha Dams is more than Akori. The benefit of Kalabagh and Bhasha Dam is around US \$ 1 billion every year, while Akori's benefit is US \$ 350 million. If we see that this dam, whatever its name may be, is constructed 3 years before and its cost is US \$ 5 billion, then US \$ 3 billion will be its benefit.

Lt. Gen. (Retd.) Zulfiqar Ali Khan concluded by saying that he just presented facts to participants and not his opinions and he would welcome informed discussion and any queries regarding any of the issues. His complete presentation is attached as **Appendix D**

## Development of Water Resources: Alternative View Points

View Point by  
**Haji Mohammad Adeel, NWFP**  
Vice President Awami National Party (ANP)

Presenting his party's view point, Haji Mohammad Adeel said that WAPDA, as a state institution has always have clashed with smaller provinces, including Sindh, Baluchistan and NWFP. The issue of the construction of Kala Bagh Dam was rejected by the provincial assemblies of three provinces but WAPDA has brought it back again. If the centre and the state institutions keep pushing for the approval of such controversial projects, the federation and unity of the country will be in danger, he warned.

He said that ANP is in favour of building dams but only such dams on which there is a consensus of all provinces. Since the Kalabagh dam is a controversial issue, why cannot we look at building other dams such as Basha or Dasu dams, he questioned. There is also a confusion on the role of the Kalabagh dam, he said. WAPDA sometimes says that Kalabagh is meant for creating electricity and at other times holds the view that it is meant to take care of water shortage.

Talking about the availability of water, he said that it is controversial as to whether we have water or not. Water, he added, can only be stored if it is available. Referring to Water Accord of 1991, he said that every province, with its allotted share of



water, can build dams, so how this is possible that water belongs to Sindh and NWFP but the dam is built in NWFP with its head in Punjab.

He said that it is astonishing the way the Government of Pakistan and President General Pervez Musharraf harp about the construction of Kalabagh Dam depending upon national consensus when three provincial assemblies have already unanimously voted against its construction. What else can be called general consensus, he questioned, which is obviously against the construction of Kalabagh dam. He also referred to the historic statement of his party's founder, Mr. Bacha Khan, who called it a human issue more than a technical issue. Haji Mohammad Adeel also blamed Punjabi officials and landlords for their selfish attitude against the wishes of the people of the three smaller provinces.

Haji Mohammad Adeel presented a report, "Tarbela Dam Sediments Management Study Report" (1998) prepared on the request of WAPDA. This report had 2 recommendations, i.e. de silting of Tarbela dam and the construction of Bhasha Dam. He questioned as to why WAPDA was not paying heed to that report and its findings.

Concluding his presentation, he said that the state institutions need to view the issues of water in the larger federal context of the country as following divisive policies will only harm the country's interests and its federation. His paper is attached as **Appendix E**

**Development of Water Resources:  
Alternative View Points**

View Point by  
**Mr. Abrar Kazi, Sindh**  
Member of Awami Tehreek Sindh;  
Secretary Sindh Water Committee



**M**r. Abrar Kazi thanked PILDAT for giving him an opportunity to present his views to the parliamentarians as they are policy makers.

He said that he would represent the point of view of the province of Sindh. Since water is an issue of life and death in Sindh. Complaints and issues relating to this are also of imminent nature. Comparing Punjab and Sindh, Mr. Abrar Kazi said that agriculture is the only way of survival for Sindhis, as 99 per cent of Sindh's industry and market are confined to Karachi. Whereas Punjab is far more developed and its industry and market is well managed. Punjab also has 55 per cent of its share of water as sweet ground water whereas Sindh has 98 per cent of its groundwater as saline. In addition to agriculture, the Southern Districts of Sindh are totally dependant on Indus Water for drinking. He said that Sindh did not have water for last 4 years, while Punjab had record bumper crops during those 4 years.

Speaking on the issue of construction of additional water reservoirs, he questioned the availability of water for storage as the main issue. He said that during the years 2000-2001, we had only 96 MAF water, which is a record low in 80 years. Later it

went to 99-113 MAF, and even this amount is less than the provincial distribution, which is 114-117 MAF. Due to all these reasons, he said, Sindh objects to the figures given by WAPDA and the dreams of Vision 2025. He said that in 2025, Pakistan's population will increase to a number that even if we store all water, it will not be enough. He suggested that instead of building reservoirs, integrated water management and conservation strategies need to be adopted.

Agreeing with Haji Mohammad Adeel, he said that instead of talking continuously about Kalabagh Dam, we need to work on other projects. Presenting his view, he said that we the people of Sindh are against building of big dams. Quoting principles of International Law, he said that firstly, water can be used from a streamline for personal use and secondly, barrages made on one stream earlier have more rights than the subsequent ones. He stated that Chenab and Jhelum are early rising rivers, where water comes in March/April, whereas in Indus, it comes in June. Sindh's agriculture season is 2 months prior to that of Punjab. Common sense demands that Chenab and Jhelum water should be given to Sindh, while Punjab, according to its requirement, can benefit from Indus. Sindh, he said, since 1966, has not received a single drop of water from Mangla. The upper riparian can change the lower riparian into a desert, which is why before making big projects, consent and consensus of both riparians is necessary.

Abrar Kazi suggested that before taking such major decisions, the entire issue needs to be discussed. He questioned chairman WAPDA to explain why the issue of construction of Kalabagh is raised again despite such clashes among the provinces. The central government and WAPDA, he said, have an authoritarian view and believe that provincial opinions do not matter. During the construction of Chashma Link Canal in 1970-1972, a meeting between the Chief Ministers of Sindh and Punjab used to take place every year to monitor the flow of water. The construction of Chashma Jhelum Link Canal was approved on two conditions that it shall be stopped upon asking by the CM Sindh, and secondly that Punjab will not consider it a right for future. Now, he said, the water flows all year long without any such consideration.

The bigger issue on water is that of lack of trust between Sindh and Punjab. We, the Sindhis, have many complaints against the rulers of Punjab, who, unfortunately are also the rulers of Pakistan, he said. Punjabi rulers commit irregularities and even frauds and later regularise the same. He gave an instance of a fraud that when in 1948, the Division of Assets Committees was formed and a water committee was also included in that but the Chief Engineer Punjab, Abdul Hameed Sheikh completely took it out from the items, so as to avoid all discussions on water issue. He referred to Ch. Mohammad Ali's book, "The Emergence of Pakistan" and said that it is written here that contrary to the fact that Radcliff Award gave control of the most important head works into India's hands, the government of West Punjab sat satisfactorily because Partition Committee and Committee B had an agreement that previous division of water will not be changed. He said that there was not any agreement for water share of East and West Punjab, but it was a pre-planned arrangement and Sindh was thrown out even though it was the third party. He said that in 1970, Punjab Government complained to the Fazl-e-Akbar Commission on Water Issues. Only 6 per cent of Indus River Basin is in India but they are given 20 per cent of water which is why their part of Rajhistan is so green. He held Punjab liable for this situation. His paper is attached as **Appendix F**.



## Development of Water Resources: Alternative View Points

View point by  
**Mr. Shams-ul-Mulk**  
Former Chairman WAPDA;  
Former Provincial Minister



**I**ntroducing himself, Mr. Shams-ul-Mulk said that he began his career as an Engineer on Baran Dam and worked an Executive Engineer on Tanda Dam, Scrutiny Engineer on Simli Dam, Chief Engineer Construction on Tarbela Repairs and General Manager on Tarbela. He said that he considers it as his responsibility to give his view point on the issue of construction of reservoirs. He added that he knows the limits of his knowledge and would not cross that limit.

The real issue, he believed, is not the construction of Kalabagh dam, but distrust among provinces, and how can the national assets be shared. He said that until the issue of distrust and complaints against each other is not handled in the right manner, all national decisions will remain irrational and go against the federation of the country. He warned that 20th Century was demanding but the 21st Century is far more demanding and there is no room for slips and mistakes in the time ahead.

Remembering February 1994, he said that the then President Farooq Ahmed Khan Leghari had summoned a meeting of all Chief Ministers, Federal Ministers, Federal Secretaries, Bureaucrats and Technocrats to discuss the DG Khan Canal's alleged excess releases, when provinces started fighting upon their shares. The President asked me to give technical advice and I replied that this is simply distrust, which needs to be taken care of, he reminisced.

Now there is a telemetry system installed to show all parties the real time data of water at the push of a button. He proposed that it should also be known that if a province has received more supplies than authorised by IRSA, it shall be penalized Rs. 1,000 per acre feet and the province, which received less shall be paid that amount.

He said that he would like to share his and WAPDA's sincere efforts with which the truth about Kalabagh dam project was pursued. He said that WAPDA, under his chairmanship, hired a well known US Consulting Firm, a London-based Firm and NESPAK to conduct a study about Flooding of Nowshehra and the outcome of their study was that if a flood like the one on August 29, 1929 comes after the construction of Kalabagh Dam, Nowshehra flooding will not aggravate but will remain the same as it was in 1929. This will be the outcome after a year of constructing Kalabagh Dam, 50 years after and 100 years after its construction. Then, he said, Chinese opinion was taken since they are considered to be the most experienced on such issues. The Chinese, he said, sent an experienced director for three months and agreed with the previous consultants. He said that another Panel of World Bank Mission Consultants, consisting of 3 members among which one was American, one British and the third, Pakistani-American, was asked to advise on three points: information/data on flooding of Nowshehra Town-immediately and after 100 years; Comment on the Methodology, and Comment on results. The Panel, he said, unanimously gave an opinion that there will be no harm to Nowshehra due to Kalabagh Dam. Adding to that, he said that they commented that rarely in the world such a study and data is collected on any project. He said that we have an extensive flood warning system as well. Kalabagh Dam, he believed, is the only

reservoir, two-thirds of whose storage will be perpetually available for use.

Mr. Shams-ul-Mulk disagreed with the Chairman WAPDA and said that Bhasha dam will only be equal to Kalabagh Dam in terms of quality of engineering 7 to 8 years later and not in 2004. He said that Bhasha dam is the need of Country but it should be taken as a facility and not as a monster in terms of breaking world records in levels. He said that Bhasha will still be a viable project financially but we must also make it technically viable. He criticised Chairman WAPDA on saying that that there will not be canals in Kalabagh Dam. Canals, he said, have been removed on the issue of distrust between Punjab and Sindh and the NWFP is being punished for this as it is NWFP's right to use its share of water. The real issue is to work on removing mistrust between provinces and educating our next generation on values.



## Q&A / Comments Session

### Question

Mr. Yusuf Talpur  
MNA, PPPP

Water reserves are decreasing and cultivation is increasing. 2½ to 3 million acres in Umar Kot and Mirpur Khas districts and 2 million acres in Thatta have suffered and are barren due to shortage of water. Three assemblies have objected to Kalabagh Dam and that should be respected. Why the Federal Government is pushing the construction of Greater Thal Canal at the cost of a province? We must make dams but not on the cost of others and let us make Carry over Dams.

### Answer

Lt. Gen. (Retd.) Zulfiqar Ali Khan

WAPDA is not the decision-making body but the Government of Pakistan is. If WAPDA can construct Kachhi and Raineen canals, why can't WAPDA build Greater Thal Canal, Kala Bagh Dam and Bhasha Dams? Mangla, Tarbela and Chashma are all Carry over dams.

### Question

Mr. Akhtar Kanju  
MNA, PML-Q

Lodhran district of Punjab suffered due to Rivers Ravi and Sutlej, but never complained. Pondicherry (India) is under Federal Area. Our question is that why Kala Bagh Dam cannot be constructed in a federally controlled area and its royalty be put in the Federal Pool?

### Question

Ms. Bushra Nazir  
MNA, PML-Q

I lost 40-45 members of my family at the time of the establishment of Pakistan. I respect all views. Let us listen to each other and show tolerance and let us examine things rationally. We have heard that Kalabagh Dam is ready for construction. Has its environmental assessment report been prepared?

**Answer****Lt. Gen. (Retd.) Zulfiqar Ali Khan**

We need to update the environment assessment report. Royalty of Kalabagh Dam can go to Federal Pool for sharing amongst provinces.

**Question****Ms. Bilqees Saif**  
**MNA, MMAP**

The Chashma-Jhelum link canal was to be used for floods but it was used for other purposes. This leads to loss of trust between provinces. We should not start working on sensitive projects without consensus building in the country. Also, the life of Kala Bagh Dam is merely 30 years.

**Answer****Lt. Gen. (Retd.) Zulfiqar Ali Khan**

The life of Kala Bagh Dam is 100 years.

**Comment****Dr Fehmida Mirza**  
**MNA, PPPP**

Mr. Shams-ul-Mulk pleaded for building trust between provinces, which is commendable as well as necessary. Three assemblies have passed resolutions against Kala Bagh Dam and Greater Thal Canal. I invite WAPDA Chairman and other participants to come and see Badin area in Sindh. We see the impact of LBOD, Tiger Link Canal today after the condition of Badin.

How can we trust WAPDA when they made such mistakes in the past? The issue of Kalabagh Dam is raised to divert attention from Kachhi, Raineer and Greater Thal Canal. Such issues need to be referred to the Council of Common Interests. Sindh had such a drought for three years that we did not have water to bathe the dead bodies. When Sindh was going through this horrible situation, Punjab had bumper crops. Please develop trust between provinces first. Lining of canals is another plan which was announced but no further step was carried out in Sindh on that.

**Answer****Lt. Gen. (Retd.) Zulfiqar Ali Khan**

Greater Thal Canal Project is specifically included in the Water Accord of 1991. Some of the people who signed the Accord are present here. LBOD is supposed to evacuate water in 7 days. People in Sanghar and Nawabshah built breaches in the canal and it affected Badin. We have requested the government to order an inquiry. As per Water Accord 1991, the issue of below Kotri release is a subject of a separate study.

**Comment****Mr. Abrar Kazi**

Greater Thal Canal was added to the 1991 Accord afterwards, and its permission was sought later too. Sindh government has had extensive correspondence on this issue and expressed its objections and reservations. 1977-1982 was the basis of division, when there was no Greater Thal Canal.

**Answer****Lt. Gen. (Retd.) Zulfiqar Ali Khan**

PC-I of Greater Thal Canal was sent to Ministry of Water and Power and Planning Division on December 10, 2001 giving sufficient time for evaluation by all stakeholders. The essentials of the project have been discussed in at least ten meetings. Therefore, this concern is not justified. Additional Chief Secretary, Government of Sindh also attended the ECNEC meeting on February 28, 2002. This Project is specifically included in the Water Accord of 1991. IRSA approved the project in its meeting on May 7, 2002.

**Question****Ms. Razia Aziz**  
**MNA, MMAP**

What are the benefits of Kalabagh Dam to the Frontier province? Why have link canals for NWFP not been constructed?

Answer

Mr. Shams-ul-Mulk

NWFP will benefit in the same way as any other province. Tarbela is a Hydal Power Project and saves Rs. 40 billion as subsidy due to cheap energy. This year WAPDA spent Rs. 40 billion and had there been Kalabagh Dam, we would have saved Rs. 40 billion per year.

Comments by the  
Session Chair

Senator Dr. Abdul Hafeez Sheikh  
Federal Minister for  
Privatization and Investment



I am not present here as a federal minister but as a parliamentarian, trying to understand the crucial issue of water resources. I am very happy with the proceedings of this session that questions have been asked and answered, issues explained and different points of view expressed and listened to. I congratulate PILDAT for holding this briefing and inviting the right speakers to present all view points.

I do not think we should raise the issue of patriotism. Question is not whether we should build Kalabagh Dam or not but we should focus on the bigger picture. There had been injustices in the division of water in the past and we should not deny it.

There are four main points which needs our attention. First is that we need to know the total amount of water. Second is the just division of available water between the provinces. Third is the Intra-Province distribution of water and how to handle the disputes arising out of this issue? Fourth is efficiency of water-use to be made possible. People in collusion with Irrigation Department manage to steal water and are able to get away with it. We should talk about it and develop some rules of the game.

We must build the confidence of provinces which is a core issue as well as offer practical suggestions. I would like to insist on one thing that the Chairman WAPDA, though representing a Public Sector Organisation here, should not be blamed and held liable for the faults of the past.

## Session 2

### Strategies to resolve Water Issues: the Way Forward

Welcome & Introductory Remarks  
by the Session Chair

**Engr Illahi Bakhsh Soomro**  
Former Speaker National Assembly



**M**r. Illahi Bakhsh Soomro said that he is happy to be amongst the family of Parliamentarians to which he also belonged once. He praised PILDAT's efforts for providing a forum for informed dialogue on the most crucial issue facing the country. He emphasized that the provinces need to work together to build trust and confidence amongst each other.

## Views by the Panelists

**Mr. Shah Mahmood Qureshi**

MNA; Former Federal and Provincial Minister



**M**r. Shah Mahmood Qureshi said that although he is politically affiliated with the Pakistan Peoples Party, his views at the briefing session are his own from the standpoint of a Pakistani. He said that we have to realise that unless the issue of water apportionment amongst provinces is resolved, there can be no water project in Pakistan.

He explained that as the then Provincial Minister of Punjab for Finance, he was a signatory to the 1991 Accord. All provinces, he emphasised, agreed to the Accord. Providing the details of the Accord, he said that Punjab let go of 1.2 per cent of its share of water in the favour of increasing the amount for Sindh, NWFP and Balochistan. This was mainly due to the reason that Punjab has sweet sub-soil water availability whereas Sindh has saline water. The

Accord, however, was not reached without its share of contentions initially, but consensus was achieved through active dialogue amongst stakeholders, he highlighted, terming consensus-building as the crucial need of the day.

Water issue in Pakistan is both technical and political. There is always a technical answer available to all technical questions, but political solutions need to be sought to settle this issue among provinces. Agreeing with Mr. Shams-ul-Mulk, he said that we would not get a chance to think over our mistakes in the twenty-first century. Water is turning into the most crucial issue of the country and is not being handled in the right manner. He objected to the President of Pakistan General Pervez Musharraf's comment that 'Kala Bagh Dam will be built at every cost.' If this issue is already decided by him, then what is the need of consensus building, he criticised.

He said that in 1950 we had excess water and today we are a water-scarce country. Water is a limiting factor in agriculture of the country. No economic growth is possible without agricultural growth. Existing capacity of water storage is depleting which is a natural process. Those storages should be built which enjoy the consensus of all provinces. But conservation strategies, effective use of water, and on-farm water management techniques are a must to learn to use water in the best manner, he concluded.



### Views by the Panelists

**Dr. Kaiser Bengali**  
Managing Director, Social Policy and  
Development Centre SPDC



**D**r. Kaiser Bengali said that during the discussion it has been repeatedly said that the issue of water resources is a technical issue but has been politicised, and Mr. Shah Mahmood Qureshi said that water issue is both technical and political. He said he would explain how technical issues become political. He also said that he felt the debate about water issues is based upon many assumptions, most of which are wrong. He explained the conceptual assumptions of the issue and focussed on the issue of Kalabagh Dam.

He said that the shortage of water is not all natural due to less rains and climatic changes but it is policy-induced too. There could be two approaches in dealing with the water issue. First approach is the techno-centric approach, which is that every problem has an engineering solution involving big capital and a lot of loan from abroad. There is an assumption that this is good. About Kalabagh Dam, it has been said in the earlier session that various US, Chinese and British have studied the project. Being an economist himself, he said that he knows that how statistics can be manipulated to achieve the desired results. Technical feasibilities that are prepared on statistical basis should not be accepted at face value, as any type of feasibility can be prepared. This argument, therefore, is not valid that this project will be right because it is prepared by experts. Many experts make such projects which prove to be wrong afterwards. Second approach,

he said, is socio-centric approach, which harmonises peoples' needs and nature. Engineering solutions sometimes go against nature. Only those solutions are stable, which are harmonised with nature and do not disturb environment and ecology. We should not try to re-invent the way nature has settled things.

Water system is a hydrological system. There is a relation between the glaciers in mountains and delta in sea. When we intervene, we intervene in one section but create distortions in other sections. We do not look for solutions for such distortions and this creates big problems. For instance, current discussion is to make water available, storage of water, building of dams, making of canals and it is said proudly that we made water available in the areas where there was not a single drop of water but when input of water is provided, its output has to be arranged, he said. In the process, a land is destroyed where there is no system of natural drainage and a lot of land in Pakistan is destroyed due to this. Then, we spent around Rs. 780 billion on LBOD. He said that our problem is that we first make a dam, taking big foreign debt and when that creates problems, we try to solve the same again by spending millions. Not considering it a common sense solution, he said that we need to understand that there is a severe trouble in our development philosophy.

Speaking on the issue of Kalabagh Dam, he said that the building of Kalabagh, Basha and other dams is being discussed on the assumption that these will be built and water for these will come somehow. Dams do not produce water, they merely store water, he added. If there is no water, dams will be empty and we have seen Mangla and Tarbela for last four years. According to climate forecast, water will decrease more in the coming years. Many figures have been presented regarding availability of water and Chairman WAPDA has also said that we will see through this issue but the figures that have been presented show negative balance, unless somebody challenges those calculations. Till now, last word has been of Mr. Abrar Kazi on the balancesheet of water availability, he said.

There are three arguments about making any dam: i.e., compulsion of food security; cheap energy and flood control. As far as food security is

concerned, it is believed that we will irrigate more land and there will be more crops. This is another implicit assumption behind our argument that cultivation can be done on any land if there is water, which is wrong. There is such land also that cannot be cultivated even if it is flooded and a large area of land in Pakistan is such. It is shown in national studies of National Commission for Agriculture and National Conservation Study that between 1952 and 1977, all increase in cultivation is because of increase in land area but we have reached its limit now and are left with very little cultivatable land. After 1977, all increase in production has been made possible due to cropping intensity. Second and third arguments of cropping intensity and yield are right that we need water there. Estimate in these studies is that 12 million hectares land being cultivated can be used for double cropping. At present, double cropping is done on only 4.5 million acres and the rest is available for double cropping if we have more water. So, the need of water is established here. On one side, we say that more water shall be given so that more land shall be cultivated but there is fear that if you give more water, the land, which is not cultivated will be cultivated and we will be left with no land.

Then there is the issue of costing in the argument of energy. A question was raised in the morning session that has the environmental impact assessment study of Kalabagh Dam been done. It has been done but environmental costs have not been included. Being included in the same study for Ghazi Barotha, he could say that with authority. He said that for the study, they used to ask for information from WAPDA regarding the rehabilitation plans, etc, which was never provided to them.

There is another assumption that energy is expensive because it is prepared from thermal resources. There are other reasons for its expensiveness such as very high distribution losses, inefficiency of WAPDA and KESC and corruption. Even through hydel power, electricity would cost the same if these factors remain.

As for flood control, monetary losses were highest in Pakistan during 1976 and 1978. Highest number of villages affected is in 1976, i.e. 18,390. These figures are after construction of Tarbela. This is a

worldwide experience that floods are not controlled by dams. Dams transfer flood threat mechanism from one place to another. Dams have actually become political weapons and powerful elements in politics plan. Dams and canals are made in such areas where the lands of the rivals are affected. So, this is also an assumption that there will be flood control by making dams and we have seen that there have been more flood damages after construction of 2 big dams, he analysed.

It is also said that water is wasted by going into sea. Mangroves need water and there were mangroves of 26,000 square kilometres in Pakistan 50 years ago, which are decreased to 260. These mangroves have died since the construction of these dams and barrages. Mangroves grow when fresh water comes into sea and they will die in sea water alone. Mangroves also act as barriers against the sea and from sea intrusion. Around 300,000 to 500,000 fishing families in lower Sindh have been affected and displaced, a factor that never forms part of any feasibility report, he said.

Upon conclusion, showing the cover of his book titled "Politics of Managing Water" which depicts a dry Kotri barrage, he said that the barrage does not even have a drop of water during four to five months of the year. Reminiscing, he said that alongside him, Mr. Abrar Kazi and him took this photograph and had tea sitting in the middle of the barrage. Mr. Abrar Kazi asked what will happen if water comes and I asked him not to worry for no water will come. His complete Paper is attached as **Appendix G**.

## Views by the Panelists

Senator Mohim Khan Baloch,  
Baluchistan

**M**r. Mohim Khan Baloch thanked PILDAT for holding briefing of parliamentarians on the crucial issue of water resources.

He said that being an agricultural country, availability of water is necessary for survival of Pakistan and dams need to be built in this regard. At present, 71 per cent of our electricity comes from Thermal Power resources. Dams are needed for production of low-cost energy. There is a need for national consensus so that water resources can be used in the best way. He said that there may be technical problems but mainly we need to resolve the issues of distrust between provinces. Even Sindh, which is more powerful than Baluchistan, is facing problems with the centre and Punjab.

Baluchistan has been saying from the start that we are not getting our rights. He said that all projects that have taken place in Baluchistan, related to water or otherwise, have not been conceived or used for the uplift of the people of Baluchistan while other provinces have started projects



keeping in view their interests. For instance, 65 per cent water of Hub Dam goes to Karachi, whereas 35 per cent of water comes to Baluchistan, out of which 25 per cent goes for the industrial purposes and only 10 per cent is left for agricultural purposes, which is unfair.

Talking about Mirani Dam, he said that the then Russian government wished to pay 75 per cent of the cost to build Mirani Dam but Gawadar Port Project was not finalized at that time so the project did not start then. Now, Mirani Dam is being started not for agriculture in Baluchistan but for Gawadar port. Pat Feeder and Shikarpur canal are also very small. He said that General Zulfikar Ali Khan himself accepted that NWFP and Baluchistan are not using water according to their shares. He said that now Baluchistan fears that even Kachhi Canal will not be used for the lands of Baluchistan.

He also complained that projects started in Baluchistan do not bring benefit and prosperity to the people of Baluchistan. Hub Project employs only 37 Baluchis out of 325 high posts, while other provinces are given a better share. Oil Refineries, SANDAK and other projects employ a very small number of Baluchis. He said that they fear a similar fate to Baluchis in the Gwadar Port project, which has established two offices: one Gwadar Port Trust, with an office in Defence, Karachi with 22 employees, none of them Baluchi and the Head Office in Islamabad which consists of 6 people, with no Baluchi, he complained.



## Q&A / Comments Session

### Session Chair

There had been some criticism on WAPDA and I would give the opportunity to respond to chairman WAPDA.

### Comment

Lt. Gen. (Retd.) Zulfiqar Ali Khan

There are two to three points to which I would like to respond. We consider Dr. Bengali an expert and thought that he would be factually correct. First of all, the fact is that Tarbela, since its construction, is filled every year. There was not a single year when it was not filled, whereas Dr. Bengali said otherwise. As far as Mangla is concerned, Mangla Dam was filled this year and last year also. It was not filled 2 years before. Since its construction in 1966, Mangla Dam has filled fully 94 per cent of times and 6 per cent of times it was not filled fully and filled up to 4 per cent. Dr. Bengali also said that there are no lands in Pakistan which can be cultivated. We are watering 250,000 acres of land through Chashma Right Bank Lift Irrigation and will be watering 750,000 acre from Kachhi Canal, 250,000 to 400,000 acre from Raineer Canal and 15, 00,000 acre land from Greater Thal Canal. So,

all this land is in Pakistan and not in the space.

Then he mentioned the issue of environment impact studies. Their costing, of course, has yet to be done. There was a very interesting argument to prove that Thermal electricity is not too bad and Hydal is not that good. This view can be of an IPP, who sell electricity on the rate of 6.91 paisas, but should not be of an expert because the difference is obvious. Today, we gave Rs. 119 billion as the price of 23.4 billion units. This is a huge amount, which is equal to 6.91 paisas. Sale price of other system is 4.9 paisas. So, there is a loss of Rs. 2.81 per unit. There is no need of calculation in this regard as it is very simple. Dr. Bengali gave another interesting argument that WAPDA needs budgetary support and also commented about inefficiency and corruption, etc. Experts should talk giving some thought to issues. Today if government provides debt service to WAPDA on 18 per cent interest rate when the bank rate is 2.3 to 2.4 per cent, who will be under financial burden? Today, if CBR and Ministry of Finance will do taxation of Rs. 41 billion to Petrol and Gas Sector, who will have the impact? The reason for giving subsidy to WAPDA is that they have done over-taxation with WAPDA. As far as tariff is concerned, I would like to say that electricity rate

was 3.48 paisas per unit 4 years ago, and today it is 4.9 paisas. It had been increased 18 per cent, whereas there was 100 per cent increase in the input.

Dr. Bengali also said that dams do not regulate floods. We have heard this for the first time. If we come to know that there have been heavy rains and 4 million acre feet of water is coming which will create flood, it is simple that when the water comes, we control it to avoid flood. Everyone knows that flood intuition is one of the major responsibilities of dams. Dr. Bengali also argued that fish production has lessened in Sindh. I will tell you the figures given by the government of Sindh, i.e., in 1995, 283,000 ton fish was produced while in 2001 315,000 ton fish was produced.

Now, I would like to comment on some statements by Senator Mohim Khan Baloch. As far as small projects are concerned, according to the government's planning, projects up to Rs. 2 million and up to 50 MW will be carried out by the province itself. I felt dejected when he said that Baluchistan has no benefits from the projects going on or planned there. I personally feel that we shall work harder for the development of Baluchistan because it is under-privileged. Kachhi Canal will neither benefit Punjab nor Sindh but Baluchistan. If we are constructing Sabak Zai Dam near Zhob, who will benefit? Also 33,000 acre land will benefit from Mirani Dam. I would like to request my brothers and sisters to acknowledge at least those acts which are done in good faith.

### Question

**Mr. Shabir Ahmed Khan**  
MNA, MMAP

How many people will get affected by the construction of Kalabagh Dam and Basha Dam?

### Answer

**Lt. Gen. (Retd.) Zulfiqar Ali Khan**

Approximately 27,500 acre land will be affected, out of which 3,000 acre is in NWFP and 24,500 acre is in Punjab. As far as affectees are concerned, we have figures of 108,101, out of which, 42172 are in Punjab and 65929 are in NWFP.

These figures need to be updated. I do not have exact figures for Basha Dam but approximately 30,000 people will get affected due to Basha Dam.

### Question

**Pir Aftab Hussain Shah Jillani**  
MNA, PPPP

I belong to Mir Pur Khas district of Sindh. I would especially like to congratulate Mr. Shah Mahmood Qureshi who delivered a very balanced speech on a controversial issue and also gave very useful suggestions. Dr. Bengali also gave very beneficial technical information. Everyone has been insisting on national consensus but even today, whenever there is shortage of water, issue again goes to the same historical usages, whereas these usages are not written anywhere in the Water Accord. I wrote a letter to the Chairman IRSA and I would like to say that even now, Water Accord has not been implemented in the literal sense. If you cannot guarantee our constitutional rights today, then how can you claim for tomorrow? I suggest that we should give priority to the solutions suggested by Mr. Shah Mahmood Qureshi. We shall also keep trying for national consensus among provinces.

### Comment

**Mr. Shah Mahmood Qureshi**

I would quickly like to respond. My proposal is that on all the areas that I have recommended, simultaneous progress is required. Time factor is of crucial importance.

### Question

**Dr Azra Fazal Pechuho**  
MNA, PPPP

Dr. Kaiser Bengali gave a very comprehensive background of the problems of water resources. Conservation is our major problem and we have not begun to understand it yet. The main issue should be not of building dams because if we do not have water, there is no way that we will be able to fill dams.

**Comment****Dr. Kaiser Bengali**

May be my presentation was not done very well. Chairman WAPDA has misunderstood me on several accounts. I did not say anything about fish production in my whole presentation. I said that the area of mangroves decreased from 2,600 sq. miles to 260 sq. miles. Then I did not say that dams do not regulate floods. I just presented data that after building two big dams, losses and dislocations from floods did not decrease but increased and data that I presented was not my own but prepared by government. As far as WAPDA losses are concerned, it is true that prices are variable. WAPDA and KESC are certainly responsible that generation and distribution losses are one of the highest in the world. WAPDA cannot deny this factor. I also never tried to promote Thermal. I only said that due to other costs, which also include inefficiency and corruption of WAPDA, Hydel power cost is more. Power rates will not only decrease by bringing Hydel but other factors also matter. Gen. Zulfikar gave many figures regarding land availability but we do not accept these figures as they are questionable. I have made a lot of feasibilities and every investor and industrialist asks to give optimistic feasibilities, so, feasibilities are usually over-optimistic. Here comes the combination of technical and political issues. All the references given by Chairman WAPDA, these lands are out of Sindh. Gen. Zulfikar can interfere if I am wrong. Technically speaking, whenever a project is developed and benefits are more then costs, only then the project is approved but in many projects of national importance, benefits goes to someone else and costs to the other. Otherwise, distributional issues arise, which is the basis of politics.

**Comment by Session Chair**

I wonder if there is any representative of IRSA is here because I want a question to be answered, which is in the PILDAT Briefing Paper and Mr. Jillani also raised this question.

**Answer****Mr. Mohammad Ameen  
(Member Water), WAPDA**

I belong to Baluchistan and was one of the signatories of the 1991 Water Accord. Objection has just raised and I would like to have your attention towards Clause 14 (B), which says 'the record of actual average system uses for the period 1977-1982 would form the guideline for developing a future regulation pattern. These ten daily uses would be adjusted pro-rata to correspond to the indicated seasonal allocations of the different canal system and would form the basis for sharing shortages and surpluses on all Pakistan bases.' Uses for the period from 1977-1982 is the basis for sharing of shortages.

**Question****Ms. Razia Aziz  
MNA, MMAP**

What is meant by ten daily uses?

**Answer****Mr. Shah Mehmood Qureshi**

Water cannot be released from a dam on daily basis. Therefore, an average is adjusted for every 10 days that this much water will be released.

I am not an authority on this topic but would like to bring a point to your notice that total availability of water in 1991 Water Accord is shown 114 MAF, whereas water that we are distributing is 104/105 MAF. So, additional distributions will only be possible if we make additional storages.

There is some confusion which is that there is an assumption on Water Accord. Assumption is that there will be some water development and usages have been increased to 114 MAF from 106 MAF and those have been distributed but the reality is that before and after the accord, storage could not be developed so the availability of water stays at 106 MAF. Now Sindh says that we should go according to the accord. Punjab says that share was changed in the accord on the basis that additional water will come through

development, which never came. The 1991 Accord still exists. The interpretation of one clause which is on shortages is being interpreted this way.

#### Comment

**Mr. Ahmed Bilal Mehboob**

During the preparation of the briefing paper, I got a chance to do some research on this issue and would like to share something. We also asked Chairman IRSA regarding the point which was raised by Mr. Jilani. The President, in his speech, talked about Inter-provincial Ministerial Decision of 1994, so we asked Chairman IRSA to give us a copy of that decision, with an intention to attach it along with a copy of the 1991 Accord to the Briefing Paper. He confirmed to us in writing that there is no such document and no decision exists. On telephone, he said that whatever sharing is taking place between Punjab and Sindh, it is based on the same basis of historical usage. There are two to three points in the 1991 Water Accord on which Sindh and Punjab have serious differences, and this is one of those.

#### Question

**Dr. Fehmida Mirza**

**MNA, PPPP**

Where was the concern for national interest when there was drought in Sindh for the last 3 years? Take a look at Thatta and Badin. Some measures should have been taken that on one side people are dying with hunger and thirst and on the other there are bumper crops. Some decision should have been taken in that situation and some balance should have been created.

#### Answer

**Mr. Ahmed Bilal Mehboob**

Parliament is the ultimate decision-making authority. It should come to you.

#### Comment

**Ms. Sherry Rahman**

**MNA, PPPP**

It has been discussed that this clause is based

upon interpretation. One thing is certain that consensus building is the responsibility of political forces. Our main forum for consensus building has already been paralysed. I would suggest PILDAT to arrange a workshop on the issue of LFO as well. Everybody knows that parliament is completely irrelevant at present and not doing any business.

#### Comment

**Mr. Shah Mahmood Qureshi**

This is what I was saying that this is parliamentarians' own prerogative to discuss and decide the issues in the parliament. I think that we should not give this right to anyone to decide our matters, while sitting outside. I am a parliamentarian myself and I am against that PILDAT solves my problems.



Comments by the  
Session Chair

**Engr Illahi Bakhsh Soomro**  
Former Speaker National Assembly

**W**hile winding up the session, Engr Illahi Bakhsh Soomro said that he is thankful to everyone for a peaceful session. He said that there are two points which should be taken into consideration, i.e. the harmony and confidence among the four federating units, and the availability of water because different agencies and WAPDA itself are giving different figures for different timings.

He proposed to PILDAT to take two professionals from each province to go through the figures and give us the actual availability of water. He also said that there is only one way to the constructive route and it is that we must work on building trust and confidence amongst the provinces. He emphasised that no step should be taken without the consensus of all provinces.

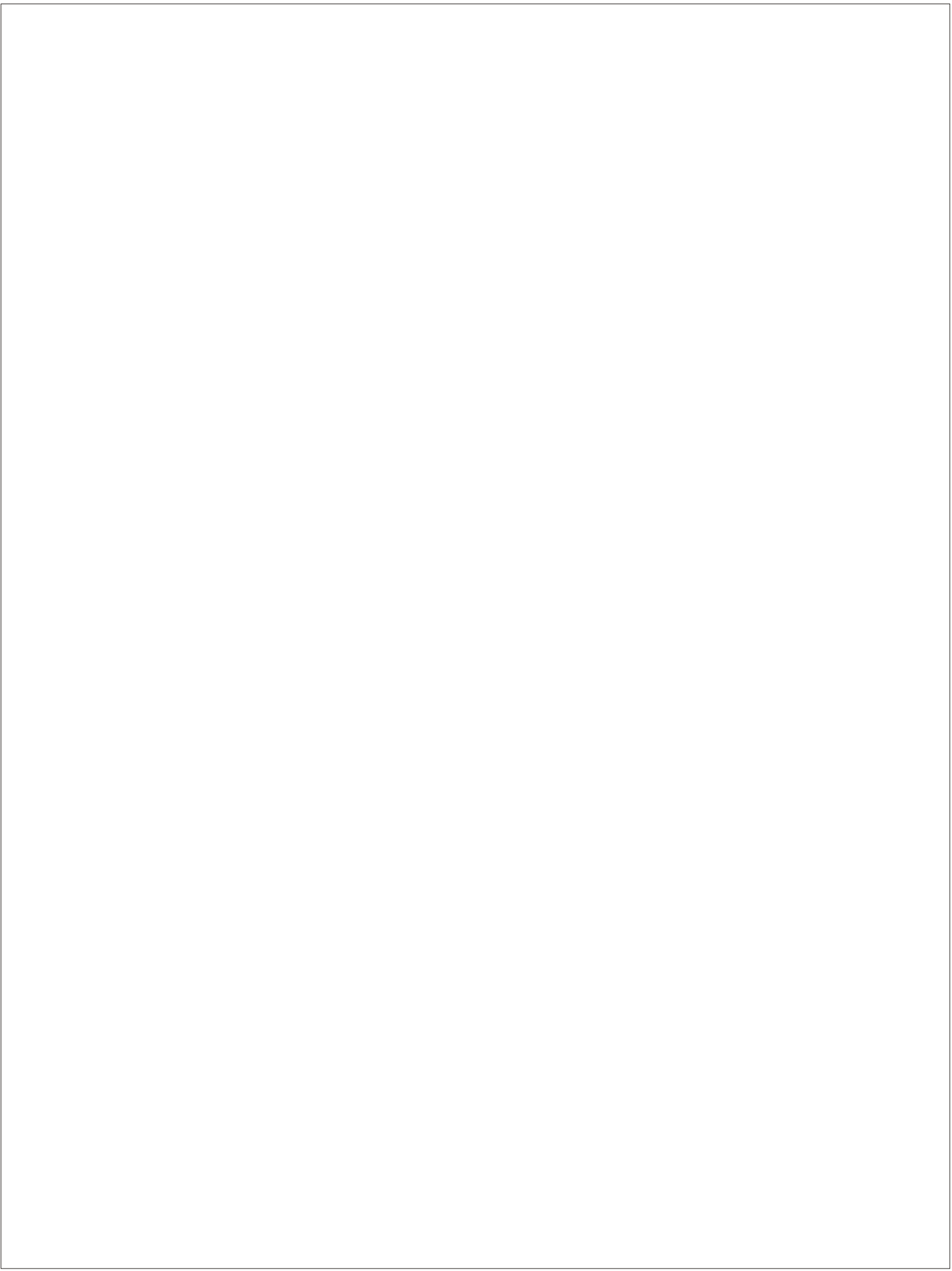
Vote of Thanks

Sardar M. Yusuf Khan  
Honorary Chairman PILDAT



Sardar M. Yusuf Khan appreciated PILDAT and its team for arranging a productive briefing session for parliamentarians. He hoped that PILDAT would be taking up issues of concern and importance to parliamentarians in the future workshops and briefing sessions. He thanked the session chairs, speakers and participants for an energising and useful discussion and exchange of views on the issue.

APPENDIX A  
PROGRAMME



## Programme

WEDNESDAY, OCTOBER 08, 2003

ITEM	Subject/ Topic/Activity	TIME	SPEAKER
1	Registration	09:30 to 10:00 am	
2	<b>Session No 1</b>		
	<b>Session Chair</b> <b>Dr. Abdul Hafeez Shaikh</b> Federal Minister for Privatisation & Investment		
	<b>Introduction</b>	10:00 to 10:15 am	<b>Mr. Ahmed Bilal Mehboob</b> Executive Director PILDAT
	<b>Issues of Water Resources in Pakistan: An Overview</b>	10:15 to 11:00 am	<b>Lt. Gen. (Retd.) Zulfiqar Ali Khan</b> Chairman WAPDA
	-Water availability -Strategies for meeting water shortage - Reservoirs - Conservation - Water management -Other issues, etc. -Conflicting point of views and their reconciliation		
	<b>Development of Water Resources: Alternative View Points</b>	11:00 to 12:30 pm	<b>Mr. Haji Mohammad Adeel</b> Vice President Awami National Party (ANP)  <b>Mr. Abrar Kazi</b> Member of Awami Tehreek Sindh; Secretary Sindh Water Committee  <b>Mr. Shams-ul-Mulk</b> Former Chairman WAPDA Former Provincial Minister
	<b>Q&amp;A/Comments</b>	12:30 to 01:30 pm	
	Comments by Session Chair	01:30 to 01:45 pm	<b>Dr. Abdul Hafeez Shaikh</b> Federal Minister for Privatisation & Investment
3	Lunch and Prayer Break	01:45 to 03:00 pm	

## Programme

ITEM	Subject/ Topic/Activity	TIME	SPEAKER
4	<p><b>Session No 2</b></p> <p><b>Session Chair</b>  <b>Engr. Illahi Bakhsh Soomro</b>                      Former Speaker National Assembly</p> <p><b>Strategies to Resolve Water Issues:                      The Way Forward</b></p> <p><b>Q&amp;A/Comments</b></p> <p>Comments by Session Chair</p>	<p>03:00 to 04:30 pm</p> <p>04:30 to 06:00 pm</p> <p>06:00 to 06:15 pm</p>	<p><b>Panellists:</b></p> <p><b>Mr. Shah Mahmood Qureshi,</b>                      MNA; Former Federal &amp; Provincial Minister</p> <p><b>Dr. Kaiser Bengali</b>                      Managing Director, Social Policy and Development Centre SPDC</p> <p><b>Senator Mohim Khan Baloch</b></p>
5	<p><b>Tea &amp; End of the Session</b></p>	<p>06:15 pm</p>	

APPENDIX B  
Lists and Profiles  
of Participating MNAs & Senators

## List of Participating MNAs

1	Afsar Begum	MQM
2	Ahmad Ghafoor	MMAP
3	Ambreen Naeem	MMAP
4	Amir Muqam, Engr.	IND
5	Belum Hasnain	PPPP
6	Bilqees Saif	MMAP
7	Bushra Nazir Hazeen	PML(Q)
8	Donya Aziz, Dr.	PML(Q)
9	Fauzia Habib	PPPP
10	Fazle Subhan	MMAP
11	Fehmida Mirza, Dr.	PPPP
12	Gul-e-Farkhanda	NA
13	Haji Azizullah Brohi	MQM
14	Hizbullah Bughio	PPPP
15	Imtiaz Safdar Warraich	PPPP
16	Inayat Begum	MMAP
17	Jamila Ahmad, Mrs.,	MMAP
18	Khalid Iqbal Memon	PPPP
19	Khalida Mohsin Qureshi	PPPP
20	Maulana Asad Ullah	MMAP
21	Maulana Muhammad Gohar Shah	MMAP
22	Muhammad Akhtar Khan Kanju	PML(Q)
23	Muhammad Anwar Bhutto	PPPP
24	Muhammad Usman, Advocate	MMAP
25	Nafisa Munawwar Raja	PPPP
26	Nawab Muhammad Yousaf Talpur	PPPP
27	Nayyer Sultana	MMA(F)
28	Noor Jahan Panezai, Dr.	NA
29	Onaza Ehsan	PML(Q)
30	Pir Aftab Hussain Gillani	PPPP
31	Qamar Zaman Kaira	PPPP
32	Razia Aziz	MMAP
33	Rukhsana Bangash	PPPP
34	Sabir Hussain Awan	MMAP
35	Sahibzada Haroon-u-Rashid	IND
36	Samina Khalid Ghurki	PPPP



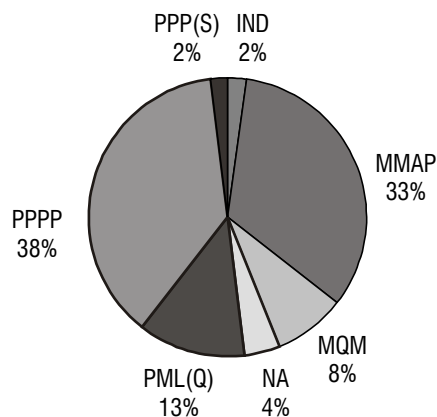
**List of Participating MNAs**

37	Sayyeda Farhana Khalid Banoori	MMAP
38	Shabina Talat	MQM
39	Shabir Ahmed Khan, Mr.	MMAP
40	Shahida Akhtar Ali	MMAP
41	Sher Akbar Khan Advocate	PPP(S)
42	Sherry Rehman	PPPP
43	Sultan Ahmed Khan	MQM
44	Syed Qurban Ali Shah	PPPP
45	Tasneem Ahmed Qureshi	PPPP
46	Umer Ayub Khan	PML(Q)
47	Zeb Gohar Ayub	PML(Q)
48	Zulfiqar Ali Gondal	PPPP

## Profile of Participating MNAs

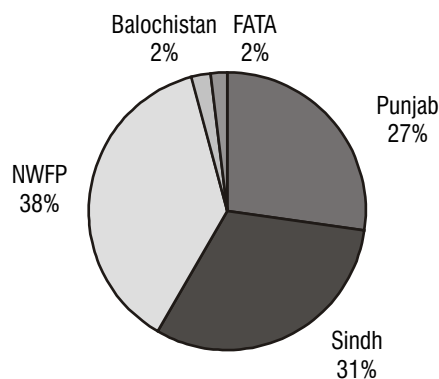
### Party Wise Representation

Party	Attendance in Briefing Session		Percentage in Assembly
	Number	Percentage	
IND	1	2	4
MMA	16	33	18
MQM	4	8	5
NA	2	4	4
PML(Q)	6	13	36
PPPP	18	38	17
PPP(S)	1	2	1
<b>Total</b>	<b>48</b>	<b>100</b>	



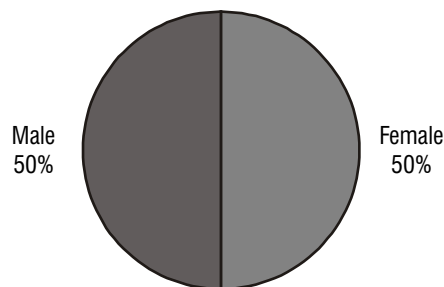
### Province Wise Representation

Province	Attendance in Briefing Session		Percentage in Assembly
	Number	Percentage	
Punjab	13	27	55
Sindh	15	31	23
N.W.F.P	18	38	13
Balochistan	1	2	5
FATA	1	2	3
<b>Total</b>	<b>48</b>	<b>100</b>	



### Gender Wise Representation

Gender	Attendance in Briefing Session		Percentage in Assembly
	Number	Percentage	
Female	24	50	22
Male	24	50	78
<b>Total</b>	<b>48</b>	<b>100</b>	<b>100</b>



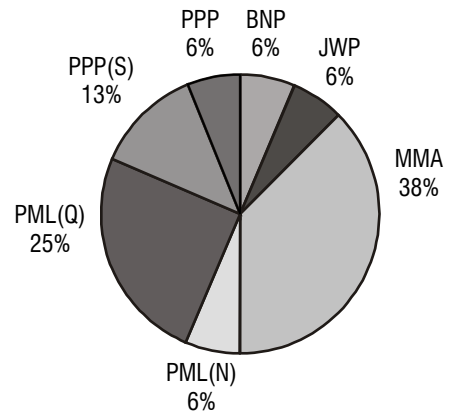
**List of Participating Senators**

1	Amanullah Kanrani	JWP
2	Anisa Zeb Tahirkheli	PPP(S)
3	Fauzia Fakhar-uz-Zaman Khan	PML(Q)
4	Haji Liaqat Ali Bangulzai	MMA
5	Kamran Murtaza	MMA
6	Kausar Firdaus, Dr.	MMA
7	Mohammad Amjad Abbas	PML(Q)
8	Mohammad Said, Dr.	MMA
9	Mouhim Khan Baloch, Mr.	BNP(A)
10	Nighat Agha, Dr.	PML(Q)
11	Razina Alam Khan, Mrs.	PML(Q)
12	Rehmtullah Kaker (Advocate)	MMA
13	Saadia Abbasi	PML(N)
14	Sardar M. Latif KhosA	PPPP
15	Shuja-ul-Mulk	PPP(S)
16	Syed Murad Ali Shah	MMA

## Profile of Participating Senators

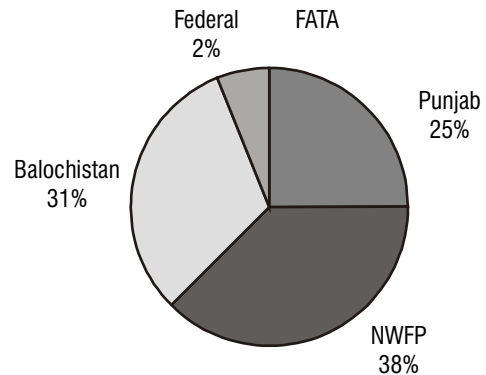
### Party Wise Representation

Party	Attendance in Briefing Session		Percentage in Assembly
	Number	Percentage	
BNP(A)	1	6	1
JWP	1	6	1
MMA	6	38	18
PML(N)	1	6	4
PML(Q)	4	25	34
PPP(S)	2	13	2
PPPP	1	6	11
<b>Total</b>	<b>16</b>	<b>100</b>	



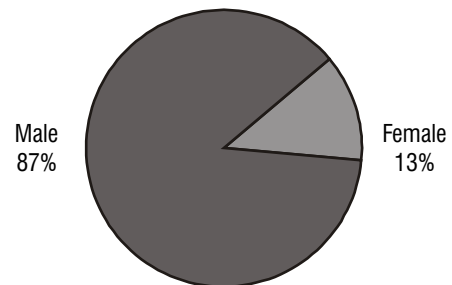
### Province Wise Representation

Province	Attendance in Briefing Session		Percentage in Assembly
	Number	Percentage	
Punjab	4	25	26
N.W.FP	6	38	21
Balochistan	5	31	21
Federal	1	6	2
<b>Total</b>	<b>16</b>	<b>100</b>	



### Gender Wise Representation

Gender	Attendance in Briefing Session		Percentage in Assembly
	Number	Percentage	
Female	2	13	18
Male	14	87	82
<b>Total</b>	<b>16</b>	<b>100</b>	<b>100</b>



APPENDIX C

**Presentation by**  
**Mr. Ahmed Bilal Mehboob**  
Executive Director PILDAT

PILDAT  
Federal Institute of  
Legislative Development  
and Transparency

Issues of Water Resources in Pakistan

PILDAT Workshop for Parliamentarians

**Welcome Remarks & Introduction**

PILDAT  
Federal Institute of  
Legislative Development  
and Transparency

Briefing Session on Water Resources

**Welcome!**

- ❖ Very warm Welcome to Session Chairs, all Participants, Speakers & Observers
- ❖ Please Check out Contents of the Dossier
- ❖ Briefing Paper included in the Dossier
- ❖ Please fill Feedback Form/Data Form
- ❖ Time Management for Speakers & Participants
- ❖ Learning Experience & Rules of the Game

PILDAT  
Federal Institute of  
Legislative Development  
and Transparency

Briefing Session on Water Resources

**The Programme Overview**

- ❖ This is not a seminar or a Ja'ise; It is a serious effort to learn from each other
- ❖ No particular viewpoint to promote
- ❖ 2 Parts of Briefing Session
- ❖ Part 1: Overview of the Issues
- ❖ Part 2: The Way Forward
- ❖ Q & A Sessions: How to maximise benefit?

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Legislative Development  
and Transparency

Briefing Session on Water Resources

**Objectives**

- ❖ Enhance awareness of public representatives about Water Issues
- ❖ Underscore the importance of consensus
- ❖ Highlight the significance of Parliament in consensus-building
- ❖ Promote Dialogue among the stake-holders
- ❖ Promote thought process for the resolution of issues

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Federal Institute of  
Legislative Development  
and Transparency

Briefing Session on Water Resources

**Why the Workshop subject is important ?**

- ❖ Resolution of Water-related issues crucial for National Unity & National Economy
- ❖ Water Issues & the related lack of mutual trust a threat to the federation
- ❖ Better understanding of the issues will make Assembly debates more informed, more effective and more useful

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Federal Institute of  
Legislative Development  
and Transparency

Briefing Session on Water Resources

**Why PILDAT holds Workshops for Legislators?**

- ❖ To see legislators more effective and powerful (Knowledge is power)
- ❖ To see Assembly Members participating in policy-making (Supremacy of Legislature)
- ❖ To see Democracy and Democratic Institutions strengthened in Pakistan

PILDAT  
Federal Institute of  
Legislative Development  
200, Feroz Road

Briefing Session on Water Resources

### Who Funds PILDAT?

- ❖ Seced. money by Overseas Pakistanis
- ❖ Pilot project funded by UNDP
- ❖ Seek and accept support from all sources without any covert or overt strings (Pure PILDAT Agenda)
- ❖ So far events are supported by UNDP, FNS, FES, DFID, The World Bank, IRI etc.

2

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Federal Institute of  
Legislative Development  
200, Feroz Road

Briefing Session on Water Resources

### What is PILDAT?

- ❖ Independent, Non-profit, Research & Study institute
- ❖ Indigenous entity well-versed in local conditions
- ❖ Strictly Non-partisan: We value trust of all parties
- ❖ Dedicated to Parliamentary Strengthening
- ❖ Mission: Strengthening Democracy & Democratic Institutions for a better Pakistan

3

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Briefing Session on Water Resources

### Some Recent Activities

- ❖ Legislative Cap Building Pilot Project-UNDP
- ❖ Briefing Sessions on WTO and PRSP
- ❖ Workshop for on Budget Process
- ❖ Workshop for MNAs on Devolution
- ❖ Orientation Workshop on Rules of Procedure
- ❖ Workshop for Balochistan, NWFP & Punjab MPAs

4

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### Near-future Activities

- ❖ Workshop for Sindh MPAs on roles of Federal, Provincial and Local governments
- ❖ Workshop on Foreign Policy
- ❖ Workshop on Public Policy Analysis
- ❖ Briefing on Pak-India Relations
- ❖ Workshop on Effective Committee System
- ❖ Directory of Parliamentarians

5

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### PILDAT Legislative Strengthening Plan:

- ❖ Legislative Capacity Building Project
  1. Sensitize Parliamentarians, CSOs, Voters
  2. Strengthen Committee System
  3. Capacity-building of Legislative Staff
  4. Capacity-building of CSOs
  5. Overseas Pakistani Legislators Network

6

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Briefing Session on Water Resources

### .... PILDAT Legislative Strengthening Plan:

6. Strengthen Parliamentary Parties
7. Capacity-building of Legislators
  - self-based Workshops
  - Briefing Papers & Sessions
  - Policy Analysis Sessions
  - Multi-party Caucuses - Etc.

7






APPENDIX D

Presentation by

Lt. Gen. (Retd.) Zulfiqar Ali Khan

Chairman WAPDA

**PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY**



**ORIENTATION**  
PILDAT LEGISLATIVE CAPABILITY BUILDING PROGRAMME

October 8, 2003  
Compiled by WAPDA Secretariat

**WATER AVAILABILITY IN PAKISTAN**

<b>AVAILABILITY</b>	<b>141 MAF</b>
<b>USES ABOVE RIM STATION</b>	<b>5 MAF</b>
<b>TOTAL</b>	<b>146 MAF</b>
<b>USES</b>	
<b>ABOVE RIM STATIONS</b>	<b>5 MAF</b>
<b>CANAL DIVERSION</b>	<b>106 MAF</b>
<b>TOTAL</b>	<b>111 MAF</b>
<b>BALANCE AVAILAHLE</b>	<b>35 MAF</b>

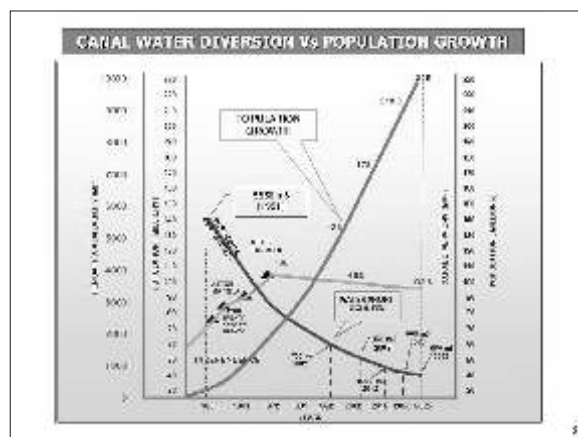
**SEASON-WISE AND ANNUAL CANAL HEAD WITHDRAWALS 1962-63 TO 2002-2003**

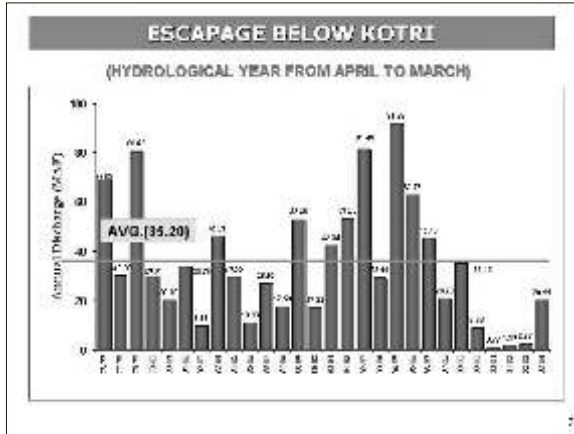
(MAF)

SEASON	PRE-MANGLA (1962-67) AVERAGE	POST-MANGLA (1967-78) AVERAGE	POST TARBELA (1978-2003) AVERAGE	ADDITIONAL WATER AFTER MANGLA & TARBELA	
KHARIF	62.38	65.82	67.77	5.39	8.6%
RABI	28.0	36.74	36.80	8.90	31.4%
TOTAL	90.38	95.80	104.57	14.19	15.7%

- WATER SECTOR ISSUES**
- WATER SCARCITY
  - WATER ESCAPAGE TO SEA
  - NEED FOR ADDITIONAL RESERVOIRS
  - SAFE DISPOSAL OF DRAINAGE EFFLUENT TO SEA
  - MINING OF GROUND WATER
  - SEEPAGE LOSSES IN IRRIGATION SYSTEM

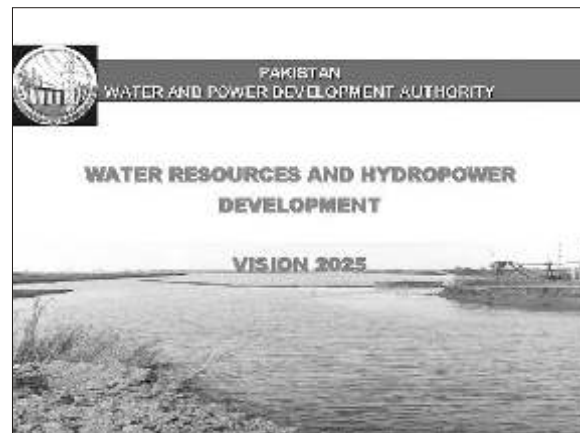
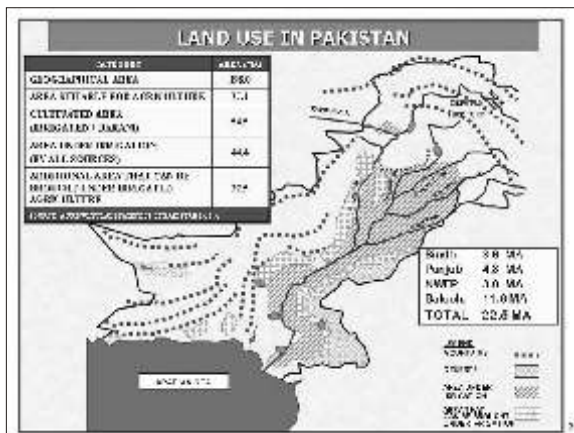
- NEED FOR ADDITIONAL RESERVOIRS**
- WATER-SHORT, LAND-RICH COUNTRY
  - RAPIDLY INCREASING POPULATION.
  - DEPLETING ON-LINE STORAGES.
  - LARGE ESCAPAGES OF UNCONTROLLED FLOOD FLOWS INTO SEA.
  - EFFECTIVE RIVER REGULATION AND INTEGRATED WATER RESOURCE MANAGEMENT





### RESERVOIR SEDIMENTATION (MAF)

RESERVOIR	DESIGN STORAGE CAPACITY (MAF)		ESTIMATED SEDIMENTATION (MAF)			
	ORIGINAL	YEAR 2000	YEAR 2010	YEAR 2020	YEAR 2030	YEAR 2040
TABULA	11.0 (27%)	8.8 (21%)	3.0 (24%)	1.0 (21%)	4.0 (21%)	2.0 (21%)
MAGDHA	5.0 (25%)	4.0 (20%)	1.0 (20%)	1.0 (20%)	1.0 (20%)	1.0 (20%)
CHASMA	3.0 (27%)	2.0 (27%)	1.0 (27%)	1.0 (27%)	0.5 (27%)	0.5 (27%)
TOTAL	19.0	15.8 (84%)	5.0 (26%)	3.0 (19%)	5.5 (35%)	3.5 (22%)



- ### BACKGROUND
- DEVELOPMENT OF WATER STORAGES AT STAND STILL SINCE 1976
  - STORAGE CAPACITY ONLY 13% OF TOTAL SURFACE WATER
  - HYDROPOWER ONLY 16% OF TOTAL POTENTIAL
  - IMPROVE HYDEL/THERMAL POWER MIX.
  - 22.5 MA CULTURABLE LAND AVAILABLE FOR DEVELOPMENT

- ### VISION 2025 - OBJECTIVES
- DEVELOPMENT OF 26 MAF OF STORAGES
  - DEVELOPMENT OF 23,000 MW OF HYDRO, COAL AND GAS POWER STATIONS
  - DEVELOPMENT OF LOW HEAD HYDELS ON CANALS
  - ENCOURAGE PRIVATE SECTOR INVESTMENT (FOREIGN/LOCAL) AND PRIVATE/PUBLIC SECTOR JOINT VENTURES
  - SUPPORT ECONOMY AND POVERTY ALLEVIATION IN BACKWARD AREAS

TOTAL STORAGE POTENTIAL		
Sr. No.	ITEM	TOTAL STORAGE CAPACITY (MAF)
I	SURFACE STORAGE'S IN OPERATION	17.74
II	STORAGES WHICH CAN BE INTEGRATED WITH EXISTING IRRIGATION SYSTEM	
	1. STORAGE SITES (BEHIND A TRIBUTARY'S)	14.05
	2. OLD CHANNELS STORAGE'S	21.85
	3. RAISED MANGLA	2.00
	SUB TOTAL	38.25
III	STORAGE SITES OUTSIDE EXISTING IRRIGATION SYSTEM	
	BALUCHISTAN	1.75
	SINDH	0.20
	PUNJAB	0.25
	AWAZ	3.30
	SUB TOTAL	5.50
	GRAND TOTAL (I & II)	54.75

## WATER SECTOR PROJECTS

PRIORITY WATER SECTOR PROJECTS								
Project	Location	Range (km)	Area Under Irrigation (10000)	Power (MW)	Cost (US\$ M)	Grand Ranking	Completion Date	Program Stage
DOMAL ZAM DAK	SWFP	1.14	161,000	11.4	137	22 Aug 2000	June 2005	1.8
BIRBHAM LADHI DAM	SWFP	1.20	262,000	25	140	11 Aug 2004	June 2009	-
CHENABE TUBE CANAL	SWFP	-	1,204,000	-	530	10 Aug 2000	June 2005	2
RAJINDER SINGH WATER CANAL	SWFP	-	475,000	-	330	03 Dec 2000	Sept 2007	4
RAJINDER SINGH WATER CANAL TARIKHA BARHAGE	SWFP	-	712,000	-	570	10 Oct 2002	June 2007	5
BEKANI DAM	SWFP	0.20	35,200	-	97	17 Aug 2000	June 2003	6.5
SAMEGAR DAM	SWFP	0.02	6,000	-	16	2005	Dec 2005	8
RAISING MANGLA DAM (GRI)	AWAZ	2.00	-	110	1000	28 Sep 2002	June 2007	9
RAISING MANGLA DAM AT THERI (SWFP)	SWFP	0.05	15,500	15	38	2005	Nov 2005	-
TOTAL		5.64	3,258,800	203.4	2780			

### HYDROPOWER DEVELOPMENT

- AT 8% GROWTH RATE POWER SHORTAGE LIKELY FROM 2006
- IN PAST 20 YEARS HYDROPOWER SHARE REDUCED FROM 60% TO 30%
- THERMAL POWER GENERATION BEING SEVERAL TIMES AS EXPENSIVE, THE ELECTRICITY TARIFF HAS GONE UP
- HYDROPOWER POTENTIAL IS ABOUT 43,000 MW
- VISION - 2025 OFFERS A WINDOW OF OPPORTUNITY FOR PRIVATE SECTOR INVESTMENT

POWER PROJECTS			
	PROJECT NAME	CAPACITY (MW)	Project Cost (US\$ M)
To Generate 650 MW by 2005	JHINA (SINDH)	96	125
	MALAKARD III (SINDH)	81	80
	NEWROOP (MCD)	97	110
	QOLAN GOEL (CENTRAL)	106	117
	ALLAI KHIVAR (SINDH)	121	52
	KHUN KHUN (SINDH)	75	43
	DEBER KHUNAR (SINDH)	120	58
	FEHR HIGH LEVEL	10	8
	TOTAL	713	712

POWER PROJECTS .../2			
	Project Name	Capacity (MW)	Project Cost (US\$ M)
To Generate 10000 MW 2005-2015	RAISED MANGLA	130	1000
	DOYLAN (KA)	425	346
	NEELUM-JHELUM (NEELUM)	969	1405
	KALABAGH (SINDH)	3000	5000
	KORALA (SINDH)	740	1551
	MATILIAN (SINDH)	81	110
	GITPUR (PUNJAB)	116	156
	ARKANIAN (SINDH)	345	290
	RAJHANI (PUNJAB)	86	113
	THAR COAL - GAS	4005	13635
TOTAL	6395	28011	

POWER PROJECTS .../3			
	PROPOSED PROJECTS	CAPACITY (MW)	PROJECT COST (US \$ M)
To Complete 1000 MW 2013-2017	KARAK	2700	2200
	DASH (INDUS)	2700	1100
	FALAK (INDUS)	1170	2200
	CHAKOTI (INDUS)	1240	2500
	WIND (INDUS)	7000	2400
	GHUMRA (SWAB)	100	250
	CHITTOOTH (PUNJAB)	100	160
	SARAN (SINDH)	200	200
	SHEKHUPUR (PUNJAB)	600	700
	FARBANI (PUNJAB)	100	100
	ZAM FALAK (PUNJAB)	100	200
	KASBI (PUNJAB)	200	200
	SMAL (PUNJAB)	100	200
	TITAS COAL	1000	1000
	LAKSHA COAL	400	200
COMBINED CYCLE	7000	7000	
	<b>TOTAL</b>	<b>16,270</b>	<b>22,320</b>
	<b>GRAND TOTAL</b>	<b>26,970</b>	<b>36,130</b>

PRIORITY HYDROPOWER PROJECTS						
Sl. No.	Name of Project	Location	Installed Capacity (MW)	Cost (US \$ M)	Year of Commencement	Year of Completion
1	ALLAI KHWAR	SWFP	120	US \$ - 100-150 Civil - Dec 2, 00	June 2007	June 2007
2	DEKAR KHWAR	SWFP	70	US \$ - 100-110 Civil - Dec 2, 00	June 2007	June 2007
3	DURR KHWAR	SWFP	100	US \$ - 100-110 Civil - Dec 2, 00	July 2008	June 2007
4	ROYAL KHWAR	SWFP	100	110	Aug 2005	Aug 2007
5	GRANWAL	SWFP	100	110	Dec 2005	Nov 2007
6	ZINWAR	Punjab	70	100	Oct 2000	Aug 2007
7	KEELUNGHELM	Azad	500	1400	-	-
8	LOW HEAD TIBBER	Pakistan	700	-	-	-
	<b>TOTAL</b>	-	<b>250</b>	-	-	-

**SMALL HYDROPOWER PROJECTS ON CANAL FALLS AND BARRAGES**

**NO OF SITES  
600**

**TOTAL POTENTIAL  
1000-1500 MW**

**GREATER THAL CANAL PROJECT**

- COST** Rs 30.467 Billion
- CONSULTANTS** NESPAK NDC ACE BARQAB JV
- SALIENT FEATURES**
  - **CAPACITY** 8500 Cusecs
  - **CCA** 1595 MI. Acres
  - **Length of Canal Network** 2212 Km
  - **R.L.R.** 18.2 %
- UP-TO-DATE EXPENDITURE** Rs 1480 Millions
- GROUND BREAKING** 16.08.2001
- DATE OF COMPLETION** 30.06.2007

**Sindh Government's Concerns on Greater Thal Canal Project**

GREATER THAL CANAL PROJECT	
CONCERNS	COMMENTS
I. The FCI of the Project be returned to CDWP for reconsideration as the FCI was received late by Government of Sindh and also Representative of Government of Sindh could not attend the CDWP meeting.	FCI sent to MUW&P and Planning Div. on 10.12.2001 giving sufficient time for evaluation by all stakeholders. The essentials of the Project discussed in at least ten (10) meetings. Therefore, concern not justified. Additional Chief Secretary, Government of Sindh also attended the RCNFC meeting on 25-02-2002.
II. Establishing any new canal must be in conformity with the 1991 Water sharing Accord.	This Project is specifically included in the Water Accord of 1991.
III. The views/comments of IRSA may be obtained before consideration of the scheme.	IRSA approved the project in its meeting on 07-05-2002.

**INDUS WATER ACCORD 1991**  
MONTHLY SHARES OF WATER TO BE ALLOCATED TO PROVINCES UNDER THE WATER ACCORD 1991

10-DAY PERIOD	INDUS RIVER TOTAL
APR 1	2.6
2	3.4
3	4.0
MAY 1	5.4
2	5.5
3	5.5
JUN 1	5.4
2	5.5
3	5.7
JUL 1	5.8
2	5.1
3	4.7
AUG 1	4.8
2	5.4
3	5.9
SEP 1	5.0
2	5.8
3	5.5
8-DAY PERIOD	1871 MM³

Note: 1. The water to be allocated to each province under the Accord shall be distributed in accordance with the provisions of the Accord. 2. The water to be allocated to each province shall be distributed in accordance with the provisions of the Accord.

**INDUS WATER ACCORD 1991**  
MONTHLY SHARES OF WATER TO BE ALLOCATED TO PROVINCES UNDER THE WATER ACCORD 1991

10-DAY PERIOD	PROVINCIAL ALLOCATION (MM³)		
	ACCORD ALLOCATION	ADDITIONAL FLOOD SHARE	ALLOCATION TO FLOOD SHARE
APR 1	2.5	0	2.5
2	3.4	0	3.4
3	4.0	0	4.0
MAY 1	5.4	0	5.4
2	5.5	0	5.5
3	5.5	0	5.5
JUN 1	5.4	0	5.4
2	5.5	0	5.5
3	5.7	0	5.7
JUL 1	5.8	0	5.8
2	5.1	0	5.1
3	4.7	0	4.7
AUG 1	4.8	0	4.8
2	5.4	0	5.4
3	5.9	0	5.9
SEP 1	5.0	0	5.0
2	5.8	0	5.8
3	5.5	0	5.5
OCT 1	0	0	0
2	0	0	0
3	0	0	0
TOTAL (8-DAY)	1871	0.004	2.256

**COMPARISON OF ACCORD AND HISTORIC CANAL WITHDRAWALS (MM³)**

PROVINCE	1991 Accord Allocation				1984 Inter-Provincial Canal Withdrawals			
	HRIF	RAH	TOTAL	%age	HRIF	RAH	TOTAL	%age
PUNJAB	57.07	15.87	72.94	48.02	54.62	19.74	74.36	51.81
SINDH	38.04	14.21	52.25	41.64	25.20	14.27	39.47	41.64
WAZIR	3.48	5.30	8.78	5.06	3.43	1.51	4.94	5.08
BALUCHISTAN	3.05	1.05	4.10	3.30	1.20	0.76	1.96	1.97
TOTAL	102.69	37.01	139.70	100	84.45	37.28	121.73	100

**WATER APPORTIONMENT ACCORD 1991**

**PARA-6**  
THE NEED FOR STORAGES, WHERE-EVER FEASIBLE ON THE INDUS AND OTHER RIVERS WAS ADMITTED AND RECOGNIZED BY THE PARTICIPANTS FOR PLANNED FUTURE AGRICULTURAL DEVELOPMENT

**PARA-8**  
THERE WOULD BE NO RESTRICTIONS ON THE PROVINCES TO UNDERTAKE NEW PROJECTS WITHIN THEIR AGREED SHARES

**PRESENTATIONS ON GREATER THAL CANAL**

S.No.	PRESENTATION TO	DATE
1.	Federal Cabinet (All Governors Present)	30.06.2000
2.	CDWP Meeting (Approval of PC-II)	19.08.2000
3.	Federal Cabinet (Vision 2025) - All Governors Present	17.04.2001
4.	Federal Cabinet (Vision 2025) - All Governors Present	09.05.2001
5.	Presentation to Governor Sindh by Chairman WAPDA (Vision-2025)	18.05.2001
6.	Presentation to Chief Executive of Pakistan by Chairman WAPDA	29.11.2001
7.	Presentation of PC I to GOIP	10.12.2001
8.	CDWP Meeting (Clearance of PC I)	06.02.2002
9.	ECNEC Meeting (Approval of PC-I)	28.02.2002
10.	Briefing to President/Chief Executive of Pakistan	21.05.2002

**GREATER THAL CANAL PROJECT**

CONCERNS	COMMENTS
iv. Nomenclature "Thal Flood Water Canal" is separate from the provision in Water Accord 1991. There is provision for "Greater Thal Canal". As such there is no provision of Water for "Thal Flood Water Canal".	Some of the Project was changed from "Greater Thal Canal Project" on the directive of Federal Government, as "Thal Flood Water Canal". It has once again been renamed as "Greater Thal Canal". Scope of the Project however continues to remain the same.
v. The nomenclature shows that the canal will be a flow-@ canal, but there is neither any assurance, nor check that this canal will not flow during normal flow conditions.	Telemetry System has been installed and flows are being monitored accordingly. Water distribution is the responsibility of IREDA.

GREATER THAL CANAL PROJECT	
CONCERNS	COMMENTS
<p>VI. Discharge for 'Thal Flood Water Canal' during June, July, August and first ten days of September is shown as 8,500 cusecs, while the provision of discharge for 'Greater Thal Canal' during this period varies from 5,000 to 6,700 cusecs. Hence these two canals are different from each other.</p>	<p>8500 cusecs will only be released if surplus water is available during flood seasons. Rainee &amp; Kachhi canals are designed on the same technology. Telemetry system will be installed at intake structure of the canal to monitor flow. Greater Thal Canal and Thal Flood Canal are names of the same canal.</p>
<p>VII. The DAF shows total not to be exaggerated figure and correspond accurately with the 5,919 cusecs listed in cropping pattern etc.</p>	<p>Project would draw from the allocated share. The maximum quantity of 9500 cusecs will only be released if surplus water is available during flood seasons.</p>
<p>VIII. The issue of discharge of water beyond Kotri against Sea Intrusion, needs to be addressed, as part of the 1991 Accord.</p>	<p>As per Water Accord 1991, the issue of below Kotri release, subject of separate study.</p>

DISCHARGE BELOW KOTRI (JUNE - SEPTEMBER 2002)									
1992	2001-02	1992	2001-02	2001	2002	2003	2004	2005	2006
20	6711	6911	6928	6911	6911	6921	6921	6921	6921
21	7111	7111	7111	7111	7111	7111	7111	7111	7111
22	7511	7511	7511	7511	7511	7511	7511	7511	7511
23	7911	7911	7911	7911	7911	7911	7911	7911	7911
24	8311	8311	8311	8311	8311	8311	8311	8311	8311
25	8711	8711	8711	8711	8711	8711	8711	8711	8711
26	9111	9111	9111	9111	9111	9111	9111	9111	9111
27	9511	9511	9511	9511	9511	9511	9511	9511	9511
28	9911	9911	9911	9911	9911	9911	9911	9911	9911
29	10311	10311	10311	10311	10311	10311	10311	10311	10311
30	10711	10711	10711	10711	10711	10711	10711	10711	10711
TOTAL	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833
2001	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833	6,20,833
1	61,775	61,775	61,775	61,775	61,775	61,775	61,775	61,775	61,775
2	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800
3	65,825	65,825	65,825	65,825	65,825	65,825	65,825	65,825	65,825
4	67,850	67,850	67,850	67,850	67,850	67,850	67,850	67,850	67,850
5	69,875	69,875	69,875	69,875	69,875	69,875	69,875	69,875	69,875
6	71,900	71,900	71,900	71,900	71,900	71,900	71,900	71,900	71,900
7	73,925	73,925	73,925	73,925	73,925	73,925	73,925	73,925	73,925
8	75,950	75,950	75,950	75,950	75,950	75,950	75,950	75,950	75,950
9	77,975	77,975	77,975	77,975	77,975	77,975	77,975	77,975	77,975
10	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000

GREATER THAL CANAL PROJECT	
CONCERNS	COMMENTS
<p>IX. Punjab has been extracting Microbe near instead of Accord Allocation. How could they go alongwith a scheme only on the grounds that it was allowed limited seasonal flows in Accord.</p>	<p>Water distribution IRSA, subject including implementation of Water Accord.</p>
<p>X. It is reported that work started on Thal Project before approval by competent forums.</p>	<p>Work was started after obtaining anticipatory approval from ECNEC, just as Kachhi and Rainee Canal.</p>
<p>XI. Study irrigation is mature of the design of the proposed canal. Whether it is within limits of Accord Allocation or beyond.</p>	<p>Final design parameters of the Project are contained in the PC I, copy of which is already available with Government of Sindh.</p>

GREATER THAL CANAL PROJECT	
CONCERNS	COMMENTS
<p>XII. According to the constitution, Plans and Inter Provincial Projects are to be executed by the Provinces. Canal projects which are not inter Provincial and recently initiated by the Federation, should be transferred to the Provinces for execution including Thal Canal etc. Funding for such mega project be first decided by the N.E.C. If the Project appears feasible then it is to be taken up by the Govt. of Punjab from its own resources.</p>	<p>Project is being implemented as part of Vision-2025 programme in pursuance of decisions taken at Federal level in the joint meetings of Federal Cabinet and Governors of all provinces. Similar projects have been initiated in all the provinces.</p>
<p>XIII. PC I has not been signed by any body.</p>	<p>PC I has been signed by all the concerned officers before its submission to ECNEC.</p>

GREATER THAL CANAL PROJECT- CONCLUSIONS	
<ul style="list-style-type: none"> <li>TEN MEETINGS HELD WITH FEDERAL-PROVINCIAL GOVTS.</li> <li>TOTAL CAPACITY OF THE IRRIGATION SYSTEM IS 8500 CUSCS                             <ul style="list-style-type: none"> <li>WATER ACCORD 1991 1875 MAF</li> <li>ADDITIONAL FLOOD SUPPLIES (IN 57% SHARE) 6634 MAF</li> <li>TOTAL 8509 MAF (8500 Cusecs Kharif)</li> </ul> </li> <li>WATER DISTRIBUTION IS RESPONSIBILITY OF IRSA. IRSA HAS CLEARED THE PROJECT - 27<sup>th</sup> MAY 2002.</li> </ul>	

GREATER THAL CANAL PROJECT- CONCLUSIONS	
<ul style="list-style-type: none"> <li>ALL THE PROVINCES ARE FREE TO UTILIZE THEIR WATER SHARE ACCORDING TO PRIORITIES FIXED BY THEM</li> <li>AVERAGE ANNUAL WATER AVAILABILITY DURING LAST 24 YEARS IS 55 MAF. DOWNSTREAM KOTRI, WHEREAS REQUIREMENT FOR THAL IS 2.5 MAF, KACHHI 1.4 MAF AND RAINEE 1.3 MAF, TOTAL FOR 3 CANALS IS 5.2 MAF. AFTER UTILIZATION, 50 MAF WILL STILL BE AVAILABLE FOR FURTHER DEVELOPMENT</li> </ul>	

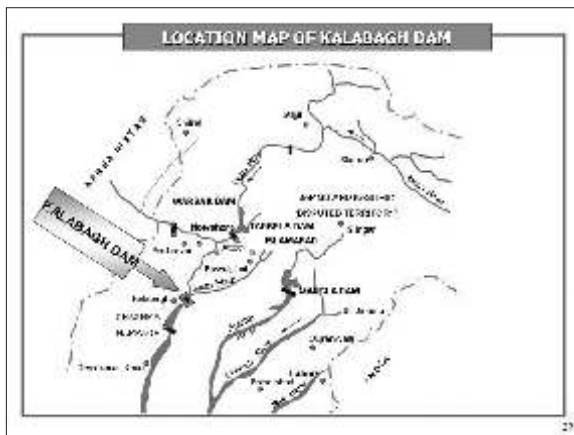
### BHASHA DIAMER DAM PROJECT Salient Features

- Concrete Gravity Dam (Roller Compacted)
- Endorsed by Panel of Experts
- Gross Storage 9.09 MAF
- Live Storage 7.34 MAF
- Dam Height 908 ft.
- Power 3700 MW
- Cost (Approx.) \$ 5 Billion
- Construction Period 7 Years

### BHASHA DIAMER DAM PROJECT (Current Status)

PROPOSED IMPLEMENTATION SCHEDULE

- Feasibility Report/Submission of PC-I June 2004
- PC-I Approval Dec. 2004
- Detailed Design Dec. 2006
- Prepare Tenders, Advertise Evaluate & Award Jan. 2005-Dec.2005
- Up gradation of KKH June 2004-June 2006
- Commencement of Construction 2006
- Completion 2013

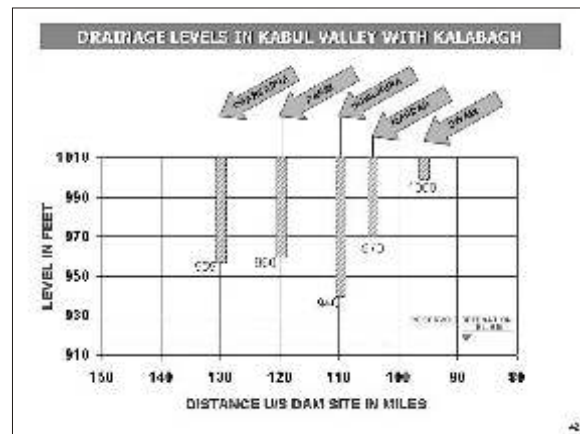


### KALABAGH DAM PROJECT SALIENT FEATURES

- Dam Type Earth Core Rock Fill
- Gross Storage 7.9 MAF
- Live Storage 6.1 MAF
- Dam Height 260 ft.
- Power 3600 MW
- Cost \$ 5.0 Billion (to be updated)

### KALABAGH DAM PROJECT MODIFICATIONS

MODIFICATION	IMPACT
Maximum Conservation Level	• Effective drainage outlet of: Charsada 955 Ft.
Original 925 Ft.	Pabbi 960 Ft.
Reduced 915 Ft.	Nowshera 940 Ft.
	Mardan 970 Ft.
	Swabi 1000 Ft.
	• Reduction in Storage Capacity from 7 MAF to 6.1 MAF
No Canal outlets from Dam	It will function as seasonal carry over Dam





KALABAGH DAM PROJECT (Current Status)	
• Feasibility Report	1984
• P.C.I submitted (1989)	Approval pending
• Project Planning Studies	Completed
• Completion Time	6 Years

KALABAGH DAM PROJECT Apprehensions and Factual Position ...1		
NWFP		
Apprehension	Factual Position	
• Possibility of Flooding of Nowshera Town and Peshawar Valley in case of unprecedented flood	• Modern Flood Warning System would provide adequate warning against floods	
• Drainage of Mardan, Pabli and Swabi will be adversely affected	• Conservation level of Kalabagh Dam (915 ft) is lower than the lowest ground level of Mardan, Pabli and Swabi Scarps areas	
• Fertile Cultivated Land would be submerged	• 3000 Acres of Barani Land and only 100 Acres of Irrigated Land would be submerged in the reservoir	
• Large population would be displaced	• Resettlement Plan would ensure proper compensation to the affected	
	Proj. (NWFP)	Total
No. of affected	65939	43122
Land affected	24500	3000
		27,330

KALABAGH DAM PROJECT Apprehensions and Factual Position ...2	
SINDH	
• No water is available for filling Kalabagh Reservoir	• Average Annual outflow Below Kotri is 35 MAF • Flood Conservative estimate shows 20 MAF for storage • Out of 6.1 MAF for Kalabagh, 5 MAF is replacement from Tarbela and Chashma
• Sindh would be converted into a desert	• After Tarbela Dam, Sindh canal withdrawals increased from 25.47 MAF to 44.17 MAF • Canal withdrawals for Sindh would further increase by 3 MAF after Kalabagh

KALABAGH DAM PROJECT Apprehensions and Factual Position ...3		
SINDH		
• Riverine Area would go out of Production due to control over River	• Flood peaks in excess of 300,000 Cusecs would still be coming • Assured Water Supply through proposed tubewells will be made round the year	
• Indus Delta Mangrove Forest would vanish	• Only 7000 Acres out of 294,000 Acres Mangrove Forest are in Indus Active Delta • No significant impact is expected as 18 MAF (on the average) will still be flooding below Kotri	
• Fish production below Kotri would be affected	• No evidence establishes this apprehension as Fish production increased after Tarbela • Marine Fish (Thousand Tons)	
	1995	1999
	285	351
	1996	2000
	270	308
	1997	2001
	292	315
	1998	305

KALABAGH DAM PROJECT Apprehensions and Factual Position ...4	
SINDH	
• Revenue from Kalabagh would go to Punjab although the Project would be Federally Funded	• Revenue goes to Federal Govt for sharing among Provinces
• Ditch Tarbela Instead of Building Kalabagh Dam	• Doubling Tarbela Reservoir is a practical option • No. of Tarbela: 200,000 • No. of Withdrawals: 54000
• Save 40-50 MAF loss in seepage through Canal System Lining	• Complimentary to Storage • Lining is expensive but time saving • Seepage from Tarbela in fresh ground water area is not a loss as it is being pumped for Irrigation

COMPARISON				
Sr. No.	TERMS	KALABAGH	INDUSLA	AKHTORI
1.	CONSTRUCTION PERIODS	201	206	201
2.	CONSTRUCTION	201	205	201
3.	LIVE CAPACITY	11 MAF	7.54 MAF	6.0 MAF
4.	WATER AVAILABILITY	90 MAF	80 MAF	70 MAF
5.	HYDROPOWER	300 MW	178 MW	400 MW
6.	RISK OF WATER AVAILABILITY FOR SINDH	FARTY	1.78	FARTY
7.	LOGISTIC PROBLEMS	LESS	MORE	LESS
8.	COST	\$ 7 BILION (TO BE UPDATED)	\$ 5 BILION	\$ 1.8 BILION
9.	BENEFIT PER YEAR	\$ 4.4 BILION (\$ 1 BILION)	\$ 4.1 BILION (\$ 1 BILION)	\$ 2.1 BILION (\$ 1 BILION)

**TELEMETRY PROJECT**

- OBJECTIVES OF THE PROJECT
  - To build confidence among stakeholders on water share and corresponding flows
- COMPONENTS OF THE PROJECT
  - Satellite based remote sensing at 23 sites (Dams, barrages and canal heads)
  - Satellite based remote sensing at 19 sites installed - 4 sites in Sindh at Pac Feeder, Uch, Minadey and Gramy (remaining)
  - Flow monitoring at IRSA, PDS, MOW&P and WAPDA
- PC-1 APPROVED BY ECNEC ON MAY 3, 2002
  - Execution assigned to WAPDA
  - O&M responsibility of IRSA
- PC-1 COST Rs 450 Million
- CONTRACT COST Rs 276 Million
- COMMENCEMENT DATE May 2002
- SCHEDULED COMPLETION DATE Nov 2003
- ACTUAL COMPLETION DATE 31 Mar 2005

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THANK YOU

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APPENDIX E

Paper by

**Haji Muhammad Adeel**

Vice President Awami National Party

## کالا باغ ڈیم۔ عوامی نیشنل پارٹی کیوں مسترد کرتی ہے۔

تحریر: حاجی محمد عدیل۔ مرکزی نائب صدر ANP

عوامی نیشنل پارٹی اس بات کے حق میں ہے کہ پانی کے ذخیرہ کرنے کے لئے ایسے ڈیموں کی تعمیر فوراً شروع کی جائے، جن پر کسی صوبے، وحدت یا قوم کا اعتراض نہیں۔ ایسے تمام ڈیمز (Dams) سے اگر کثیر المقاصد فوائد حاصل ہوں تو ANP کو کوئی اعتراض نہیں۔ مگر ANP کسی صورت میں کالا باغ ڈیم یا ایسے تمام منصوبوں کی مخالفت کرے گی اور ان کی اجازت نہیں دے گی۔ جن کے متعلق کسی ایک صوبے، وحدت یا قوم کو اعتراض ہو۔ ایسے منصوبوں میں ”گریڈیشنل کینال“ کا پراجیکٹ بھی ہے۔ جس پر سندھی قوم اور صوبے کے لوگوں کو شدید اعتراض ہے۔

ہم واپڈا اور حکمرانوں سے یہ بھی دریافت کرنا چاہیں گے کہ اگر کوئی منصوبہ متنازع ہے اور اربوں روپے کے ابتدائی اخراجات کے باوجود دوسرے تین صوبے اور اس کی اسمبلیاں مسلسل کئی بار متفقہ طور پر اسے مسترد کر چکی ہیں تو گزشتہ 20 سال سے اس پر مسلسل اصرار کیوں؟ اور اس دوران دوسرے غیر متنازعہ منصوبوں پر کام کیوں نہ شروع کیا گیا اور خصوصاً ان کی فیڈریشنوں پر پورٹس بنانے میں بحرمانہ غفلت کیوں برتی گئی جن منصوبوں پر کسی صوبے، وحدت یا قوم کو اعتراض نہ تھا؟ مثلاً بھاشا ڈیم اور اسی طرح کے دوسرے منصوبے سکرو ڈیم وغیرہ۔

اے این پی کو اس پر بھی تعجب انگیز اعتراض ہے کہ بجلی کی کمی کو پورا کرنے کے لئے گزشتہ پندرہ برس سے صوبہ پنجتو نحو (سرحد) میں کئی ایسی جگہوں کی نشاندہی کی گئی ہے جہاں باآسانی RUN ON WATER طریقے سے پانی گرا کر نہایت ہی سستی اور اس قدر بجلی پیدا کی جاسکتی ہے جن کی کل مقدار کسی بھی بڑے منصوبے سے کئی گنا زیادہ ہو سکتی ہے۔

اے این پی ان تمام معاملات کو سامنے رکھتے ہوئے ”حکمرانوں“ واپڈا اور پنجاب کے اس رویہ کو شک کی نگاہ سے دیکھتی ہے۔ اور پنجتو کے طور پر محسوس کرتی ہے کہ واپڈا کا یہ ارادہ کہ اگر بننے کا تو سب سے پہلے کالا باغ ڈیم ہی بنے گا، فیڈریشن اور ملک کے اتحاد کے لئے نقصان دہ ہے۔ کیونکہ اس مجوزہ ڈیم کی تعمیر کے نتیجے میں صوبہ سرحد (پنجتو نحو) اور سندھ فوری اور طویل المعیا نقصانات اور تباہی کا شکار ہو جائیں گے۔ ہر بلوچستان میں پٹ فیڈر سسٹم ناکامی کا شکار ہو جائے گی۔ کوئی مظہن علاج کے لئے زہر استعمال صرف اسی وقت کرتا ہے جب کوئی دوسری دوا، یا علاج میسر نہ ہو۔ جب دوسرے علاج اور دوسری دوائیں وافر مقدار میں موجود ہوں تو کوئی طبیب کسی مریض کو زہر دے کر زندہ رکھنے کی کوشش نہیں کرتا۔ جس علاج سے زندگی تو شاید بچ جائے۔ مگر دوسرے اعضاء کام کرنا چھوڑ دیں۔

ایک اور بات تعجب انگیز ہے، جنرل مشرف سے لے کر تمام درباری حضرات ایک ہی لے میں مسلسل یہ کہہ رہے ہیں کہ کالا باغ ڈیم کی تعمیر تمام صوبوں کے اتفاق رائے سے ہوگی۔ آخر اتفاق رائے کسے کہتے ہیں؟ کالا باغ ڈیم کے خلاف ملک کی تین صوبائی اسمبلیوں نے مسلسل 7 سات دفعہ متفقہ قراردادیں پاس کیں اور ان قراردادوں کے پاس کرنے والوں میں تمام سیاسی جماعتوں کے اور آزاد اراکین بھی شامل تھے۔ اور ان میں وہ اراکین اسمبلی بھی شامل تھے جن کی جماعتیں مرکز میں اس وقت حکمران تھیں۔ کیا یہ سب اس ڈیم کی مخالفت میں صوبوں کی تین چوتھائی اکثریت کا اتفاق رائے نہیں؟ کہ اب مصنوعی اتفاق رائے کی اس طرح کوشش کی جا رہی ہے جس طرح جمالی صاحب کو ایک ووٹ کی اکثریت دلو کر ملک کا وزیر اعظم بنا دیا گیا۔ اور اس کوشش میں جماعتوں کو توڑا گیا۔ کیا ایسے ہی اتفاق رائے کی کوئی کوشش کالا باغ ڈیم کے حق میں کی جائے گی؟ اپنے BOSS کے حکم پر وزیر اعظم آجکل ایسا ہی نفعہ سنار ہے ہیں۔

ہمارے سیاسی قائد فلسفی اور نظریاتی استاد میر افغان باچا خان مرحوم نے کالا باغ ڈیم کے خلاف اس وقت عظیم الشان تحریک چلائی جب واپڈا اس حوالے سے اپنی فیڈریشن سانس لے آیا تھا۔ اور اپنے اس عمل میں اس کے ذریعہ قوم کا تقریباً ایک ارب روپے کا ضیاع بھی ہو چکا تھا۔ لوگوں کو بتایا گیا کہ ان کے گھر، کھیت، مڑکیں، بل، دوکانیں، سکول، ہسپتال، کارخانے اور قبرستان کالا باغ ڈیم کی نذر ہو جائیں گے۔ ہر جگہ KBD کے نشانات لگائے گئے۔ جو کہ ڈیم کی تعمیر میں نوشہرہ، جہانگیرہ، کوٹہ، صوابی، مردان اور ملحقہ علاقوں کے زیر آجائے گی کی ”نوید“ تھی۔ ”باچا خان“ کی تحریک نے واپڈا کو مجبور کیا اور اس نے ”نوشہرہ چھاؤنی“ کے کینوں کو یہ خوشخبری دی کہ ان کے بچاؤ کے لئے DIKE بنائے جائیں گے۔

کچھ عرصہ بعد واپڈا نے اعتراف کر لیا کہ اگر ڈیم میں پانی کی سطح منصوبے کے مطابق 925 فٹ بلند رہی تو یقیناً یہ تمام علاقے زیر آب آجائیں گے اور ملحقہ علاقوں میں زیر زمین پانی کی سطح بلند ہو کر صوبے کے زرخیع علاقوں کی تباہی کا باعث بنے گی۔ اس لئے اب مجوزہ سطح 915 فٹ کر دی جائے گی۔ اربوں روپے خرچ کرنے (اور کروڑوں روپے کمیشن کھانے) کے بعد واپڈا کے سفید ہاتھی نے کم از کم یہ اعتراف تو کر لیا کہ اس کی بنائی ہوئی فیڈریشن رپورٹ غلط تھی گراہ کالا باغ ڈیم صرف تکنیکی مسئلہ نہ رہا۔ ماہرین ناقابل اعتماد پٹھرے۔ اور یہ مسئلہ انسانی مسئلہ بن گیا۔ اور جوں جوں انسان دوست اور ماہرین نے اس کا جائزہ لینا شروع کیا اس کے بہت سے ہیبت ناک نقصانات سامنے آنے شروع ہوئے۔ سندھی قوم پرست ماہرین بھی اس معاملے میں آگے بڑھے اور اس امر انصوبے

کے ان خراب زرعی، زینتی، آبی، جنگلاتی اور معاشی اثرات سے قوم کو خبردار کیا، جو کہ سندھ پر پڑیں گے۔ بلوچستان کے ماہرین نے بھی اس منصوبے کو ناپسند کر کے مسز ڈر دیا۔ مگر ایک مافیہ، جس میں واڈا، پنجاب کے جاگیردار، سیاستدان، صحافی اور رسول فوجی نوکر شاہی شامل ہیں جن کے پاس پولستان کی وسیع زمینوں کی ناجائز ملکیت ہے، نے مسلسل مرحوم کالا باغ ڈیم کے منصوبے کو زندہ رکھا اور کوشش کی کہ کسی دوسرے منصوبے پر کام نہ ہونے دیا جائے۔ اور KBD کو ملک کے آبی، برقی اور زرعی مسائل کا واحد اور اکلوتا منصوبہ ہونے کی مسلسل ”تبلیغ“ کی گئی۔ لیکن اے این پی اور دیگر وطن دوست سیاسی اور قوم پرست جماعتوں، دانشوروں اور ماہرین نے اس مسلسل یکطرفہ پروپیگنڈہ کا توڑ کیا۔ اور کسی حکمران کو یہ ہمت نہ ہو سکی کہ وہ اس ناپاک منصوبے پر کام شروع کر سکیں یا کسی بجٹ میں اس منصوبے کیلئے رقم مختص کر سکیں۔ بعد ازاں واڈا نے اس بات پر اصرار کرنا شروع کر دیا کہ کالا باغ ڈیم کا ترمیم شدہ منصوبے میں پختونخوا کے خدشات کا ازالہ کر دیا گیا ہے۔ مگر حقیقت یہ ہے کہ اس ترمیم شدہ منصوبے سے بھی پختونخوا کے صوبے کو شدید تباہی اور نقصانات کا سامنا کرنا پڑے گا۔ پانی کی سطح مختلف دریاؤں پر مختلف جگہوں پر بڑھ جائے گی۔ نوشہرہ اور اکوڑہ کے درمیان دریائے کابل کے دونوں کناروں پر آباد دو لاکھ افراد ہمیشہ ہمیشہ شدید سیلابوں کی زد میں آجائیں گے۔ زرخی زمینوں میں پانی کی سطح بلند ہونے سے زرعی تباہی کی ابتداء ہو جائے گی اور آئندہ پچاس سالوں میں یزرخی علاقے Water Logged ہو جائیں گے۔ اور زمینیں ”ڈھنڈ“ Swamp Lands ہو جائیں گی۔ مردان اور صوابی SCARP کے پراجیکٹ مکمل طور پر ناکام ہو جائیں گے۔ کیونکہ ان کے اخراج Level کا ڈیم کی سیلابی سطح سے نیچے ہو جائے گا۔ اس طرح اربوں روپے کے پراجیکٹ ختم ہو جائیں گے۔ اور نتیجتاً 123,000 ایکڑ زرخی زمین تباہ ہو جائے گی۔ ڈیم کی وجہ سے صوبے کے مواصلاتی نظام پر بھی برا اثر پڑے گا۔ سڑکیں، پل اور آبادیاں اسکی زد میں آجائیں گی۔ اور ہزاروں گھرانے بے گھر ہو جائیں گے۔ KBD میں پانی کے اخراج کے نتیجے میں پشیمپرائٹ بینک کینال پر بھی منفی اثرات پڑیں گے۔ اور اتنا پانی ہی نہ رہے گا کہ مستقبل میں لفٹ سیکسوں پر عملدرآمد ہو سکے۔ KBD کے مجوزہ ذخیرہ آب 925 فٹ سے 915 فٹ کرنے اور صرف 10 فٹ کی کمی کے اعلان سے بھی ہونے والے حقیقی نقصانات میں کمی کے تجربے کی کوئی آزادانہ رپورٹ سامنے نہیں آئی۔ کہا گیا ہے کہ DAM-CREST کی اونچائی صرف 5 فٹ نیچے کی جائے گی۔ اور یہ کوئی گارنٹی نہیں کہ ذخیرہ آب کی سطح 915 فٹ سے زیادہ نہ ہوگی۔ اسی طرح یہ بھی اندازہ نہیں ہے کہ ریت اور مٹی کی گھرائی میں صرف 10 فٹ کے اضافے سے صوبہ پختونخوا (سرحد) ان تمام نقصانات اور خدشات کا شکار ہو جائے گا۔ جن کا تجربہ آزاد ماہرین نے 925 فٹ پانی کی بلندی کے حوالے سے کیا ہے اور واڈا ابھی تک کسی طرح بھی ان سے بچاؤ کا حل نہ دے سکا۔

کالا باغ ڈیم کے مجوزہ منصوبہ میں پختونخوا کے جنوبی علاقوں کے لئے پانی مہیا کرنے کی کوئی توجیہ مثلاً Right Bank Canal نہیں ہے۔ البتہ لیفٹ بینک کینال سے دریائے سندھ کے پانی کا رخ رسول قادر آباد سیکٹر میں موڑ کر پنجاب کی طرف کر دیا جائے گا اور سندھ اپنے پانی سے محروم ہو جائے گا۔ اور سندھ کے زرخی علاقے بخر بن جائیں گے۔ سندھ کا پانی دریائے سندھ میں در آئے گا۔ (جیسا کہ اس وقت بھی ہو رہا ہے) اور بدین اور ٹھٹھہ کے اضلاع تباہی کا شکار ہو جائیں گے۔ (یہ عمل اب بھی شروع ہو چکا ہے) کیونکہ ماضی حال اور مستقبل میں تونسہ، پنجند اور چشمہ جہلم کینال کی وجہ سے انہیں ایسے تجربات ہو چکے ہیں۔ اسی طرح بلوچستان کو بھی یہ خطرہ ہے کہ KBD کی تعمیر سے مستقبل میں اسے اس کی ضرورت کے مطابق 6000 کیوسک تک پانی کی سپلائی، پٹ فیڈر کینال کو مہیا نہ ہو سکے گی۔

1922ء سے لے کر 1944ء تک کے موسمی اور سالانہ پانی کے اخراج جو کہ مغربی دریاؤں میں ریکارڈ ہوئے ہیں ان سے یہ ثابت ہوتا ہے کہ اتنا پانی ہی نہیں کہ اسے جمع (سٹور) کیا جائے۔ اور اگر ایسا کوئی ذخیرہ بنایا بھی جائے تو یہ سندھ کے جائز قانونی حق کی قیمت پر ہوگا۔

کالا باغ ڈیم کی تعمیر سے علاقے کی جیولوجیکل صورتحال پر بھی منفی اثرات پڑیں گے۔ خصوصاً پٹھو ہار پلیٹو Pothowar Plateau اور پورے علاقے کے نمک کے ذخائر۔ اسی طرح اس ڈیم کے لئے جو جگہ منتخب کی گئی وہ کئی لحاظ سے ایک غلط انتخاب ہے۔ اور اسے Fault Line کہا جا سکتا ہے۔ اس علاقے میں Rock Strata، سینڈسٹون، کھلے اور لائم سٹون پر مشتمل ہے۔ اسی طرح اس علاقے میں Salt+Gypsum کے ذخائر کے پورے پورے طویل رینجر ہیں۔ پانی کے اس ذخیرہ کی وجہ سے یہ علاقہ شدید زلزلوں کی زد میں آئے گا اور زیریں علاقوں (Down Stream) کے رہنے والوں اور رہتیوں کے لئے خطرناک ثابت ہوگا۔ کالا باغ ڈیم کے غازی برودھ پاور چینل پر بھی منفی اثرات پڑیں گے۔ KBD کے ذخیرہ کی وجہ سے اس بات کا خطرہ ہے کہ پانی کا Fall، بڑے سیلابوں کے دوران Hydro Power Station پر کم ہو جائے۔ اور اس طرح اس کی بجلی پیدا کرنے کی استعداد کم ہو جائے گی۔ تعجب کی بات ہے کہ واڈا، کالا باغ ڈیم کی تعمیر پر تو اصرار کر رہا ہے مگر تربیلا کے متعلق Action Plan پر عملدرآمد سے گریز کر رہا ہے۔ جو کہ اس کی ہدایت پر Tarbela Sediment Managment Consultants یعنی TAMS نے مارچ 1998ء کو دیا تھا۔ جس پر تقریباً پانچ ارب ڈالرز کے خرچے سے تربیلا کے سٹوریج کی عمر میں 30 سے 40 سال کا اضافہ ہو سکتا ہے اور اسکی برقی پیداوار میں بھی تقریباً 30 فیصد اضافہ مل سکتا ہے۔

اسی طرح اگر بھاشا ڈیم کی تعمیر کی جائے تو اس کے ماحولیاتی نقصانات بھی کم ہیں۔ آبادی کا انتقال بھی بہت کم ہوگا۔ اخراجات کی کمی کے باوجود پانی کے ذخیرہ کرنے اور بجلی کی پیداوار میں بھاشا ڈیم کالا باغ ڈیم سے زیادہ صلاحیت رکھتا ہے اور اس کی سب سے بڑی خوبی مزید یہ ہے کہ اسکی تعمیر کے نتیجے میں تربیلا ڈیم کی عمر میں کم از کم 30 سے 40 سال کا اضافہ ہو جائے گا۔ کیونکہ بھاشا ڈیم میں سے ہو کر

آنے والے پانی میں 50% SILT فیصد کم ہوگی۔

ANP پوری امیداری کے ساتھ یہ سمجھتی ہے کہ کالا باغ ڈیم کا منصوبہ پاکستان دشمن ہے۔ مگر کچھ لوگوں کی ذاتی اغراض کی وجہ سے مسلسل پروپیگنڈہ کر کے پنجاب کے عوام کو فریب دیا جا رہا ہے۔ اگر پنجاب کے لوگوں کو پتہ چلے کہ ان کی قیمت پر دوسرے صوبوں کو تباہی کا شکار بنایا جا رہا ہے تو وہ یقیناً اسکی مخالفت کریں گے۔ 1991ء میں پانی کی تقسیم کا فیصلہ ہو چکا مگر اب حکمران اسے بھی Re-Open کرنا چاہتے ہیں۔ ایسے تمام اقدامات کا نتیجہ فیڈریشن کی تباہی ہوگا۔ جس میں واپڈا کے ذمہ صوبہ پنجتوںخوا کی تین کھرب روپے سے زائد بجلی کے خالص منافع کی رقم کو روکنا بھی ہے۔

APPENDIX F

Paper by

**Mr. Abrar Kazi**

Member Awami Tehreek Sindh

Secretary Sindh Water Committee

## سندھ گریٹر تھل کینال اور کالا باغ ڈیم کے کیوں خلاف ہے؟

ابرار حسین قاضی

سیکرٹری سندھ پانی کمیٹی

ممبر مرکزی کمیٹی عوامی تحریک

حیدرآباد

30 ستمبر 2003ء

صوبہ سندھ میں گریٹر تھل کینال اور کالا باغ کے خلاف شدید احساسات پائے جاتے ہیں۔ سندھ اسمبلی نے کالا باغ ڈیم کے خلاف 3 دفعہ اور گریٹر تھل کینال کے خلاف 2 دفعہ متفقہ قراردادیں پاس کی ہیں۔ سندھ کے لوگ ہر فورم اور ہر جگہ میں ان منصوبوں کے خلاف سراپا احتجاج بنے ہوئے ہیں اور ان منصوبوں کو اخلاقی، قانونی اور فنی لحاظ سے ناروا، غلط اور سندھ دشمن قرار دیتے ہیں۔ مرکزی حکومت اور واپڈا کے اہلکار جو ان منصوبوں کی مدافعت میں ہیں، سندھ کے اس شدید احتجاج کو ناکام اور غیر نمائندہ سیاستدانوں کا اپنے زندہ رہنے کیلئے استعمال کیا ہوا حراہ سمجھتے ہیں، اور ان منصوبوں کو پاکستان اور خاص طور پر سندھ کیلئے انتہائی سود مند منصوبے بیان کرتے ہیں۔

پنجاب کے وہ دوست جو انصاف پسند اور کھلا ہوا دل و دماغ رکھتے ہیں، انہوں نے سندھ کے اعتراضات کی شدت دیکھتے ہوئے مسئلہ کو سمجھنے کی خواہش ظاہر کی ہے۔ اس مضمون میں ایسے دوستوں کے لئے سندھ کا موقف اور اعتراضات اس امید پر پیش کئے جا رہے ہیں کہ پاکستان کے سب سے بڑے صوبے میں رہنے والے دوست یہ سمجھ سکیں کہ کیوں سندھ کے لوگ ان منصوبوں کو اخلاقی، قانونی اور فنی لحاظ سے ناروا اور سندھ دشمن سمجھتے ہیں۔

### اخلاقی اسباب:

سندھ کے لوگوں کو پنجاب کے حکمران طبقے سے سخت شکایت ہے کہ انہوں نے ہر معاملے اور خاص طور پر پانی کے معاملے میں، سندھ کے ساتھ ساتھ بلکہ پاکستان کے ساتھ، بہت بڑے فراڈ اور جرائم کئے ہیں اور دھوکہ دہی کو فراوانی سے استعمال کیا ہے۔ یہ تاریخ کا ایک ایسا المناک پہلو ہے جو اب تک چھپا ہوا تھا اور جسے تاریخ کی تصحیح اور سندھ کا موقف و تحفظات سمجھنے کیلئے اب منظر عام پر آنا چاہئے۔ سندھ اور پاکستان کے خلاف پانی کا سب سے بڑا فراڈ اور جرم تقسیم ہند کے وقت ہوا۔ برصغیر کی تقسیم کے وقت سرکاری اثاثوں کی تقسیم کیلئے ایک Division of Assets کمیٹی مقرر کی گئی اور اس کے فیصلوں کے خلاف اپیل کیلئے Arbitral Tribunal، جس کا سربراہ اس وقت کا ہندوستان کا چیف جسٹس تھا۔ دونوں کا عرصہ حیات 31 مارچ 1948ء تک رکھا گیا کہ امید یہ تھی کہ اس وقت تک اثاثوں کی تقسیم کا عمل مکمل ہو جائے گا۔ لیکن حیرت انگیز اور نہ سمجھ میں آنے والی وجوہات کی بناء پر پنجاب کے چیف انجینئر خان بہادر شیخ عبدالحمید نے Division of Assets Committee کے ایجنڈا سے اپنی تقسیم کا اسم ہی ہٹوا دیا!! ہندوستان نے 31 مارچ 1948ء تک پاکستان کی طرف بٹنے والے سب کینال تو بننے دیے اور پہلی اپریل کو پانی بند کر دیا۔ پنجاب میں کہرام مچ گیا اور پاکستان نے وزیر خزانہ غلام محمد (بعد کے گورنر جنرل) بمعہ پنجاب کے وزیروں شوکت حیات اور ممتاز دولتانہ کے سرہٹ دوڑتے ہوئے دہلی پہنچے اور ہند کے سامنے دست بدست درخواست گزار ہوئے اور بھاری رقم کے عوض پانی جاری کروا کر ہمیشہ کیلئے ستلج، بیاس اور راوی پر ہندوستان کا حق تسلیم کر آئے۔

سندھ کے لوگ یہ سمجھتے ہیں کہ یہ پوری بھاگ دوڑ اور واپڈا ایک نورا کشتی اور سندھ کے خلاف ایک کمروہ سازش تھی جس کو سمجھنے کیلئے بہتر ہے کہ پنجاب کے سیاستدانوں کی تحریروں پر پیش کی جائے۔ چودھری محمد علی اپنی کتاب The Emergence of Pakistan کے صفحہ 319 پر لکھتے ہیں (کاپی شامل کر رہا ہوں، Appendix I)۔ ”اس حقیقت کے برعکس کہ ریڈ کلف ایوارڈ نے پاکستان کیلئے انتہائی اہم ہیڈ ورکس کا کنٹرول ہندوستان کے ہاتھوں میں دے دیا تھا، مغربی پنجاب کی حکومت اطمینان سے بیٹھی رہی کیونکہ پنجاب پارٹیشن کمیٹی اور Committee B کے درمیان سمجھوتہ ہو گیا تھا کہ پارٹیشن سے پہلے والی پانی کی تقسیم کو تبدیل نہیں کیا جائے گا۔



ایسا کوئی بھی دستاویز رکھا گیا نہ دستخط کروائے گئے جس میں مشرقی اور مغربی پنجاب کے آبپاشی اثاثوں کا تخمینہ لگایا گیا ہو۔ مغربی پنجاب کے وزیر اور سرکاری عملدار اپنے ہندوستانی ہم منصبوں کی گردان سے مطمئن رہے کہ پارٹیشن سے پہلے والی پانی کی تقسیم کو تبدیل کرنے کا سوال ہی پیدا نہیں ہوتا۔ جب Arbitral Tribunal کے سامنے بھی پانی کے نظام کی تقسیم کا سوال اٹھا تو وہاں بھی یہی اعلان دہرائے گئے۔ حقیقت میں، جیسے بعد میں ظاہر ہوا، مشرقی پنجاب کے عملدار پنجاب حکومت کو لوریاں بنا کر سلائے کی کوشش میں مصروف تھے لیکن درپردہ وہ پاکستان کو ایک کاری ضرب لگانے کا ارادہ رکھتے تھے۔ وہ 31 مارچ 1948ء کے منظر تھے جس دن آر بی ٹی ٹرائیبول کی زندگی پوری ہونے والی تھی۔ مشرقی پنجاب نے میکا وی جیسی منافقت کا مظاہرہ کیا اور مغربی پنجاب نے عقل کی کمی، فرض کی کوتاہی اور غفلت کا۔ پاکستان کیلئے لیکن اس کا نتیجہ تباہ کن ثابت ہوا۔

”پہلی بار اپریل 1948ء کو، Arbitral Tribunal کے عرصہ حیات ختم ہونے کے دوسرے دن، مشرقی پنجاب نے پاکستان کی طرف بے بنیاد والے ہر کینال کا پانی بند کر دیا، جس میں سینٹرل باری دو آب کینال، دیپال پور کینال اور بہاول اسٹیٹ ڈسٹری بیوٹری شامل تھے۔ اس کمرہ حرکت پر تبصرہ کرتے ہوئے Arbitral Tribunal کے صدر سر پیٹرک اسٹینس نے لندن میں، 23 فروری 1955ء کو، ایسٹ انڈیا ایسوسی ایشن اور اورینٹل لیگ کی مشترکہ میٹنگ سے کہا، مجھے اچھی طرح یاد ہے کہ میں نے مشورہ دیا تھا کہ کیا یہ بہتر نہیں ہوگا کہ پانی کا بہاؤ جاری رکھنے کیلئے کوئی حکم جاری کیا جائے۔ لیکن ہمیں دونوں انٹرنیشنل جرنلز (ہندوستان اور پاکستان کے) نے یقین دلایا کہ پانی کی پرانی تقسیم میں کسی قسم کی رکاوٹ پیدا نہیں کی جائے گی۔ بس اس سے زیادہ میں کچھ نہیں کہوں گا کہ ہمارا فیصلہ آنے کے صرف چند دن بعد پانی کے بہاؤ میں سنگین مداخلت کی گئی، جس سے مجھے بہت ڈہنسی کوفت ہوئی۔“

آگے چل کر جوڈری جمعی علی مزید لکھتے ہیں، ”ان انتہائی مایوس کن حالات میں، مئی 1948ء کے اوائل میں، مسئلہ کا حل تلاش کرنے کے لئے پاکستان سے ایک وفد وزیر خزانہ غلام محمد کی سربراہی میں، دہلی روانہ کیا گیا جس میں مغربی پنجاب کے دو وزیر شوکت حیات خان اور ممتاز دولت نادر شامل تھے۔ دہلی میں مشرقی پنجاب کے نمائندے بھندر رہے کہ پانی اس وقت تک نہیں بہایا جائے گا جب تک مغربی پنجاب یہ مان نہ لے کہ اس پانی پر ان کا کوئی قدرتی حق نہیں ہے۔“ اس کے بعد کچھ اور نوآرٹھنٹی ہوتی رہی اور آخر میں غلام محمد کے سامنے ایک بیان کھول کر رکھا گیا کہ، ”پانی صرف اس شرط پر چھوڑا جا رہا ہے کہ مغربی پنجاب ایک Escrow اکاؤنٹ میں اتنے پیسے رکھے گا جتنے وزیر اعظم ہندوستان فیصلہ کریں۔“

حقیقت میں مغربی پنجاب کے وزیر اور عملدار پہلے ہی ستلج، بیاس اور راوی ہندوستان کو بیچنے کی سازش کر چکے تھے۔ سردار شوکت حیات اپنی کتاب ”The Nation Hat Lost its Soul“ کے صفحہ 202 پر لکھتے ہیں (کاپی شامل کر رہا ہوں، Appendix II) ”مشرق اور مغربی پنجاب میں اثاثوں کی تقسیم کیلئے کمیٹیاں بن چکی تھیں اور باری باری لاہور اور مشرقی پنجاب کے عارضی دارالخلافہ جالندھر میں ملتے تھیں۔ اصول یہ وضع ہوا کہ کمیٹیوں کے درمیان اختلاف کی صورت میں Arbitral Tribunal سے رجوع کیا جائے گا جس کا سربراہ ہندوستان کا چیف جسٹس سر پیٹرک اسٹینس تھا۔ ہندوستان اور پاکستان پنجاب کے درمیان پانی کی تقسیم کا معاملہ جالندھر میں منعقد ہونے والی ایک میٹنگ میں طے ہونا تھا جس میں میں بھی شریک ہوا۔ آبپاشی کا چیف انجینئر اور سیکریٹری عبدالحمید چیف سیکریٹری حافظ عبدالمجید آری ایس بھی میرے ہمراہ تھے۔“

”دوسرے دن ہم نے پانی کے مسئلے کا اٹھانا تھا جس پر ہماری پوری معیشت کا انحصار تھا۔ ہم نے آپس میں اس مسئلے پر بات چیت کی اور اس نتیجے پر پہنچے کہ اگر ہم یہ مسئلہ Arbitral Tribunal میں لے بھی گئے اور اگر ہمارے حق میں فیصلہ ہو بھی گیا تو بھی یہ فیصلہ منوائیں گے اس طرح جب ریڈ کلف ایوارڈ نے ناخوش بیڈ ورکس ہندوستان کے حوالے کر دیے ہیں۔ اس لئے ہم نے فیصلہ کیا کہ کوئی درمیانہ راستہ تلاش کیا جائے جس میں کینال اور ہندوستان کو ملے ہوئے ہیڈ ورکس کے خرچے میں حصہ داری کی جائے۔ بڑے بحث و مباحثہ کے بعد ہندو ایک سمجھوتے پر پہنچے لیکن صد افسوس کہ وہ اپنے چاکی (میکا وی) فلسفہ پر قائم رہتے ہوئے بعد میں مگر گئے۔ Arbitral Tribunal کی عمر پوری ہونے کے دوسرے روز انہوں نے مادھو پور ہیڈ ورکس میں سے نکلنے ہوئے باری دو آب اور فیروز پور ہیڈ ورکس میں سے منگمری علاقے کو سیراب کرنے والے دیپال پور کینال اور بہاول پور کینال کا پانی بند کر دیا۔ مجھے سخت دھچکا لگا۔“

ان دردی داستانوں سے چنداں ہم سوالات ابھرتے ہیں۔ (1) کیا اثاثوں کی تقسیم کی کمیٹی کے ایجنڈا سے پانی کے اثاثوں کا اسم خارج کروانا، لکھت میں کوئی دستاویز تیار نہ کرنا، نہ ہی کسی قسم کی تحریر پر دستخط کروانا، پانی کے اثاثوں کے تخمینے ہی پر کام نہ کرنا، پانی کے ہر فیصلے کو زبانی رکھنا، چیف جسٹس کے واضح اشارے کے بعد بھی اسے آرڈر نہ لینا، یہ سب حکومت پنجاب کے سیاستدانوں اور عملداروں کی اور مختلف اوقات پر کی ہوئی ”فرض کی کوتاہی“ اور ”عقل کی کمی“ کے واقعات ہیں یا ایک ملک اور سندھ دشمن سازش کی کڑیوں کا سلسلہ ہے؟ (2) کیا مغربی پنجاب کے عملداروں کو یہ علم تھا کہ پاکستان ایک وفاق ہے جس میں 5 صوبے ہیں (اس وقت تھے) اور قومی و بین الاقوامی قانون کے مطابق سندھ بھی ستلج، بیاس اور راوی کے پانی میں حصہ دار ہے؟ پھر سندھ کے کسی نمائندہ کو کیوں شامل نہیں کیا گیا؟ (3) مغربی پنجاب کے سیاستدانوں اور عملداروں کو صدیاں سکھ اور ہندوؤں کے ساتھ رہنے گزارنے تھے بلکہ تقسیم ہند سے پہلے تو بہت سے بحث و مباحثے اور جھگڑے بھی چھڑے ہوں گے، ان بیچاروں کو کیا اچانک پتہ چلا کہ ہندو میکانیک کے ہیرو کار ہیں؟ (4) آر بی ٹی ٹرائیبول کا قانونی راستہ چھوڑ کر انہوں نے، بقول شوکت حیات کے، ہندوؤں کے ساتھ ایک خفیہ سمجھوتہ کیا (جس سے بھی، بقول اس کے، ہندو پھر گئے)۔ کیا حکومت پاکستان یا مغربی پنجاب نے انہیں خفیہ سمجھوتے کرنے کی اجازت دی تھی؟ اگر ہاں تو کس نے دی تھی اور وہ خط و کتابت کہاں ہے؟ انٹرنیشنل جرنل نے اتنے واضح اشارے ملنے کے بعد بھی اسے آرڈر کیوں نہیں لیا؟ کیا انہوں نے اتنا بڑا فیصلہ کرنے سے قبل کسی سے اجازت طلب کی تھی؟ (5) کیا تین چھوٹے کینال ایک مہینہ سوکنے پر

در چند ہجینس بکریاں پیاسی رہنے پر اپنی تین ندیاں بیچ دینی چاہئیں؟ کیا پنجاب حکومت میں کسی کو بھی علم نہیں تھا کہ پیسے دے آنے اور شرائط ماننے سے کس قسم کی مشکلات پیدا ہونے کے امکانات ہیں؟ (6) اگر پنجاب کے عملداروں اور سیاستدانوں سے ”غفلت اور فرض میں کوتاہی“ ہوئی تو کیا کسی کو اس کی سزا ملی؟ کوئی عملدار معطل ہوا یا سے نوکری سے خارج کیا گیا؟ اس کے برعکس دیکھا یہ گیا کہ نہ صرف کسی کو سزائیں ملی بلکہ ان میں سے چند، خاص طور پر شیخ عبدالحمید، 1960ء میں واشنگٹن میں سندھ طاس معاہدے پر دستخط کرنے والوں میں پیش پیش تھے۔

پنجاب کے سیاستدان اور حکومتی اہلکار اتنے سادہ یا بیوقوف نہیں ہیں جتنا چودھری محمد علی اور شوکت حیات اپنی کتابوں میں ثابت کرنے کی کوشش کر رہے ہیں۔ بلکہ اس بات کے امکانات زیادہ ہیں کہ پنجاب کے حکمران ٹولے نے سندھیوں کے مقابلے میں اپنے (سکھ) پنجابی بھائیوں کو ترجیح دی اور نوکری اور ڈرامہ رچاکے، اپنے سکھ بھائیوں سے ملی بھگت کر کے، سندھ اور پنجاب کے پرانے پانی کے جھگڑے کو مغربی اور مشرقی پنجاب، بلکہ ہندوستان اور پاکستان کے جھگڑے میں تبدیل کر کے ایک بین الاقوامی اشوگرہ کر دیا، اور سندھ صوبہ جو اب تک پانی کے جھگڑے میں ایک فریق تھا، اسے باہر پھینک کر دریائے سندھ کا پانی آپس میں بانٹ لیا۔

کچھ عرصہ بعد ہی، 1960ء میں، اتنے بڑے فراڈ اور ہمالیہ جتنے جرم کو سندھ طاس معاہدے کے تحت قانونی شکل دی گئی اور دریائے سندھ کے تین اجزاء، ستلج، بیاس اور راوی ہندوستان کو 47 کروڑ 50 لاکھ ڈالر میں بیچ دیے گئے۔

ہندوستان کو 3 ندیاں بیچنے کا عمل کتنا پاکستان دشمن ہے اس کے بارے میں بہتر ہوگا اگر آپ کو پنجاب حکومت کا موقف بتایا جائے۔ حکومت پنجاب نے 1970ء میں فضل اکبر کمیشن کے سامنے اپنا کیس پیش کرتے ہوئے شکایت کی کہ ہندوستان کی جغرافیائی حدود میں وادی سندھ (Indus Basin) کی صرف 6% زمین ہے لیکن اسے دریائے سندھ کا 20% پانی (33 بلین ایکڑ فٹ یا ماف) دے دیا گیا ہے۔ (نتیجہ یہ نکلا ہے کہ ہندوستان نے اس پانی سے پورے صحرا جستان کو ہرا کر دیا ہے اور پاکستان میں صوبے ایک ایک ماف کے لئے لڑ رہے ہیں۔)

سندھ کے لوگ یہ سمجھتے ہیں کہ حکومت پنجاب کے پاس تین چار ٹوپیاں ہیں جو اس کے کارندے حسب ضرورت بدلتے رہتے ہیں۔ ایک ٹوپی حکومت پنجاب کی اپنی ہے جسے بہن کر ہندوستانی پنجاب کے سکھ بھائیوں سے بیچتی کا اظہار کرتے ہوئے انہیں تین ندیاں بیچ دیں (نوٹ فرمائیے کہ چودھری محمد علی اور شوکت حیات نے ہر جگہ اپنی کتابوں میں ”مغربی پنجاب حکومت“ لکھا ہے)۔ پھر وہ ٹوپی اتار کر وفاقی حکومت کی ٹوپی پہن لی اور سندھ طاس معاہدے کے خدو خال طے کئے (واشنگٹن میں سندھ طاس معاہدے کی تفصیل طے کرنے والی ٹیم میں 7 عملدار تھے، جو سب کے سب پنجاب سے تعلق رکھتے تھے۔ لسٹ شامل کر رہا ہوں۔ Appendix III) پھر وفاق کی ٹوپی اتار کر پنجاب حکومت کی ٹوپی پہن لی اور واپلا کرنے لگے کہ وفاق نے ہماری ندیاں دے دیں۔ آج دن تک پنجاب کا حکمران ٹولہ دریائے سندھ کا پانی چرانے یا اپنے حصے سے زیادہ لینے کا سبب یہ ہی گردانتا ہے۔ 22 جولائی 2003 کو بھی پنجاب کے سیکریٹری آبپاشی نے دیکھنا کھانا کیا ہے کہ ہماری تین ندیاں وفاق نے دے دیں اس کا جو ماحول یا اثر پڑا ہے اس کیلئے وفاق کچھ کرے۔ سندھ کے لوگوں کو لگتا ہے کہ ان آنسوؤں سے کتنی ہمدردی ہوگی یا ہونی چاہئے، وہ اندازہ آپ لگا سکتے ہیں۔

سندھ طاس معاہدے کے تحت 475 بلین ڈالر (جو اس وقت ایک خلیفہ رقم تھی) وصول ہوئے وہ تریلا ڈیم کے علاوہ سب کے سب پنجاب میں خرچ ہوئے۔ لیکن کینالوں کا ایک جال چھا کر جہلم، چناب اور دریائے سندھ کو کھسکی ہوئی ندیوں سے ملا لیا گیا۔ 15000 ٹیوب ویل لگائے گئے اور منگلا ڈیم بنا جس کا بنیادی مقصد بیٹی ہوئی ندیوں کی کمی کو پورا کرنا تھا (خاص طور پر سردیوں میں)۔ سندھ میں ایک پانی بھی خرچ نہیں کی گئی اور آپ کون کر جرت ہوگی کہ منگلا ڈیم میں سے، جب سے وہ 1967ء میں بنا ہے، سندھ کو ایک بوند پانی کی کبھی نہیں دی گئی۔

ایک کینال کا جال بیچنے سے پنجاب کی تقریباً ایک کروڑ ایکڑ زمینی تک پانی پہنچ گیا۔ اب تک سندھ اور پنجاب کے درمیان پانی کی تقسیم سندھ پنجاب (ڈرافٹ) ایگریمنٹ 1945ء کے تحت ہوا کرتی تھی جس میں کل 103 ماف میں سے سندھ کو 48.74 ماف اور پنجاب کو 48.33 ماف دیے گئے تھے۔ پنجاب میں ایک کروڑ ایکڑ زیادہ زمین زیر کاشت آنے کے بعد زیادہ پانی کا استعمال ہونے لگا جسے قانونی شکل دینا ضروری ہو گئی۔ اسلئے 1991ء کے پانی کے بین الصوبائی سمجھوتے میں پانی کی تقسیم کی بنیاد 1945 ڈرافٹ ایگریمنٹ کی جگہ 82-1977ء کے حقیقتاً استعمال کئے ہوئے پانی کو رکھا گیا۔ سندھ نے بہت شکایت کی پنجاب کی طرح اسے پانی کے استعمال بڑھانے کے مواقع ہی نہیں ملے تو اسے کس بات کی سزا دی جارہی ہے۔ لیکن ہمیشہ کی طرح اس کی بات سنی نہیں گئی۔ اس طرح سندھ کا ستلج، بیاس اور راوی کے پانی میں حصہ بھی گیا، متبادل اور ترقی کیلئے جو پیسے ملے تھے، ان میں سے بھی ایک پانی نہیں ملی اور آخر میں اس کے حصے کا پانی بھی ہمیشہ کیلئے کم ہو گیا۔

1991ء کے کارڈ میں پانی کی تقسیم کی بنیاد 82-1977ء کے حقیقی استعمال کا سالانہ اوسط رکھا گیا۔ اس وقت گریٹر تھل کینال کا وجود ہی نہیں تھا۔ (بلکہ اب تک نہیں ہے صرف ٹھوڑی سی کھادی ہوئی ہے)۔ اسلئے گریٹر تھل کیلئے پانی مختص کرنے کا سوال ہی پیدا نہیں ہوتا تھا۔ لیکن جب ہر صوبے نے اپنے اپنے کینالوں کو سالانہ اوسط کی تفصیل پیش کی تو پنجاب نے چوری چھپے اس میں گریٹر تھل کینال کا نام گھسیڑ دیا۔ سندھ نے بہت شور مچایا کہ یہ غلط ہو رہا ہے، گریٹر تھل کا وجود ہی نہیں ہے اس کیلئے پانی کیوں رکھا جا رہا ہے (چند سرکاری خطوط کی کاپیاں پیش کر رہا ہوں، Appendix IV)، لیکن ہمیشہ کی طرح پنجاب حکومت ٹال مٹول سے کام لیتی رہی جب تک مشرف حکومت کی آمد سے اسے ماضی کی طرح اپنے جرائم اور فراڈ کو ایک دفعہ پھر قانونی شکل دینے کا موقع نہیں مل گیا۔ اب جنرل مشرف نے ان کا زاپہ ہاتھ میں لے لیا ہے اور کہتے ہیں کہ گریٹر تھل ہر حال میں بنے گا۔

لیکن گریٹر تھل کینال کو چوروں کی طرح دے پاؤں 1991ء کے کارڈ کی تفصیل (Annexure) میں داخل کرنے اور ڈھٹائی سے اسے 1991ء کے کارڈ کا حصہ قرار دینے سے بھی زیادہ متر اور

سندھ دشمن حرکت جو پنجاب کا قلمدان طبقہ کرتا رہا ہے، وہ ہے 1994ء کی تقسیم کا فارمولہ جو حکومت پنجاب نے ایک بین الصوبائی کارڈ (1991ء) کے ہوتے ہوئے 1994ء سے اب تک مسلط کر رکھا ہے۔

جیسے اوپر عرض کیا ہے 1991ء کے کارڈ میں تقسیم کی بنیاد 1977-82ء کے پانی کے حقیقی استعمال کی اوسط رکھی گئی۔ 1977-82ء میں چاروں صوبے 105 ماف استعمال کرتے تھے ان میں سے پنجاب 54 ماف (یعنی 105 تقریباً 52%) اور سندھ 44 ماف (یعنی 105 کا 41%)۔ (آسانی کیلئے اعشاریہ نکال دیا گیا ہے)۔ 1991ء کے کارڈ میں چاروں صوبوں میں جاری اور موجود منصوبوں کیلئے 117 ماف پانی تقسیم کیا گیا جس میں پنجاب کو 56 ماف (یعنی 117 کا 48%) حصہ ملا اور سندھ کو 49 ماف (یعنی 117 کا 42%)۔ کارڈ میں یہ بھی صاف رکھا گیا کہ پانی کی کمی کی صورت میں صوبوں میں پانی کی تقسیم اسی حساب سے (Prorta) ہوگی اور اصولاً بھی یہی ہونا چاہئے کہ کسی کی صورت میں جو بھی پانی میسر ہو اس میں سے پنجاب 40% اور سندھ 42% لے یا جتنی کمی ہو اس کا 48% حصہ پنجاب کے حصے میں آئے اور 42% حصہ سندھ کے۔ لیکن ایسا نہیں ہوا۔ ایک عجیب و غریب ٹرکسال کیا گیا۔

1994ء میں پانی کی قدرتی کمی واقع ہوئی اور پانی کی کل مقدار دریائے سندھ اور اسکے پورے نظام میں 127 ماف ہو گئی۔ لاہور میں ایک معمول کے مطابق منعقد کی گئی وزارتی میٹنگ کے بعد منٹس ظاہر کیے گئے جو بالکل جھوٹے اور بوگس تھے کہ میٹنگ میں فیصلہ ہوا ہے کہ آئندہ پانی کی کمی کے دوران تقسیم 1977-82ء کے حقیقی استعمال والے فارمولے سے ہوگی۔ سندھ نے بہت شور مچایا اور شکایت کی کہ اس قسم کی کوئی بات نہ بحث میں آئی نہ طے ہوئی (سندھ حکومت کی خط و کتابت کے چند اوراق شامل کر رہا ہوں، Appendix V)، لیکن ہمیشہ کی طرح آج تک مختلف حیلے اور بہانے بنا کر 94 کا فارمولہ زبردستی لاگو رکھا گیا ہے۔

اس فارمولے کے تحت اگر صوبوں کو بانٹے ہوئے 117 ماف سے ایک چھپچھی پانی کم ہو جائے تو پنجاب کا حصہ 48% سے بڑھ کر 52% ہو جاتا ہے!! مثلاً اگر پانی ایک ماف سے کم ہو کر 116 ماف ہو جائے تو پنجاب کا حصہ 48% (یعنی 55 ماف) سے بڑھ کر 52% (یعنی 60 ماف) ہو جاتا ہے!! اس غیر منصفانہ اور غیر اخلاقی فیصلے کو لاگو کرنے کے لئے، 1991ء کے کارڈ کی روح اور الفاظ کے برخلاف، بلوچستان اور سرحد کو یہ یقین دلا گیا کہ کسی زمانے میں ان کا حصہ کم نہیں ہوگا۔ یعنی اگر پانی کی کل مقدار قدرتی طور پر کم ہو جائے تو پنجاب کا حصہ اس کے پورے حصے سے بڑھ جائے گا اور بلوچستان اور سرحد کو پہلا حصہ ملے گا!! اب آپ سمجھ سکتے ہیں کہ سندھ کیوں اتنے برس سے پینے کے پانی کو بھی ترس رہی ہے۔

چھپلے 4 برس پانی کی قدرتی کمی کے برس تھے۔ 1999ء میں پانی 124 ماف تھا، 2000ء میں چھپلے 80 سال میں سب سے کم، ریکارڈ، 96 ماف، 2001ء میں 99 ماف اور 2002ء میں 113 ماف۔ جب اس زمانے میں 94 کا فارمولہ زبردستی رائج کیا گیا تو سندھ میں روزانہ چار پانچ جگہوں پر پانی کی کمی کے خلاف احتجاج ہوتے رہے۔ دوسری طرف ان چار برس میں پنجاب میں سپر اور ریکارڈ فصل ہوتے رہے۔ نہ صرف پنجاب کے کسی حصے سے پانی کی کمی کی شکایت نہیں آئی بلکہ پنجاب حکومت کے محکمہ زراعت کے مطابق 1,150,000 ایکڑ زیادہ زمین پر گتے کی اور 1,120,000 ایکڑ زیادہ پر چاول کی کاشت ہوئی ہے۔

سوال یہ پیدا ہوتا ہے کہ کیا پاکستان کے دوسرے بڑے اور اہم صوبے کے ساتھ یہ سلوک ہونا چاہئے؟ سندھ کا 99% زرخیز زمین پانی سمندر کے پانی سے بھی زیادہ نمکین اور کڑوا ہے۔ سندھ میں بارشیں برسوں نہیں ہوتیں۔ ہم پینے کے پانی کیلئے بھی دریائے سندھ پر انحصار کرتے ہیں۔ سندھ کی معاشی ترقی انتہائی غیر ہموار ہوئی ہے۔ پنجاب کے برعکس جس میں بڑے بڑے صنعتی مراکز پورے صوبے میں پھیلے ہوئے ہیں، جو چھوٹے شہروں کو ذریعہ معاش فراہم کرتے ہیں اور چھوٹے شہر دیہاتوں کو روزگار دیتے ہیں، سندھ میں تاریخ کے ایک حادثے نے صوبے کی ایک تہائی آبادی (ایک کروڑ بیس لاکھ آدمی)، 99% صنعت، 99% تجارت، پوری دولت، پورا ہنر اور پورا مارکٹ جنوب مغرب کے صرف ایک شہر، کراچی میں مرکوز کر دیا ہے۔ اسلئے اندرون سندھ میں روزگار کا بھی واحد ذریعہ دریائے سندھ کا پانی، یعنی زراعت ہے۔ اگر سندھ کے لوگ دریائے سندھ کے پانی کے متعلق اتنے حساس ہیں تو اسکی وجہ یہ ہے کہ انکے روزگار اور اس سے بھی بڑھ کر پینے کے پانی کا پورا دار و مدار مکمل طور پر دریائے سندھ پر ہے۔ ہر شخص سمجھ سکتا ہے کہ روزگار اور پینے کے پانی کے بغیر زندگی ممکن نہیں ہے۔ اس طرح دریائے سندھ، سندھ اور سندھ کے لوگوں کی زندگی ہے۔

سندھ کے لوگ مرکزی حکومت اور واپڈا، اور اس جیسے سب مرکزی اداروں کو، حکومت پنجاب کے ذیلی محکمے سمجھتے ہیں۔ اسلئے مرکزی حکومت اور واپڈا کے کہے ہوئے سب فیصلے پنجاب اور اسکے مفادات سے منسوب کئے جاتے ہیں۔ انکی نظر میں پنجاب کا حکمران طبقہ اپنی ندیاں بچ کر 24 گھنٹے دریائے سندھ کے پانی پر نظر س گاڑے رکھتا ہے، پورے منگلا ڈیم کو بھرم کرنے کے بعد مستقل چشمہ۔ جہلم اور تونسہ۔ بجنڈ کھلا رکھ کر دریائے سندھ کا پانی چراتا ہے، 1991ء کا معاہدہ کرنے کے بعد نہ صرف اس سے منکر جاتا ہے بلکہ فراڈ کے ذریعے اپنے حصے سے زیادہ پانی لینے کا بوگس فیصلہ مسلط کرتا ہے، گریٹر تھل کینال کا نام اور میٹنگ کے منٹس میں من گھڑت فیصلے داخل کر کے انتہائی نچلے درجے کے بین الصوبائی آداب اور طریقہ کار کی خلاف ورزی کرتا ہے، تو اس حکمران طبقے پر یہ یقین کیسے کیا جاسکتا ہے کہ وہ آج کا لا باغ ڈیم بنا کر کل اس میں سے پانی نہیں چرائیں گے یا گریٹر تھل کینال بنانے کے بعد اسے چشمہ۔ جہلم اور تونسہ۔ بجنڈ کی طرح ہمیشہ کھلا نہیں رکھیں گے؟ پنجاب کا حکمران طبقہ پانی کے بڑے منصوبے بنانے کا اخلاقی جواز کھو چکا ہے۔ سندھ کے لوگ اس طبقے پر کبھی بھی یقین نہیں کریں گے۔

## قانونی اسباب:

صوبوں کے درمیان، یا بین الاقوامی پانی کے جھگڑے نئی بات نہیں ہیں۔ پچھلی صدی میں ایسے بہت سارے تنازے اٹھے تھے جن کے بارے میں کورٹ آف انٹرنیشنل جسٹس، یا خصوصی طور پر منعقد کی ہوئی کمیشنوں نے بہت شاندار فیصلے دیے ہیں۔ امریکہ کی سپریم کورٹ نے خاص طور پر پانی کے بین الصوبائی جھگڑے نبھانے کیلئے بڑے جامع فیصلے کئے ہیں۔ ان فیصلوں سے دو اہم اصول وضع ہوئے ہیں۔ ایک مسلمہ اصول یہ ہے کہ کسی بھی ایک ندی پر پہلے بنے ہوئے پیراج کا حق بعد میں بنے ہوئے پیراجوں سے زیادہ ہے۔ اس اصول کے تحت جب تک دریائے سندھ پر بنے ہوئے پیراج اپنا مقرر کیا ہوا پانی نہیں لیتے، چشمہ، جہلم اور تونہ۔ پنجند نہیں کھلنے چاہئیں کیونکہ اسکے ذریعے پانی پنجند اور اسلام پیراجوں کو جاتا ہے جو دریائے سندھ پر واقع نہیں ہیں۔ جب سندھ اس اصول کے تحت چشمہ، جہلم اور تونہ۔ پنجند بند کرنے کو کہتی ہے تو پنجاب حکومت کی طرف سے جواب آتا ہے کہ 3 دریائے سندھ کے بعد پورا نظام ایک ندی تصور کیا جانا چاہئے۔ یعنی دریائے سندھ، پنجاب اور جہلم ایک ہی ذریعہ (Source) ہیں۔ جب سندھ کہتی ہے کہ اگر سب ندیاں ایک ہی ذریعہ ہیں تو اسے منگلا ڈیم سے بھی پانی دیا جائے تو جواب ملتا ہے کہ سندھ طاس معاہدہ کے دوران ہندوستان سے مذاکرات میں مشرقی اور مغربی زون تشکیل دیے گئے تھے۔ آپ مغربی زون یعنی دریائے سندھ سے پانی لیں، جہلم اور پنجاب کو چھوڑیں۔

دوسرے اصول کی بنیاد اس حقیقت پر ہے کہ اگر اوپر والا حصہ دار چاہے تو نچلے کو صحرا بنا سکتا ہے، اسلئے نچلے حصہ دار کے حقوق اور مفادات کے تحفظ کی خاطر یہ قانون وضع ہوا کہ پانی کا کوئی بڑا منصوبہ بنانے سے پہلے حصہ دار کی رضامندی ضروری ہے۔ ہمارے آئین کی دفعہ 155 میں بھی واضح ہے کہ اگر کسی حصہ دار صوبے یا اس میں رہنے والے کسی انسان کے قدرتی پانی کی فراہمی میں خلل پڑے تو وہ صوبہ کا وٹسل آف کامن انٹریسٹس کی میٹنگ بلا سکتا ہے جس میں مسئلہ کا تصفیہ ہوگا ورنہ پارلیمنٹ، یعنی قومی اسمبلی اور سینیٹ، کا متفقہ اجلاس بلا یا جانے گا جس میں فیصلہ ہوگا۔ سندھ اسمبلی گریٹر تھل کینال کے خلاف دو دفعہ اور کالا باغ ڈیم کے خلاف تین دفعہ متفقہ قراردادیں پاس کر چکی ہے۔ اس سے بڑھ کر سندھ کے لوگوں کی منشاء کا اظہار اور کوئی نہیں ہو سکتا۔ جو لوگ اسے چند لوگوں کی سیاست چکانے کے لئے اٹھایا ہوا مسئلہ کہتے ہیں وہ باقوت بالکل دیکھ نہیں سکتے یا دیکھنے سے گریز کر رہے ہیں۔

پچھلے سال مئی میں، جنرل ذوالفقار رسول بخش پلجھو سے ملنے آئے تھے۔ میں بھی اس میٹنگ میں موجود تھا۔ میں نے جنرل صاحب سے سوال کیا کہ کیا وجہ ہے کہ اس وقت جب صوبوں کے درمیان تعلقات کشیدہ ہیں، جس کا ذکر جنرل پرویز مشرف اپنی پہلی تقریر میں بھی کر چکے ہیں تو آپ نے گریٹر تھل کینال پر کام شروع کر دیا ہے جس سے کشیدگی مزید بڑھنے کے امکانات ہیں؟ انہوں نے جواب دیا کہ مجھ سے جنرل مشرف نے پوچھا کہ وہ کون سا کام ہے جو ہم شروع کر سکتے ہیں اور جس کا ہمارے دور میں ختم ہونا بھی ممکن ہو تو میں نے کہا کہ گریٹر تھل کینال۔ انہوں نے کہا کہ کام شروع کرا دو اور میں نے کرا دیا۔

سندھ کے چار کروڑ عوام کو جو آئینی تحفظ اور ملکی اور بین الاقوامی قانون کی حمایت حاصل ہے وہ کیا دوا فراہم اور ان کا ساتھ دینے والے ایک صوبے کے حکمران ٹولے کے پیروں تلے پورے رونا جانا چاہئے؟ کیا وفاق میں اکائیوں کے ساتھ یہ سلوک ہونا چاہئے؟ یہ تو نہ صرف سندھ کو زخمی کرنا ہوا بلکہ اسکی جمیت اور غیرت کو بھی مٹی میں ملانا ہوا۔ یہ ایسا ہے جیسے سندھ کے لوگوں سے کہا جا رہا ہو کہ ہم نے گریٹر تھل کینال ہر حال میں بنانا ہے، تم نے جو کچھ کرنا ہے کر لو۔

## قٹی اسباب:

سندھ کے لوگوں کا خیال ہے کہ کالا باغ ڈیم اور گریٹر تھل کینال فنی لحاظ سے بہت غلط منصوبے ہیں جن کا فائدہ تو چند لوگوں کو ملے گا لیکن جنکے بے انتہا نقصانات صرف سندھ کے حصے میں آئیں گے۔ اس سوچ کے اسباب اور سندھ کے شک و شبہات کی بڑی وجوہات یہ ہیں:-

(1) کالا باغ ڈیم کی مدافعت میں سب سے بڑی وجہ یہ بیان کی جاتی ہے کہ موجودہ دو ڈیموں کی 18 ملین ایکڑ فیٹ (MAF یا ماف) کی گنجائش میں سے چوتھائی، یعنی 4.5 ماف، ریت بھرنے کی وجہ سے ضائع ہو چکی ہے۔ اسلئے پچھلے والی گنجائش حاصل کرنے کیلئے ایک نیا ڈیم فوراً بنانا چاہئے۔ کیونکہ کالا باغ ڈیم کی انجینئرنگ ڈرائیونگ بھی تیار ہے اسلئے یہ ڈیم 8 برس میں بن جائے گا کوئی اور ڈیم 5 برس زیادہ لے گا۔ کہیں کوئی بھی ڈیم بنانے سے پہلے ایک بڑا سوال یہ ابھرتا ہے کہ تریلا ڈیم جو آج سے 30 سال پہلے مکمل ہوا تھا اسکی ریت نکالنے کا اب تک کوئی انتظام کیوں نہیں کیا گیا؟ مارچ 1998ء میں ٹیس ویلنگفورڈ (Tams-Wallingford) کمپنی سے تریلا کی مٹی نکالنے کا ابھیاس کروایا گیا تھا جس میں نہ صرف تریلا کی مٹی نکالنے کے طریقے وضع کئے گئے تھے بلکہ کالا باغ ڈیم کی تعمیر اور تریلا کی مٹی نکالنے کا موازنہ بھی کیا گیا تھا جس سے یہ ظاہر ہوا تریلا کی ریت نکالنے کا خرچ (20 ارب روپے) کالا باغ ڈیم تعمیر کرنے کے خرچ (360 ارب روپے) کا اٹھارواں حصہ ہے۔ واپڈا کے چند قریبی حلقوں سے کہتے سنا ہے کہ تریلا کی مٹی نکالنا ناممکن ہے۔ قطع نظر اسکے کہ پاکستان کے سب سے بڑے اور اہم ڈیم کو اس حالت پر کیوں پہنچنے دیا گیا، اگر تریلا کی مٹی نکالنا ناممکن ہے تو جو موجودہ گنجائش ہے اسے قائم رکھنے کی کوششیں ہوتی ہوئی نظر کیوں نہیں آ رہیں؟ 30 سالوں میں ڈیموں کی سائنس تو بہت ترقی کر گئی ہے۔

(2) کابل ندی دریائے سندھ کی سب سے مثیالی ندی ہے اور دریائے سندھ کی 400 ملین ٹن سلاٹ مٹی میں سے 100 ملین ٹن صرف کابل ندی لے آتی ہے۔ اس مٹی کی وجہ سے کالا باغ ڈیم محض

45 سال میں مٹی سے بھر جائے گا جس کے لئے قوم سے 360 ارب روپے خرچ کرائے جا رہے ہیں۔

(3) ایک اور سوال یہ ابھرتا ہے کہ اگر تریبلا ڈیم مٹی سے بھر رہا ہے تو کیا غلغلہ اس میں نہیں ہے کہ تریبلا کے نیچے (کالا باغ پر) نہیں بلکہ اوپر کہیں ڈیم بنایا جائے تاکہ تریبلا کی زندگی بڑھ سکے؟ مثلاً تریبلا کے اوپر اگر کوئی ڈیم ہو (جیسے بھاشا کے مقام پر) اور وہ آہستہ آہستہ تریبلا کو پانی دیتا رہے تو تریبلا کی پیک (Peak) بجلی کی پیداوار میں کم از کم دو مہینے کا اضافہ ہو سکتا ہے جس سے واپڈامنت میں اربوں روپے زیادہ حاصل کر سکتا ہے۔ اس بات کا عموماً واپڈا کے پاس ایک ہی جواب ہے کہ کسی اور ڈیم کی فیئر ٹیلیٹی تیار نہیں ہے۔ لیکن اس بہانے کو بھی تو 15 برس گزر گئے ہیں۔

(4) کالا باغ ڈیم کی مدافعت میں مسلسل یہ پروپیگنڈا ہوتا رہا ہے کہ اس ڈیم کی وجہ سے دو کروڑ چھبیس لاکھ ایکڑ (22.6 ملین) زمین آباد ہوگی اور پورا پاکستان گل و گلزار ہو جائے گا۔ یہ مکمل غلط بیانی ہے۔ کالا باغ ڈیم میں 6 فٹ پانی جمع ہونا تھا۔ ایک ایکڑ کو سال بھر میں تین فٹ پانی درکار ہوتا ہے۔ اس موٹے اصول سے 20 لاکھ ایکڑ تو آباد ہو سکتے ہیں 2 کروڑ چھبیس لاکھ کھیتی نہیں۔

تریبلا سے مستقل بے اعتنائی اور کالا باغ ڈیم کی ہر قیمت پر پذیرائی اور اسے قبول کرانے کیلئے ہر قسم کی غلط بیانی اور ہتھکنڈوں کے استعمال سے سندھ کے لوگوں کو یقین ہو چلا ہے کہ کالا باغ کے بائیں جانب سے چشمہ جہلم کینال جتنی ایک بہت بڑی نہر نکالی جائے گی جو شمالی پنجاب کو سیراب کرتی ہوگی، جہلم میں جاگرے گی، اس طرح شمال میں اس کینال سے چشمہ جہلم ٹنک سے اور جنوب میں ٹونہ۔ پنچند کے ذریعے پنجاب کو پورا آبی نظام دریاے سندھ سے ملا دیا جائے گا۔ اور پانی کی کمی کے زمانے میں سندھ کے حالات اس سے بھی بدتر ہونگے جو ہم نے چھپلے چار سالوں میں جھیلے ہیں۔ ایک طرح سندھ کی زندگی کی ڈور پنجاب کے ہاتھوں میں چلی جائے گی، جسے سندھ کے لوگ کبھی بھی قبول نہیں کریں گے۔

میں سمجھتا ہوں کہ واپڈا کے اہلکار خاص طور پر ان کے چیئرمین، کالا باغ ڈیم بنانے میں کبھی سنجیدہ نہیں تھے۔ انہیں پتہ ہے کہ پاکستان کے پاس 360 ارب روپے نہیں ہیں اور اس ڈیم کی مخالفت سندھ کے علاوہ سرحد میں بھی شدید ہے۔ انہوں نے جان بوجھ کر کالا باغ کا شوٹر چھوڑا اور پنجاب میں رہنے والے آپ جیسے مہربانوں کی ہمدردیاں حاصل کیں۔ ساتھ ساتھ سندھ کو بدنام کیا کہ 35 فٹ پانی ہر سال ضائع کر دیتے ہیں اور یہ مطالبہ صرف 6 فٹ کالا باغ ڈیم میں جمع نہیں کرنے دیتے۔ اور جب سندھ کیلئے پنجاب میں جو تھوڑا بہت نرم گوشہ تھا وہ واپڈا کی اس پروپیگنڈا سے ختم ہو چکا، تو انہوں نے چپکے سے گریٹر ٹھیل کینال پر کام شروع کر دیا۔ اب سندھ نے اس کینال کے خلاف جب شور مچانا شروع کیا تو توقع کے مطابق پنجاب سے یہی جواب موصول ہو رہا ہے کہ سندھ کے لوگ کسی بات پر خوش نہیں۔ ہمیں اپنا پانی بھی استعمال نہیں کرنے دیتے۔

ہو سکتا ہے کہ واپڈا کے اہلکار اپنی کامیاب چال پر بہت خوش ہوں، لیکن اپنا مخصوص مقصد حاصل کرنے کیلئے سندھ اور پنجاب کے لوگوں کے درمیان عدم اعتمادی اور نفرتوں کو ہوا دینا کسی طرح بھی قابل تحسین عمل نہیں ہو سکتا اور اس کے نتائج وفاق اور قوم کیلئے بہت ناگوار ہونگے۔

(5) جو شخص سیلاب کے پانی کے سمندر میں گرنے کو ”ضائع“ ہونا سمجھتا ہے اور کہتا ہے وہ شدید لاعلمی کا شکار ہے۔ پیراجوں کے اوپر (Upstream) پانی ٹھہرنے کی وجہ سے مٹی کے تزیے بن جاتے ہیں جیسے تریبلا میں بن گئے ہیں۔ ان کو بنانے کا واحد طریقہ سیلاب ہیں۔ اگر پانچ چھ سال میں زوردار سیلاب نہ آئیں اور اس مٹی کو سمندر میں بہا کے نہ لے جائیں تو پاکستان کے سب پیراج وار سک ڈیم کی طرح مٹی کے تودے بن جائیں گے۔

(6) دریائے سندھ کروڑوں برس سے تقریباً 10 لاکھ ٹن مٹی روزانہ سمندر میں پھینکتا رہا ہے جس سے ہر سال سمندر 60 فٹ کے قریب پیچھے دھکیلا جاتا رہا ہے۔ کہتے ہیں کہ کروڑوں سال پہلے سمندر ملتان کے نزدیک ہوا کرتا تھا۔ دریائے سندھ نے ملتان سے نیچے اور پورے سندھ کے علاقے کو سمندر سے چھین کے نکالا ہے۔ بیٹھے اور نمکین پانی کے امتزاج سے درخت کی ایک قسم ”شمر“ کے پورے جنگل سمندر کے کنارے آگے آئے ہیں۔ کچھ عرصہ پہلے تک یہ جنگل 6 لاکھ 50 ہزار ایکڑ پر پھیلے ہوئے تھے۔ شمر کے درخت اور جنگل صدیوں کا عمل ہیں۔ پہلے آگے ہوئے درخت زمین کو جماتے ہیں جس سے نئے پودوں کو اگنے میں مدد دیتی ہے ایک دفعہ یہ عمل رک جائے تو بگڑتا ہی چلا جائے گا۔ سندھ کی پوری ساحل کو یہ جنگلات ایک ٹھہراؤ (Stabilization) بخشتے ہیں اور ایک طرف تو سمندر کو زمین میں پیش قدمی سے روکنے میں مدد دیتے ہیں، دوسری طرف سندھ کی بندرگاہوں (کراچی اور پورٹ قاسم) کے ریت سے بھر جانے کے عمل کو روکتے ہیں۔ اگر یہ درخت سمندر کے پانی سے ریت کو چھاننے کا عمل بند کر دیں تو شاید دونوں بندرگاہوں کے ریت سے بھر جائیں اور بہت مہنگی کھدائی (Dredging) کرنی پڑے۔ شمر کے سائے میں مچھلی اور بھینگوں کی کئی اقسام اپنے ابتدائی دن گزارتے ہیں۔ کراچی اور اندرون سندھ کے ساحلی علاقوں کے بہت سے لوگوں کا گذر بسر مچھلی کے کاروبار سے منسلک ہے۔ ساحلی علاقے کے مویشی، خاص طرح اونٹوں کا چارہ شمر کے پتے ہیں۔ اس طرح ان جنگلات کی ایک بڑی سماجی اور معاشی وقعت (Value) ہے۔ امریکا سمیت جن ممالک نے ”ترقی“ کے نام پر شمر کے جنگلات ختم کئے ہیں، وہ اب بڑی قیمت پر انہیں پھر لگانے کی کوشش کر رہے ہیں۔ ان کے خیال میں سائنسی تحقیق نے کامل ثابت کر دیا ہے کہ ان جنگلات کی ماحولیاتی اور معاشی قیمت اس ”ترقی“ سے کئی گنا زیادہ ہے جو ان کو ختم کر کے حاصل ہوتی ہے۔

سندھ کے ساحلی علاقے پر دریائے سندھ کا کیا اثر ہوتا ہے، یہ اثر کتنے فاصلے تک رہتا ہے، کتنے لوگوں کا روزگار اس پانی سے وابستہ ہے، کیا ان جنگلات کا کوئی نعم البدل بھی ہے، ان جنگلات کو قائم رکھنے کیلئے کتنا پانی درکار ہے، اگر یہ پانی روک دیا جائے تو کتنے لوگوں کا ذریعہ معاش اثر انداز ہوگا، اگر یہ پانی اناج پیدا کرنے کیلئے استعمال کیا جائے تو کتنا اناج پیدا ہوگا اور کتنے لوگوں کا بھلا یہ معلوم کرنے اور سمجھنے کیلئے سائنسی تحقیقات کرنے میں سب سے بڑی رکاوٹ پنجاب حکومت ہے۔ آج سے 11 برس پہلے U.N.D.P کی طرف سے اسے ابھاس کرانے کیلئے 8 لاکھ ڈالر کا عطیہ دیا گیا تھا

لیکن پنجاب کے ممبر ارمانے ڈس آف ریفرنس پر اعتراض کرتے ہوئے لکھا کہ ”پرانے طے کیے ہوئے مسائل پھر اٹھ کرے ہو گئے۔“ اس وقت سے لیکر اب تک کسی نہ کسی بہانے سے یہ ابھیاں نہیں کرانے دیئے جارہے۔

سندھ کا ساحلی علاقہ پاکستان کا سمندری کنارہ ہے۔ اسکے فوائد پورے پاکستان کو ملتے ہیں۔ اسکی صحت کیلئے کتنا بیٹھا پانی درکار ہے اس کے لئے ایک چھوڑ دس ابھیاں کرانے چاہئیں تاکہ کسی سائنسی نتیجے پر پہنچا جاسکے اور اسکے بادی نظر لائٹ عمل تیار کیا جاسکے۔

گندم اور دوسری فصلیں تو پاکستان کے 4 کروڑ 20 لاکھ ایکڑ پر ہو سکتی ہے اور جیسا پروپیگنڈا کیا جا رہا ہے، پانی پختہ پرمزید 2 کروڑ 26 لاکھ ایکڑ پر لگائی جاسکتی ہیں۔ شمر کے جنگلات لیکن ایک دفعہ ختم ہو گئے تو صدیوں نہیں لگائے جاسکتے۔ یہ جنگلات انواع و اقسام کے لاکھوں زندگی کے اقسام (Forms) کو بچا بیٹھتے ہیں۔ اللہ تعالیٰ نے یہ دھرتی صرف انسان کیلئے پیدا نہیں کی کہ اپنی ترقی اور تعمیر کی خاطر خدا تعالیٰ کی باقی مخلوق کیلئے حیات تنگ کر دے۔ لیکن اگر اخلاقیات کے اس اصول پر کاربند نہ ہوں تو بھی یہ ضروری ہے کہ ایک عمل کو ختم کر کے دوسرے کو شروع کرنے سے پہلے دونوں کے نقصانات اور فوائد کا موازنہ کیا جائے۔ سندھ کا مؤقف یہ ہے کہ جب تک اس قسم کے ابھیاں کر کر کسی نتیجے پر نہیں پہنچا جاتا پانی کا کوئی بڑا منصوبہ ہاتھ میں نہیں لینا چاہئے۔

(7) کالا باغ ڈیم یا گریڈ کیٹل کے خلاف سندھ کا سب سے بڑا اعتراض یہ ہے کہ نظام میں اتنا پانی ہی نہیں ہے کہ ایک اور ڈیم بنایا جائے یا کینال نکال کر نئی زمین آباد کی جائے۔ درحقیقت دریائے سندھ کے نظام میں کتنا پانی ہے یہ آج تک طے نہیں ہوا۔ مئی 2003ء میں پلاننگ کمیشن نے اسلام آباد میں ایک سیمینار کروایا تھا جس میں بجلی اور پانی کی وزارت نے اعلان کیا کہ نظام میں کل پانی 143 ماف ہے۔ اسی سیمینار ہی میں پلاننگ کمیشن نے بتلایا تھا کہ پانی 155 ماف ہے۔ واپڈ 80 برس (2002ء-1922ء) کے اوسط 138 ماف کو ترجیح دیتی ہے۔ سندھ کا مؤقف ہے کہ میگا منصوبوں کیلئے اوسط نہیں 80% پانی کی موجودگی کے بین الاقوامی اصول کی پیروی کی جائے یعنی ایسا پانی جو 5 میں سے کم از کم 4 سا موجود ہو۔ یہ مقدار 124 ماف ہے۔ میں سمجھتا ہوں کہ کامن سنس کا یہ تقاضا ہے کہ کوئی بھی میگا منصوبہ شروع کرنے سے پہلے کم از کم اس بہت ہی اہم ایشو پر ایک متفقہ فیصلہ ہونا چاہئے کہ آخر کتنا پانی ہے جس کے آسروے میں ہم منصوبہ بنائے چلے جا رہے ہیں۔

کیونکہ پانی کے بڑے منصوبے پیسنگڑوں برس کیلئے ہوتے ہیں اسلئے پانی کی مقدار کا فیصلہ کرتے ہوئے اس بات کا خیال رکھا جائے کہ دنیا میں ماحول اپنی پیشین گوئی کے مطابق گرمی کا حد بڑھنے سے ہماریہ پرف کم کرے گی اور دریائے سندھ کے پورے نظام میں بتدریج پانی کی کمی واقع ہوگی۔ اس سے بھی بڑھ کر اس بات کا خیال رکھا جائے کہ افغانستان سے ہمارا کوئی پانی کا معاہدہ نہیں ہے۔ اس ملک کی تعمیر نو کیلئے جو اقدامات سوچے جا رہے ہیں ان میں قابل اور بیلمند ندیوں کا پانی زراعت کیلئے استعمال کرنا بھی شامل ہے۔ بلکہ اس وقت ہندوستان کی 20 افراد کی ایک ٹیم افغانستان میں قابل ندی کے پانی کے استعمال کے طریقے دھونڈنے میں مصروف ہے۔ آج یا دس بیس سال میں اگر افغانستان اپنے علاقے میں پانی کا کوئی بڑا منصوبہ بنانا چاہے تو نہ صرف اسے پورا حق ہوگا بلکہ پاکستان کے لوگ اس بد نصیب ملک کے عوام کیلئے دعا گو ہوں گے۔

ہماریہ پرف برابری کم ہو یا دریائے قابل کے سالانہ 25 ماف میں سے کچھ پانی موڑا جائے دونوں صورتوں میں دریائے سندھ کے کل پانی میں کمی واقع ہوگی اور سندھ کے لوگوں کا یہ ناخوشگوار تجربہ ہے کہ جب بھی پانی میں کمی واقع ہوئی ہے، اس کا پورا بوجھ سندھ کو برداشت کرنا پڑا ہے۔

(8) نظام میں اتنا پانی ہے کہ ایک اور کینال نکالا جائے یا ڈیم بھرا جائے اس کا سب سے بڑا اثبوت یہ دیا جاتا ہے کہ 35 ماف پانی ہر سال سمندر میں بہہ جاتا ہے جس کا مطلب ہے کہ اتنا پانی فاضل ہے کہ جو استعمال کیا یا استعمال میں لایا جاسکتا ہے۔ یہ فاضل پانی ایک سراب ہے اور اسکی موجودگی کا دعویٰ غلط بیانی اور پروپیگنڈا ہے۔ نظام میں اوسط پانی کا ہونا اور منصوبہ بندی کیلئے قابل اعتبار پانی کے ہونے میں بہت بڑا فرق ہے جسے سمجھنا بہت ضروری ہے۔

قطع نظر اسکے کہ فی الوقت صوبے 103 ماف پانی استعمال کرتے ہیں اور انہیں 1991ء کے کارڈ کے مطابق 11 ماف مزید پانی استعمال کرنے کی اجازت ہے، 7 ماف پانی ہندوستان کو دی ہوئی ندیوں میں سے بہہ کے آتا ہے جو آئندہ بند ہو جائے گا، 3 ماف منگلا کی دیواریں اونچی کرنے پر اسٹور ہو جائے گا۔ ایک ماف گومال۔ زم ڈیم میں چلا جائے گا، 10 ماف یا اس سے کم یا بادیہ کوٹری کے نیچے چھوڑنا ضروری ہے۔ اور بہت سارا پانی ہزاروں برساتی نالوں میں سے بہہ کے دریائے سندھ میں آتا ہے جس پر کسی منصوبہ بندی کیلئے اعتبار نہیں کیا جاسکتا اور یہ سب پانی 35 ماف میں سے نکالا جائے تو ضمنی پانی بچے گا، وغیرہ وغیرہ، ایک اہم نقطہ اور ہے جو سمجھنا چاہئے۔

1959-60ء میں، دریائے سندھ کے نظام میں سب سے زیادہ پانی 186 ماف بہا تھا۔ صوبوں کے استعمال کئے ہوئے 103 ماف نکال دیں تو 83 ماف پانی سمندر میں بہہ گیا ہوگا۔ فرض کر لیں کہ 6 ماف (کالا باغ ڈیم جتنے) 14 ڈیم بنائے یہ پانی اسٹور کر لیا جاتا جو ملک میں پانی کی کمی کے 5 سال گزارنے کیلئے کافی ہوتا ہے۔ کہیں اگر دوسرے سال بھی اتنا ہی پانی نظام میں آجاتا تو اسے ہر حال میں سمندر میں چھوڑ کر ضائع کیا جاتا اسلئے کہ اسے اسٹور کرنے کیلئے مزید 14 ڈیموں کی ضرورت پڑتی۔ 1990-97ء کے 7 برسوں میں بالکل ایسا ہی ہوا ہے جب ایک سال (94-93ء) کے علاوہ 150 ماف سے زیادہ کے سپر سیلاب آتے رہے۔ (80 سالہ لسٹ Appendix VI)۔ قطع نظر کہ دریائے سندھ کی بڑی ندیوں، چناب، جہلم اور قابل پر پانی اسٹور کرنے کی جگہیں ہیں ہی نہیں، اور

ان پر پانی اسٹور کر نہیں سکتے (سوائے چناب کے جس پر روہتاس کے مقام پر درمیان ڈیم بن سکتا ہے، اور جہلم پر منگلا کے مقام پر پہلے ہی ڈیم موجود ہے)، 6 سال مسلسل سپر سیلاب آتے رہے تو اوسط بہت بڑھ جائے گی لیکن منصوبہ بندی کیلئے یہ پانی کسی طرح بھی قابل اعتبار نہیں ہو سکتا۔ اسلئے سندھ میں یہ شدید خوف اور پریشانی پائی جاتی ہے کہ پانی کی اوسط کے بناء پر جو بڑے منصوبے واپڈا اور حکومت پاکستان کی طرف سے بنائے جا رہے ہیں وہ سندھ کیلئے انتہائی نقصان دہ ثابت ہو سکتے، جس طرح ماضی میں ہوتا رہا ہے۔

کیا کرنا چاہئے:

کیا کرنا چاہئے پر سوچنے سے پہلے ایک بہت ہی اہم بات نوٹ کرنی چاہئے۔ پانی کے ذخیروں کو بڑھانے کی وجہ یہ بتائی جا رہی ہے کہ پاکستان کی آبادی تیزی سے بڑھ رہی ہے اور اگلے برسوں میں غلے کی شدید قلت واقع ہوگی۔ تخمینہ یہ ہے کہ 2025 تک پاکستان کی کل آبادی 22 کروڑ ہو جائے گی، اور اس وقت جو بھی پانی دریائے سندھ کے نظام میں موجود ہے وہ ناکافی ہو جائے گا بلکہ اس میں 5 تا 12 ماہ پانی کم پڑ جائے گا۔ سوال پیدا ہوتا ہے کہ یہ دو یا تین ہزار ارب روپے کے ڈیم اور یہ صوبوں کے درمیان خلفشار صرف 22 برس کی منصوبہ بندی کے لئے ہیں؟ ان 22 برس کے بعد کیا ہو گا؟ ڈیم پانی اسٹور کرتے ہیں بناتے تو نہیں۔ اگر پورے نظام کا اوسط پانی جمع کر کے خرچ کر لیا تو اس کے بعد کیا کریں گے؟

سندھ کے لوگوں کا خیال ہے کہ ان سب اسباب کو نظر میں رکھتے ہوئے ایسی منصوبہ بندی کی جائے جو لمبے عرصے تک، یعنی تقریباً 100 برس تک، پینے کے پانی اور گندم کی پیداوار کا مسئلہ حل کر دے۔ یہ ایسی منصوبہ بندی ہونی چاہئے کہ کوئی صوبہ یہ نہ سمجھے کہ پاکستان کے نام پر اس پر زبردستی ایک ناپسندیدہ اور نقصان دہ فیصلہ مسلط کیا جا رہا ہے۔

اس سلسلے میں سندھ کی چند گزارشات ہیں جو پیش کر رہے ہیں۔

1- پانی ذخیرہ کرنے کی پالیسی کو تبدیل کر کے پانی بچانے کی پالیسی پر زور دینا چاہئے۔ اس سلسلے میں جنوبی پنجاب اور سندھ کے علاقے کی سب نہریں اور واٹر کورس کرپشن پروگرام کے تحت کپے کئے جائیں۔ پاکستان کا نہری نظام بہت فرسودہ اور غیر مستعد (Inefficient) ہے۔ صوبوں کے اس وقت استعمال میں لائے ہوئے 103 ماہ میں سے صرف 45 ماہ پودوں کی جڑوں تک پہنچتا ہے اور باقی برس کر ز زمین پانی کی سطح کو بلند کرنے کا باعث بنتا ہے۔ سندھ اور جنوبی پنجاب میں زیر زمین پانی سمندری پانی کی طرح نمکین ہے۔ اس کی سطح بلند ہونے سے پوری زمین سیم اور تھور کے تباہ کن اثر میں آ جاتی ہے۔ نہروں اور واٹر کورس پکا کرنے سے دوہرہ فائدہ ہوگا۔ ایک یہ کہ پانی اس کو ضائع ہونے سے بچائے گا اور دوسرا سیم اور تھور کے اثر سے نکل کر زمین کی پیداوار میں بہت اضافہ ہوگا۔ ایک اندازے کے مطابق اس پورے عمل سے تقریباً 30 ماہ پانی بچے گا جو کالا باغ ڈیم میں اسٹور کئے ہوئے پانی سے 5 گنا زیادہ ہے۔

2- اگر ہم نے اپنا موجودہ کارٹریج کا طریقہ تبدیل نہ کیا تو بہت جلد ایسا وقت آنے والا ہے جب پورے دریائے سندھ کے نظام کا پانی بھی پاکستان کی بڑھتی ہوئی آبادی کے لئے گندم اور غلہ پیدا کرنے میں ناکافی ہو جائے گا اس لئے کھیتوں میں پانی بھرنے کے بجائے اس طریقے سے سو گنا زیادہ مستعد (efficient) ڈرپ اور سپرنکلر سسٹم کو رائج کیا جائے۔ کیونکہ اس نئے نظام میں بہت وقت اور سرمایہ لگے گا اس لئے ابھی سے سندھ اور پنجاب کے مخصوص علاقوں میں پائلٹ پروجیکٹ شروع کرنے چاہئیں تاکہ اس نظام سے روشناس ہونے میں مدد ملے اور اس کے فائدے اور نقصانات کے بارے میں معلومات حاصل ہوں۔

3- ہمارے کاشتکاروں کے پاس زمین کو صحیح ہموار کرنے کا کوئی خاطر خواہ طریقہ اور علم نہیں ہے اور پانی ضرورت سے زیادہ دینا ایک معمول ہے۔ زمین ہموار کرنے کے جدید طریقے اور پانی کی صحیح مقدار کے استعمال سے بہت سارا پانی بچ سکتا ہے۔ اس قسم کے پروگرام پر فوراً عملدرآمد ہونا چاہئے اور اس کے لئے پیسے اور کوششیں مختص کرنی چاہئیں۔

4- پاکستان میں گندم اور دوسرے فصلوں کی پیداوار دنیا کی پیداواری اوسط سے بھی کم ہے۔ مثلاً پاکستان کی ایک ایکڑ گندم کی اوسط پیداوار 0.81 ٹن ہے، ہندوستان کی 0.97 ٹن، امریکہ کی 1.07، چین کی 1.33 اور دنیا کی 0.87 ٹن ہے۔ اس طرح اس شعبے میں بھی بہت ساری منازل طے کرنا باقی ہیں۔

5- پورے ملک میں دیہاتوں اور چھوٹے شہروں کے باہر گندے پانی کے تالاب نظر آتے ہیں۔ یہ گندے پانی تھوری تھوری صفائی کے بعد کھیتوں میں استعمال کیا جا سکتا ہے۔ اس منصوبے پر دیہاتوں اور چھوٹے شہروں کے باہر گندے پانی حاصل ہو سکتا ہے۔ ایسے گندے پانی سے جو صحت اور جمالیات کے فائدے ہیں وہ بونس ہیں۔

6- اس درمیان میں تریلا کی مٹی نکالنے کا کام شروع کرایا جائے اور اگر وہ ممکن نہ ہو تو موجودہ گجاش کو قائم رکھنے کی سنجیدہ کوششیں کی جائیں۔ منگلا ڈیم کی دیواروں کی اونچائی کے بعد اس میں 3.1 ماہ مزید گجاش بڑھنے کے امکانات ہیں۔ اس طرح مٹی بھرنے سے جو بھی اسٹورج میں کمی واقع ہوئی ہے وہ بڑی حد تک پوری ہو جائے گی۔

7- اسی دوران ایک چھوٹے جگہوں کے متعلق ابیاں کرنا چاہئے جہاں ڈیم بننے کے امکانات ہوں۔ ان میں سے کوئی ڈیم اس وقت تک نہیں بننا چاہئے جب تک پورے منصوبے پر سیر حاصل بحث نہیں ہو جاتی اور سندھ کا اعتماد بحال نہیں ہو جاتا۔

- 8- کوٹری کے نیچے کتنا پانی سمندر میں جانا چاہئے، ایسے ایسا کرانے کا عمل شروع کرایا جائے۔
- 9- چشمہ، جہلم لنک کینال فوراً بند کر دینا چاہئے۔ یہ کینال دریائے سندھ سے اتنا پانی لے جاتا ہے (15 ماہ سالانہ) جتنا راوی میں پورا سال بہتا تھا۔ یہ کینال ایک مستقل ناسور ہے جو سندھ کبھی بھی قبول نہیں کرے گا۔
- 10- ہر حالت میں گریڈ تھل کینال پر کام روک دینا چاہئے۔ اس کینال سے سندھ اور پنجاب میں صدیوں جھگڑا چلتا رہے گا۔ جب بھی سندھ میں پانی کی کمی ہوگی چشمہ، جہلم اور گریڈ تھل کو قصور وار ٹھہرایا جائے گا اور پنجاب کو اس کا ذمہ دار۔ میں نہیں سمجھتا کہ پاکستان کے دوسرے بڑے اور اہم صوبے کو مستقل ناراض کر کے اس کا نظام چل سکتا ہے۔
- جب جنرل ذوالفقار رسول بخش بلبلجو سے ملنے آئے تھے تو بلبلجو صاحب نے ان سے گریڈ تھل کے بارے میں کہا تھا کہ آپ کو بھنوں کی پھانسی ہضم ہوگی لیکن گریڈ تھل ہضم نہیں ہوگا۔ اس چھوٹے ٹے سے جملے میں سندھ کی برسوں کی شکایتیں چھپی ہیں اور آنے والے طوفان پوشیدہ ہیں۔



## Appendix I

*The Emergence of Pakistan: By Chaudhry Muhammad Ali*

Indian side of the border both Madhopur Headworks on the Ravi River and the Ferozepure Headworks on the Sutlej River. The former controlled the Upper Bari Doab canals, of which the Central Bari Doab canals in West Punjab were only a continuation. The latter controlled the Dipalpur canal in West Punjab and the Eastern Grey canal, which irrigated part of Bahawalpur state. In this award on the Punjab boundary Radcliffe said:

The fixing of a boundary in this area was further complicated by the existence of canal system, so vital to the life of the Punjab but developed only under the conception of a single administration. ... I think I am entitled to assume with confidence that any agreements... as to sharing of water from these canals or otherwise will be respected by whatever Government hereafter assumes Jurisdiction over the headworks concerned.

***Despite the fact that the Radcliffe Award had placed the control of headworks vital for Pakistan in the hands of India, the West Punjab government remained content because of the agreement reached by Committee B and the Punjab partition Committee, that the preparation shares of water would not be varied. No formal document specifying the precise shares of East Punjab and West Punjab in irrigation waters was drawn up and signed. The West Punjab ministers and officials felt assured by the repeated declarations of their counterparts in East Punjab that there was no question of any change in the preparation arrangements for canal waters. The same declarations were also made by the East Punjab representatives before the Arbitral Tribunal, when the disputed question of the valuation of the canal system came up for a hearing. Actually, as events showed, the East Punjab ministers and officials were planning a deadly blow against Pakistan and were lulling the West Punjab government to sleep with sweet words. They were waiting for the day when the life of the Arbitral Tribunal would come to an end on March 31, 1948. On the side of East Punjab there was Machiavellian Duplicity. On the part of West Punjab there was neglect of duty, complacency, and lack of common prudence-which had disastrous consequences for Pakistan.***

***On April 1, 1948, the day after the Arbitral Tribunal ceased to exist, the East Punjab government cut off the water supplies in every canal crossing into Pakistan. These consisted of the Central Bari Doab canal system, the Dipalpur canal system, and the Bahawalpur state distributary. Of this action, Sir Patrick Spens, Chairman of the Arbitral Tribunal, said before the joint meeting in London of the East India Association and the Overseas League on February 23, 1955:***

***I remember very well suggesting whether it was not desirable that some order should be made about the continued flow of water.... But we were invited by both the Attorney-Generals [of India and Pakistan] to come to our decision on the basis that there would be no interference whatsoever with the then existing flow of water, and the award which my colleagues made, in which I had no part, they made on that basis. Our awards were published at the end of March, 1948. I am going to say nothing more about it except that I was very much upset that almost within a day or two there was a grave interference with the flow of water on the basis of which our awards had been made.***

The irony of the situation was that, in its award, the Arbitral Tribunal accepted, in principle, the contention of India that Pakistan should be accountable for a higher valuation of the canal system than its book value. It reached this decision on the premise that the existing allocation of water would be respected, for, without water, canals are dry ditches, a liability and not an asset. The Tribunal also required Pakistan to account to India for the crown wastelands at an appreciated value due to the advent of irrigation. As soon as the Arbitral Tribunal ceased to exist, all promises made before it by the representative of India

that "there would be no interference whatsoever with the then existing flow of water" were forgotten and water was shut off from Pakistan canals on which the irrigation of 1.66 million acres depended. East Punjab now contended that Pakistan had no right to any water and demanded seigniorage charges as a condition for reopening the canals. There was acute distress which, with every day that passed, became more and more intolerable. In large areas where the subsoil water is brackish there was no drinking water. Millions of people faced the ruin of their crops, the loss of their herds, and eventual starvation due to lack of water.

***Under these distressful circumstances, a delegation was sent from Pakistan to Delhi in the beginning of May, 1948, to seek a solution to the problem. The delegation was led by Ghulam Muhammad, the Finance Minister of Pakistan, and included two ministers from West Punjab-Shaukat Hayat Khan and Mumtaz Daultana. At the meetings in Delhi, East Punjab representatives insisted that they would not restore the flow of water to the canals unless West Punjab acknowledged that it had no right to the water.*** To this the representatives of West Punjab could not agree. The Pakistan proposal that the two governments should submit their differences to the arbitration of the International Court of Justice was not acceptable to India. There was an impasse. Ghulam Muhammad appealed to Mountbatten who consulted with Nehru. ***A statement was then placed before Ghulam Muhammad,*** and he was asked to sign it without changing a word or a comma—a condition for restoring the flow of water.

On May 4, 1948 was signed by Ghulam Muhammad and the two West Punjab Ministers on the one hand and by Nehru and two East Punjab ministers on the other. The statement declared that, apart from the questions of law involved, the governments were anxious to approach the problem in a practical spirit. The East Punjab government would progressively diminish its supply to the Central Bari Doab and Dipalpur canals in West Punjab in order to give reasonable time to the West Punjab government to tap alternative sources. The statement announced that water was being restored to these canals, that West Punjab was Punjab was to deposit in escrow such "ad hoc sum as may be specified by the Prime Minister of India" to cover certain disputed payments, and that, after an examination by each side of the legal and other issues involved, further meetings would take place. In conclusion, the Dominion governments expressed the hope that a friendly solution would be reached.

Though India restored the flow of water to the Dipalpur canal and the principal branches of the Central Bari Doab canals, water was still withheld from the Bahawalpur state distributary and nine lesser distributaries of the Central Bari Doab system. Eventually, considerable areas in Bahawalpur state reverted to desert. Notwithstanding the compulsion under which the arrangement was signed, Pakistan performed its part and deposited in escrow the sums specified by the Prime Minister of India. Later, Nehru, in a fit of amnesia, denied that there had been any compulsion. In a letter to Liaquat Ali Khan in September, 1950, Nehru wrote: "Your Government's communication [states] that the agreement of 4 May 1948 was accepted by Pakistan" 'under compulsion'. This has surprised and distressed me greatly... I cannot imagine how any question of compulsion could possibly have arisen in these circumstances. There was then no kind of threat or even suggestion about stopping the flow of the water."

The further meeting between the two Dominion governments envisaged in the May 4 statement took place in Lahore in July, 1948.

## Appendix II

*"The Nation that lost its soul: By Sardar Shaukat Hayat Khan"*

At the same time I rang up Mamdot requesting him to post his able Secretary, Pir Ahsan-ud-Din, ICS, a very efficient officer as D.C. in Lyallpur. I offered Hamid the job which suited him best, that of my Private Secretary in Lahore. To this, the British Governor objected saying it was acting beyond my powers. I immediately returned to Lahore and requested a Cabinet meeting. We took up the matter and decided that after the Independence the Governor no longer possessed any special powers with regard to Services. Services must be brought under control of the Cabinet. Moreover, the Cabinet approved of my actions and Hamid was made an officer on Special Duty at Lahore. [The Governor, who was an ex-UP Chief Secretary and had been specially brought over to the Punjab by Nawabzada Liaquat Ali Khan, on account of personal gratitude owed to him in UP.] Mudie reacted by requesting Liaquat Ali Khan to take Hamid as his own Private Secretary.

This was the first act of intervention in Provincial affairs by the Prime Minister of Pakistan which led to many a complication in times to come. Hamid had his knife in me thereafter. This showed that the position of the elected representatives was still secondary to that of the Officials, as had been the custom during the British Raj in India.

### Division of Assets:

***Where the division of assets was concerned after the Partition, India did not play fair with us. Where the Army's equipment was concerned we did not receive any supplies of Ordinance*** and all the factories put up during the war and earlier were in the South of India and large depots, such as Ferozpur, were wrongfully handed to India under pressure from Mountbatten. We did not receive any supplies from these factories or arsenals. All we got was what happened to be already in our possession in Pakistan. All we received were over-size boots and useless equipment.

***The Division of Assets Committee had been formed in East and West Punjab and met alternately at Lahore and Jallandur, the temporary Capital of East Punjab. The rules were that, in case of differences between us, the case would be referred to the Arbitral Tribunal headed by the Chief Justice of India, Sir Patrick Spens.***

***The question of Division of Water between Indian and Pakistani Punjab was to be decided at a meeting to be held in Jallandur. I attended this particular meeting along with the Secretary-Cum-Chief Engineer of the Irrigation Department Mr. Abdul Hameed and the chief Secretary, Hafiz Abdul Majeed ICS. We were accommodated in a ramshackle old hotel.***

I remember an old Hindu friend from Lahore called on me. During conversation he said, "Shaukat Jee, Your Pakistan is not viable, it will not last long." I told him not to live in a fool's paradise. "The Nation which could handle half a million refugees that you have cruelly thrust on us, that Nation can cope with any situation." He said, "Shaukat, you have not understood me. To understand my point, please, on your return, buy a pair of dogs; chain them separately in opposite corners. Do not feed them for three or four days. Kill a goat and place the meat in the centre. Then let them off the leash at the same time. On seeing the meat they would first go for each other, to be the first to get at the meat. One would win and he would over eat and fall exhausted. The other will over indulge in what is left over by the first. Both will be sick with indigestion. We have left your hungry and impoverished people so much wealth that they would go for each others throats, after seeing the glitter we have left behind. Afterwards you would become like those dogs, losing your direction on account of greed. We have left so much wealth in your part of the Punjab that your Nation would become corrupt, on seeing the glint of gold and would start

worshipping Lakhshami Devi our goddess of wealth.” How true his prediction turned out to be forty-seven years later!

*The next day we had to tackle the matter of the division of water on which our economy entirely depended. We discussed it amongst our own Party and came to the conclusion that even if we took this problem to the Arbitral Tribunal and got a favorable decision, how were we going to get it implemented when the Headworks had been unfairly allotted to India, in the so-called Radcliffe Award. Therefore, we decided that we should find a via media to share the expenses of running the Head Works and part of the canal system located in the East Punjab. The Hindus, after long discussion, came to an agreement. Alas, in-keeping with their Chanakian (Machiavellian) philosophy they reneged later, a day after the end of the Arbitral Tribunal. They stopped our share of water from the Head Works at Madhopur feeding Bari Doab and from the Ferozepur Head Works which supplied water to Dipalpur Canal, irrigating the Montgomery area, and to the Bahawalpur Canal. This came as a deep shocked to me.*

## Appendix III

Source: From a Book in Sindhi

## پانی منجھو پساہہ

by Sher Muhammad Baloch (Late) Secretary Irrigation (Former) West Pakistan Government

Mr. G. Mueenuddin  
K.B.M. Abdul Hameed, C.E Punjab  
Mr. Khalil-ur-Rehman  
Mr. S. Kirmani  
Mr. S. I. Mehboob  
Mr. S. M. Niaz  
Mr. Altaf Hussain

As was expected, the Indus Basin Advisory Board signed Indus Water Treaty on 19th Sept 1956 surrendering Pakistan's right on the three eastern tributaries of Indus -- Sutlej, Beas and Ravi -- in return for 175 million dollars from India. Another \$150 million were granted by other countries and World Bank loaned \$ 150 million to construct Tarbela on Indus and Mangla dam on Jehlum, along with link canals, to drain water of Indus and Jehlum into the dry beds of the three eastern tributaries.

## Appendix IV

GOVERNMENT OF SINDH  
IRRIGATION AND POWER DEPARTMENTSUBJECT: FOLLOW-UP ACTIONS OF THE WATER ACCORD 10-DAILY SYSTEM-WISE ALLOCATIONS

The decisions of the meeting of the Council of Common Interests (CCI) held on 16th September 1991 have been received in this office, a copy of the same is placed at Flag 'A'.

2. It was reported by Mr. Muhammad Alim Baloch, who attended the meeting as an Expert along with the Chief Minister and Chief Secretary that System-wise Adjusted Ten-daily allocations of the provinces were presented before the Council of Common Interests and it was agreed except the inclusion of the allocations of Greater Thal System which is unsanctioned project. In this regard Secretary Water and Power was asked to look into this item and get it corrected to bring it in line with the Water Accord requirements.

3. The record of decisions placed below do not indicate the above views in respect of the allocations of Greater Thal Project. In this respect we have already requested the Secretary M/O Water and Power, Government of Pakistan, through Fax Message, to take necessary action for correcting the allocations of the Province of Punjab. A copy of Fax Message is placed at Flag 'B'.

4. The next meeting of Council of Common Interests is expected to be held in the third week of October. It is requested that this aspect of Ten-daily allocations may kindly be brought to the notice of the Chief Minister, Sindh to point out to the Chairman, in the next meeting of the CCI.

(Signed)

**(Muhammad Idris Rajput)**  
**Secretary to Government of Sindh**  
**Irrigation and Power Department**

**SECRETARY TO CHIEF MINISTER**  
**U.O.NO.A(WD)I&P/5-91 dt.5.10.91**

No.A(WD)I&amp;P/5-91

Dated Karachi the 5th October 1991

Copy forwarded for information to the :-

1. Minister for Irrigation and Power  
Government of Sindh  
Karachi
2. Chief Secretary to Government of Sindh  
Karachi

(Signed)

**(Muhammad Idris Rajput)**  
**Secretary**  
**Irrigation and Power Department**  
**Government of Sindh**

## Appendix V

NO. A(WD)/I&P-94/131  
IRRIGATION AND POWER DEPARTMENT  
KARACHI, DATED THE 7th AUGUST '94

To

Mr. Salman Faruqi,  
Secretary,  
Ministry of Water and Power,  
Government of Pakistan,  
Islamabad

SUBJECT: RESUME OF THE INTER-PROVINCIAL MINISTERIAL MEETING ON WATER HELD ON MAY 2, 1994  
IN THE COMMITTEE ROOM, WAPDA HOUSE, LAHORE

REF: MEMBER (SINDH) IRSA LETTER NO:IRSA/M(Sindh)/2304-6  
DATED 18.7.1994, ADDRESSED TO YOU AND COPY ENCLOSED  
TO THIS DEPARTMENT.

In continuation to this Department's Fax Message dated 15.5.1994, I fully endorse the views of Mr. A. R. Memon, Member Sindh IRSA. ***It is further brought to your kind notice that Sindh has not agreed to the proposal chalked out by Mr. Mazhar Ali, Advisor to Government of Punjab, regarding sharing of shortages/surpluses based on historic uses of the provinces. The Minister for Irrigation and Power Sindh and the Member Sindh IRSA rejected altogether the proposal of Mr. Mazhar Ali.***

***2. It is, therefore, requested that the para 6(3) may kindly be deleted from the minutes of resume of the Inter-Provincial Ministerial Meeting held on 2nd May, 1994***

Sd/-

(SYED ALI GOHAR SHAH)  
SECRETARY TO GOVERNMENT OF SINDH

Copy forwarded for information to:-

1. Mr. Nawab Yousaf Ali Talpur, Minister Food and Agriculture, Government of Pakistan, Islamabad.
2. The Member Sindh, Indus River System Authority (IRSA), House No.4, Street No. 1, Cavalry Ground, Lahore Cantt.
3. The Private Secretary to Minister, Irrigation and Power, Government of Sindh, Karachi
4. The P.S. to Secretary Irrigation and Power Department

Sd/-  
(SYED ALI GOHAR SHAH)  
SECRETARY TO GOVERNMENT OF SINDH

## INDUS RIVER SYSTEM AUTHORITY

Phone No. 6672717

House No. 4, St. No. 1  
Cavalry Ground  
Lahore Cantt.

No. IRSA/M(Sindh)/2304-6

July 18, 1994

To,

Mr. Salman Faruqi,  
Secretary,  
Minister of Water & Power,  
Government of Pakistan,  
Islamabad.Sub: RESUME OF THE INTER-PROVINCIAL MINISTERIAL MEETING  
ON WATER HELD ON MAY 2, 1994 AT LAHORE.

Ref: D.O. No. C-2(156)A/94 dated May 5, 19 &amp; June 30, 1994.

To recapitulate, ***a ministerial meeting on water was held on May 2, 1994 at Lahore. Subsequently minutes were issued by Mr. Fazul Rahman, Engineering Advisor as "Resume of the inter provincial meeting on May 5, 1994. After receipt of minutes" I pointed out that para 6(3) of "resume" ("The shortages between Sindh and Punjab will be shared according to historic uses," as per consensus) was against the Accord and I had vehemently opposed the adoption of historic uses as the basis of sharing shortages and surpluses.*** The same objection was raised by Secretary, Government of Sindh in the meeting also and the request was made by him to delete para 5(3) of the "Resume".

2. On receipt of these letters, the Ministry wrote a letter to Chairman IRSA as under:

3. "As you are aware, IRSA is vested with full authority under the Act for resolving inter provincial water issues. The Inter-Provincial Committee on Water is of an advisory nature and without any legal mandate. The Committee is primarily to assist IRSA in attempting a consensus on major issues through spirit of goodwill and cooperation. All decisions on controversial matters are ultimately the responsibility of IRSA to ensure fair and equitable distribution of water among the provinces."

Instead of amending the minutes which was the bone of contention, the Ministry raised extraneous issue as if IRSA was unaware of the charter as well provisions of the Act. At this stage, I approached you in Lahore and you desired to talk to Special Secretary. In short, all said and done, the Special Secretary refused to amend the minutes. While approaching time and again, you may feel I am showing too much loyalty to the cause or bankruptcy of my perception of the problem. I assure you it is none of these. The issue is very sensitive and ***Ministry had recorded wrong minutes. I reiterate, with all the responsibility-misleading minutes,*** ought to be amended. Sindh should not be pushed against the wall. The damage done to Accord and consequently to 3 provinces would be irretrievable.

3. I therefore earnestly request your intervention to get right, the wrong done within legal bounds and justice. ***As a consequence these minutes have promoted Member Punjab and Federal to revise the "Water Accord" by brute "Majority view". It is submitted that the Accord has the approval of CCI-is sacrosanct and does not fall within the ambit, purview of the prerogative of the "Majority view" of IRSA.*** Unfortunately new meanings are being attached to plain clauses of the



Accord.

4. Should we open up the consensus Accord? Do we propose to dispatch Sindh prematurely soliciting CCI? Should the Sindh be forced to withdraw from IRSA. Will this be in the interest of Federation at this point of time to unfold a settled issue and open up Pandoras Box. These are the questions which would arise and the solution would not be in sight.

5. I solicit your assistance in resolving the issue lest this may trigger ultimately the time bomb and release the latent energy which would be difficult to control with common wisdom. I assure you, Sir, I am informing you well in time.

6. Lastly I am to state that the Working Papers submitted by me, were blacked out for no reason for which my complain is still outstanding. I do not know how long this will last-

Sd/- 18/7/94

(A.R. Memon)  
Member (Sindh)  
Indus River System Authority

Copy to Nawab Muhammad Yousaf Talpur, Minister for Food, Government of Pakistan, Islamabad for extending the assistance within the norms of rules and ethics.

Sd/-18/7/94  
(A.R. Memon)

Copy for information to Private Secretary to Minister of irrigation & Power, Government of Sindh, Karachi, for information of the Minister.

Sd/-18/7/94  
(A.R. Memon)

**WESTERN RIVER INFLOWS (Figures in MAF)**

Year	Indus at Kalabagh	Jhelum at Mangla	Chenab at Marala	Total Inflows	Sr. No.	Total Inflows in Descending Order
1922-23	97.68	25.76	23.99	147.43	1	186.79
1923-24	110.04	22.93	21.04	154.01	2	172.09
1924-25	82.70	26.45	20.52	129.67	3	171.65
1925-26	77.75	20.74	20.22	118.71	4	169.68
1926-27	72.85	22.39	22.06	117.30	5	167.08
1927-28	69.74	20.69	20.41	110.84	6	166.10
1928-29	81.12	27.22	21.96	130.30	7	165.80
1929-30	76.67	23.58	23.90	124.15	8	164.08
1930-31	86.42	25.58	24.86	136.86	9	163.47
1931-32	78.06	25.30	20.04	123.40	10	161.40
1932-33	82.05	21.34	21.87	125.26	11	161.26
1933-34	91.84	26.18	26.42	144.44	12	158.86
1934-35	86.07	18.02	22.77	126.86	13	158.55
1935-36	87.43	25.80	25.86	139.09	14	157.38
1936-37	95.70	24.31	25.82	145.83	15	155.27
1937-38	87.53	21.03	22.88	131.44	16	154.01
1938-39	95.65	23.61	28.69	147.95	17	152.99
1939-40	100.05	22.09	22.64	144.78	18	151.09
1940-41	84.91	16.54	18.64	120.09	19	150.48
1941-42	91.29	19.77	22.61	133.67	20	149.95
1942-43	112.62	25.63	28.83	167.08	21	147.95
1943-44	95.36	23.26	28.37	146.99	22	147.43
1944-45	92.33	19.43	24.40	136.16	23	146.99
1945-46	105.10	20.67	24.71	150.48	24	146.65
1946-47	90.26	15.35	23.25	128.86	25	146.18
1947-48	78.32	17.82	28.53	124.67	26	145.83
1948-49	95.10	27.80	32.82	155.72	27	145.72
1949-50	101.10	24.73	27.16	152.99	28	144.78
1950-51	106.33	30.19	35.13	171.65	29	144.44
1951-52	71.92	20.57	21.31	113.80	30	144.43
1952-53	86.45	19.57	24.28	130.30	31	143.06
1953-54	93.56	22.68	26.82	143.06	32	141.07
1954-55	90.81	23.70	25.74	140.25	33	140.62
1955-56	84.27	19.31	28.94	132.52	34	140.50
1956-57	98.79	25.02	33.57	157.38	35	140.47
1957-58	85.86	32.74	32.49	151.09	36	140.25
1958-59	99.47	27.39	31.69	158.55	37	139.51
1959-60	120.09	31.65	35.05	186.79	38	139.09
1960-61	104.51	16.26	24.95	145.72	39	138.97
1961-62	93.84	17.79	28.87	140.50	40	138.84
1962-63	71.32	16.18	22.31	109.81	41	138.43
1963-64	89.36	22.01	23.69	135.06	42	136.86
1964-65	88.73	23.60	26.10	138.43	43	136.39
1965-66	89.74	26.60	22.63	138.97	44	136.16
1966-67	91.47	23.10	25.90	140.47	45	135.26
					46	135.17

**WESTERN RIVER INFLOWS (Figures in MAF)**

Year	Indus at Kalabagh	Jhelum at Mangla	Chenab at Marala	Total Inflows	Sr. No.	Total Inflows in Descending Order
1967-68	96.98	23.90	25.30	146.18	47	135.06
1968-69	93.29	21.64	23.91	138.84	48	134.93
1969-70	87.50	24.22	22.55	134.27	49	134.27
1970-71	71.52	15.35	19.30	106.17	50	133.67
1971-72	71.74	13.55	18.85	104.14	51	132.52
1972-73	79.58	24.96	21.54	126.08	52	132.00
1973-74	106.69	26.43	30.96	164.08	53	131.44
1974-75	63.19	16.32	18.23	97.74	54	131.33
1975-76	81.29	25.38	32.84	139.51	55	130.30
1976-77	81.44	24.64	29.18	135.26	56	130.30
1977-78	81.23	19.63	26.59	127.45	57	129.67
1978-79	106.58	24.62	32.27	163.47	58	128.86
1979-80	86.99	20.72	24.29	132.00	59	127.48
1980-81	86.76	23.44	26.19	136.39	60	127.45
1981-82	89.94	22.59	28.09	140.62	61	126.86
1982-83	73.24	21.32	27.79	122.35	62	126.08
1983-84	93.91	26.22	29.82	149.95	63	125.26
1984-85	92.17	18.68	24.08	134.93	64	124.67
1985-86	75.83	17.64	24.23	117.70	65	124.54
1986-87	91.11	27.84	27.70	146.65	66	124.15
1987-88	88.03	27.83	25.21	141.07	67	123.40
1988-89	104.73	23.98	32.69	161.40	68	122.35
1889-90	81.20	24.71	25.42	131.33	69	120.09
1990-91	108.73	27.39	29.98	166.10	70	118.71
1991-92	112.18	31.11	28.80	172.09	71	117.70
1992-93	109.90	32.00	27.78	169.68	72	117.30
1993-94	81.77	22.71	23.00	127.48	73	113.80
1994-95	109.12	26.48	30.20	165.80	74	113.30
1995-96	98.91	28.08	31.87	158.86	75	110.84
1996-97	100.34	29.04	31.88	161.26	76	109.81
1997-98	83.08	24.01	28.08	135.17	77	106.17
1998-99	97.70	21.83	27.90	144.43	78	104.14
1999-00	87.15	14.44	22.95	124.54	79	99.99
2000-01	67.41	12.57	20.01	99.99	80	97.74
2001-02	64.98	11.96	19.04	95.98	81	95.98
2002-03	72.64	17.02	23.64	113.30		
Avg: 1922-2002	89.48	22.80	25.76	138.04		
Avg: 1976-2002	89.78	23.06	26.99	139.82		
Maximum 1922-2002	120.09	32.74	35.13	186.79	<b>4 out of 5 is 65th hence 80% discharge is 124.54 MAF</b>	
Minimum 1922-2002	63.19	11.96	18.23	98.98		

APPENDIX G

Paper by

**Dr. Kaiser Bengali**

Managing Director

Social Policy and Development Centre - SPDC

## INTRODUCTION

Water is life. And for Pakistan, receiving far less of the world average rainfall, the Indus River System is its lifeline. This is particularly true for Sindh, where the river Indus is the only source of water for irrigation as well as human consumption. For parts of the country which lie outside the Indus basin and are classified as arid zones – most of Balochistan, FATA, Tharparkar, etc. – water is even more precious. Despite its critical importance, however, the political economic and technological management of water resources has been abjectly woeful; which, as a result, has given rise to extremely serious problems of efficiency as well as equity. These range from the very availability of water, problems created in the wake of development, issues of planning for water infrastructure for storage and drainage, and privatization and community management of water supply to water conflicts, and of course the ubiquitous question of inter-provincial water accords and of the Kalabagh Dam and new water distribution canals.

Water scarcity is widely assumed. Yet, with more than 1 300 cubic metres per person available annually, Pakistan is – by hydrological definitions – not exactly a water-stressed country. Nevertheless, tremendous shortages are experienced and most of the burden of scarcity affects the poor and poorer regions and areas. Water shortage is, thus, not just an issue of natural scarcity; it is a socially generated scarcity as well, created as a result of distortions in social and economic policies. These policies serve some sections of society well, but exacerbate shortages for others. Water scarcity is, thus, a function of politics.

At the center of this politics is the capture of the resource by the elite and the powerful, aided and abetted by the state. Resources are not considered a public good, but state property to be disposed of as largesse to the favoured elite. Whether it is about sharing water at the provincial level, or along a watercourse, or in a city like Islamabad or Karachi, the equilibrium almost always tends to tilt in favour of those who have the power to capture the resource.

At another level, the state and its allied lobbies have a penchant for large, capital-intensive, foreign debt-funded water infrastructure projects. The techno-centric paradigm induces policy-makers to look almost exclusively towards engineering solutions. This approach treats water as a mere raw material and uses technical and scientific knowledge to harness it to its fullest capacity. The approach does have its merits and has, in the past, turned arid lands into green acres. However, it has its limitations too. It offers technological fixes for social and political problems, but de-links itself from the new social and political problems it creates.

The techno-centric approach is driven by the logic that engineering expertise alone will provide the capacity to manage the present disorder. It overlooks the fact that water constitutes a system: a hydrological cycle in which every intervention may be a possible disruption in the system. The glacier in the high mountains and the delta below are as inter-connected as the rains and the underground water aquifers. The creation of a vast network of canals was a great human feat, but it has raised water tables and turned once fertile lands into saline marshes. This approach will advocate, for instance, the construction of bunds on riverbanks to save people from floods; but has little to offer in terms of disaster-mitigation initiatives to strengthen peoples' capacities to deal with emergencies.

The socio-centric paradigm is based on the logic that development, management and conservation cannot be achieved in a vacuum and social systems and structure and peoples' cultures and lifestyles also need to be addressed. If a new technology has the power to reform the social system, the social structure also has the power to manipulate technology. The irrigation system in Sindh was unable to replace the tribal feudal order; on the contrary, the feudal system succeeded in manipulating the

irrigation system to its ends. The socio-centric approaches call for recognizing the socio-engineering responses developed by people over time and building upon them to meet new challenges. As opposed to the techno-centric reliance on large, capital-intensive foreign debt funded approaches, the socio-centric approach relies on indigenous physical and human resource management.

Three imperatives emerge from the above. One, the need to move from a fetish with expansion of water supply to a stress on conservation of water resources. Two, the need to move away from large-scale capital and technology intensive, foreign debt funded, and environment degrading approaches to indigenous technology, and management-intensive, ecologically-balanced approaches. And three, the need to move towards a more equitable distribution of water resources across income classes and regions.

### **“Socionomics” of Kalabagh Dam**

The Kalabagh Dam project comes at an important confluence of events. It reflects a crisis of governance, where decision-makers are at odds with an increasingly vocal society, including in Punjab. Among the concerns being voiced is the fear that Kalabagh could trigger irreversible degradation of the Indus River ecosystem.

The key imperatives of sustainable development – transparency and good governance – were never factors in the formulation of the Kalabagh Dam Project. An important factor in good governance is decentralized and consultative decision-making. By contrast, project planning for Kalabagh has been the very antithesis of this principle, with policy decisions made in a highly centralized, politically coercive, and technically flawed manner – the belated call for consensus notwithstanding. For instance, the rotating chairmanship of the Indus River System Authority has been converted into a permanent appointment, provincial resolutions against Kalabagh have been given short shrift, the Council of Common Interests (CCI) has been ignored in the matter, and community concerns continue to be met with blatant disregard. Small wonder then that the political leadership in the smaller provinces and civil society are up in arms against the Kalabagh Dam.

### **Traditional Arguments for Kalabagh Dam**

Dams do not produce water. They merely store it. Given that there are years when Mangla and Tarbela Dams have not been filled to capacity shorts the surplus water theory to bits. Three of the most commonly cited arguments in favour of large dams relate to food security, cheap energy and flood control. These are taken up in due order.

### **Food Security**

It is claimed that additional water from Kalabagh can enhance crop production in three ways: by irrigating new land; by enhancing cropping intensity on existing land; or by enhancing yields. Even if it is accepted that the necessary water for the Kalabagh Dam is available, the first option appears tenuous. The claim is that Kalabagh will irrigate close to an additional million hectares of barren land. However, evidence in the reports of the National Commission on Agriculture (NCA) and the National Conservation Strategy (NCS) suggests otherwise. According to the latter, the amount of available cultivable land is nearly matched by the amount cultivated, leaving little scope for expansion at the extensive margin. Between 1952 and 1977, about 80 per cent of the increase in total cropped area was due to extensive cultivation. Since then, this proportion has fallen dramatically, with double cropping accounting for the bulk of the increase. These reports suggest that, in addition to the water constraint, a very tangible land constraint exists as well.

The other two options for increasing crop production are cropping intensity increases and crop yield enhancements. Both are water dependent and establish an a priori justification for Kalabagh. The NCS report states, 'At present 12.2 million hectares of land are available for double cropping, as against the

4.38 million hectares that are double cropped clearly water is the constraining factor.' With respect to yield enhancements, water is again required in large quantities by the high-yield seed varieties and for its synergetic effects upon chemical inputs.

However, a critical choice needs to be made here. Is there need for additional water, or can the same results be achieved through improved water use efficiency? Higher water retention in the system risks aggravating an already massive problem of waterlogging and salinity. Should we spend scarce capital for remedial drainage projects, i.e., the controversial and exorbitant \$780 million, 25-year National Drainage Plan project?

Kalabagh is bound to add to the problem; not only in its immediate environs but also where new irrigation infrastructure is to be situated. Furthermore, the incremental land degradation is likely to be most pronounced in Sindh reflecting the north-south land gradient. Tables 1 and 2 show that waterlogging is higher in Sindh and has been increasing over time, against a declining trend for Punjab. The numbers for salinity also indicate that its incidence is higher in Sindh than in Punjab; almost 30 per cent of the area within the canal commands in Sindh is afflicted by salinity, as compared to 20 per cent in Punjab.

The upshot is that attempts to increase crop production by tapping new sources of water could be self-defeating; on account of resulting soil degradation. Land currently available for cultivation can go out of cultivation.

**Cheap energy**

Additional energy requirements notwithstanding, the claims of cheap hydel energy are becoming untenable on two counts. First, the cost calculus has changed with respect to both capital as well as recurring outlays. Upfront capital costs need to factor in social displacement and environmental degradation. (Resettlement claims for Ghazi Barotha have been reassessed from Rs. 2 billion to Rs. 5 billion). These costs have not been factored in while preparing the economic feasibility of Kalabagh. If

LAND WITH WATER-TABLE DEPTH OF UNDER 0-5 FEET (Million hectares)					
Province	Punjab	Sindh	NWFP	Balochistan	Pakistan
<b>1988</b>					
June	0.54	0.86	0.06	0.04	1.50
October	1.72	3.44	0.06	0.09	5.31
<b>1990</b>					
June	.71	2.34	0.05	0.09	3.20
October	-	-	-	-	-
<b>1992</b>					
June	0.64	2.23	0.05	0.14	3.05
October	1.25	4.08	0.06	0.14	5.53
<b>1993</b>					
June	0.58	1.30	0.04	0.07	1.99
October	0.98	4.06	0.06	0.15	5.25

Source: Compendium of Environmental Statistics of Pakistan, 1994-95

these costs are added, economic feasibility may not hold.

#### **Flood Control**

It is claimed that large dams are the perfect flood prevention devices. The evidence for Pakistan shows otherwise. Despite the presence of large dams, there has been neither any significant reduction in the incidence or intensity of floods nor in associated losses in lives, crops, livestock and infrastructure. As Table 3 illustrates, there appears to be no pattern to the floods other than that they have coincided with wet cycles. If anything, the severity of floods appears to have increased after the two major dams, Mangla and Tarbela, were constructed.

It has long been known that river systems have a natural capacity for dealing with the threat of floods and that the natural processes embodied in them provide many benefits. Flood plains, wetlands, and backwaters are commonly referred to as nature's sponges; they absorb excess water, purify it and can be tapped during lean periods. They act as spawning grounds for fish and wildfowl. The floods themselves replenish agricultural soils. Communities living around these areas adapt to this natural rhythm and use its bounty to ensure reliable and sustainable livelihoods. The flood 'pulse' is not a disturbance, flood prevention is. And that is exactly what large dams like Mangla and Tarbela have contributed to. Dams do not prevent floods; they merely create costly flood threat transfer mechanisms.

#### **ENVIRONMENTAL AND SOCIAL PERSPECTIVES**

Degradation of the Indus delta ecosystem as a result of reduced water outflows is already a highly visible phenomenon. The present level of silt discharge, estimated at 100 million tons per year, is a four-fold reduction from the original level before the rivers were dammed. The combination of salt water intrusion, and reduced silt and nutrient flows has changed the geomorphology of the Indus delta considerably. The area of active growth of the delta has reduced from an original estimate of 2600 sq. km. to about 260 sq. km. Freshwater reaches only a few of the creeks and others have become blocked. The delta is being transformed by strong wave erosion, an increasing dominance of sand at the delta front and an increase in wind-blown sand deposits because of losses in vegetation.

The consequent ravages to the ecosystem have been exceptionally severe, in particular to the mangroves, which are its mainstay. They sustain its fisheries, act as natural barriers against sea and storm surges, keep bank erosion in check and are a source of fuel wood, timber, fodder and forest products, a refuge for wildlife and a potential source of tourism. Without mangroves and the nutrients they recycle

<b>EXTENT OF SALT-AFFECTED LAND (1000 hectares)</b>				
	<b>NWFP</b>	<b>Punjab</b>	<b>Sindh</b>	<b>Total Indus Basin</b>
Canal Command Area	320	7891	5351	13,562
Salt Affected Area	14	1614	1532	3160
Per cent	4.3	20.4	28.6	23.3
Outside CCA				
Salt Affected Area	502	1129	1019	2650
<b>Total</b>	<b>616</b>	<b>2743</b>	<b>2551</b>	<b>5810</b>

Source: Soil Survey of Pakistan (1977-78)

and the protection they provide, other components of the ecosystem cannot survive.

The direct and indirect benefits of mangroves are enormous. Pakistan earns about Rs 2 billion from fish exports, of which shrimp and prawns which breed in mangroves constituted 72 per cent. The collective imputed income from fuel wood, fodder and forest products is another Rs 100 million. These are broad orders of magnitude, which are threatened by mangrove degradation. Even where numbers are



absent, the functions are indicative of the mangroves' value. For instance, substituting natural with physical barriers (dykes, walls, dredgers) entails enormously high capital and maintenance costs. The health of mangroves is directly linked to freshwater outflows. Releases below Kotri barrage average 34 MAF. Of this, about 20 MAF actually reach the mangroves, and that too, between the Kharif months of July and September. The rest is lost due to evaporation or diversions. According to the Sindh Forestry Department, about 27 MAF is required to maintain the existing 260,000 ha of mangroves in reasonably healthy condition. This is 7 MAF more than currently available, a situation that has contributed to ecosystem instability and mangrove loss. Within the framework of the Indus Water Accord, the intent is to divert an additional 11 MAF for upstream dam construction to meet agricultural and hydropower needs. This would result in a further reduction in existing sub-optimal flows and aggravate an already critical

**FLOOD DAMAGE IN PAKISTAN**

Year	Monetary Losses (Billion Rs. in 1995 prices)	Lives Lost (No.)	Villages Affected (Nos.)	Area flood (sq. miles)
1950	9.08	2910	10,000	7000
1955	7.04	679	6945	8000
1956	5.92	160	11,609	29,065
1973	5.52	474	9719	16,200
1975	12.72	126	8628	13,645
1976	64.84	425	18,390	32,000
1978	41.44	393	9199	11,952
1981	N/A	82	2071	N/A
1982	N/A	350	7545	N/A
1988	15.96	508	100	4400
1992	56.00	1008	13,208	15,140
1995	7.00	591	6852	6518

Source: Water Sector Report, Climate Change Impact Assessment and Adapting Strategies, July 1997

situation. For communities residing in the Indus Delta, the mangroves are a vital source of livelihood, both direct (fuel, fodder, grazing) and indirect (fish, amenity values).

**STRATEGIES TO RESOLVE WATER ISSUES: THE WAY FORWARD**

**ISSUES AND CHALLENGES FOR WATER POLICY**

There are four issues and challenges for water policy: lack of water policy and policy forums, lack of conservation orientation, lack of conservation orientation and inequitable distribution

**Lack of water policy and policy forums**

Pakistan does not have a consolidated policy on water that integrates the development and management of this vital resource. Policy pronouncements have been fragmented and ad hoc. The institutional arrangements are also fragmented as each institution deals with a specific and narrow dimension of the water sector. There is a need for the integration of policies and of the institutional arrangements that exist in the water sector today. For example, the irrigation department and agriculture departments have little or no co-ordination at any level. Furthermore, there is an absence of a culture of democratic decision making. There are no institutional forums to discuss policy alternatives with key stakeholders and arrive at a consensus on some of the vital issues confronting the country. Rather, there is an entrenched tendency towards unilateral closed door decision making and an arrogant disregard for any accountability.

**Low delivery and use efficiency**

The Indus Basin Irrigation System comprises of an extensive system of barrages, canals and watercourses. Due to age, overuse and poor maintenance, canal delivery is extremely inefficient in watercourses. Average delivery efficiency is 35 per cent 40 per cent from the canal head to the root zone with most losses in the watercourses. Improper irrigation practices add another 10 to 15 per cent to the losses. Some assess the total amount of loss due to conveyance and irrigation practices to be between 65 to 70 per cent, and estimate that an amount as high as 30.82 million acre feet (MAF) is wasted as a result. The loss of such a major part of surface water not only reduces available water for crops, it also contributes to waterlogging and salinity.

**Lack of conservation orientation**

Pakistan's policies and institutions are based on the assumption of abundance of water. There is a great deal of wastage that occurs in domestic use, irrigation practices and in the way we manage resources at the national level. A lot of wastage of water occurs because its pricing is not right. Reforms are needed to set prices right with people's participation in the reform process. In addition, there is a need for irrigation techniques that are water saving and cropping patterns that are not intensive in water use. A clearly preferred choice is to use existing water more efficiently, and to focus on making the necessary institutional changes for its equitable distribution. Some of the proposed measures are canal and watercourse rehabilitation, land leveling, improved on-farm water management, and at the policy level, switching to demand-based management and water pricing. These are clearly win-win solutions as they are relatively low cost, efficient, equitable and environmentally friendly. For the long run, measures will have to be initiated to gradually replace the 19th century flood irrigation method with various forms of appropriate drip irrigation technology.

**Inequitable distribution**

By hydrological definitions, Pakistan is not a water scarce country. The key issue is equitable and just distribution. Inequity has many dimensions: there is a geographical inequity, inter-provincial inequity, cropping pattern inequity, head and tail user inequity, the rich and poor inequity and the land owner and landless inequity. It is not a simple matter to deal with all these dimensions of inequity. The distribution of water rights is tied to land rights and distribution. It is necessary to examine if this paradigm can continue to sustain life. There is a need to evolve a system of water allocation and distribution that can mediate between these competing demands in a manner that is fair to all stakeholders and sustainable for human livelihoods. At the provincial level, the water accord between the provinces lays the basis for a solution. However, these problems are likely to re-emerge with growing water scarcity and increasing demand. The inequity in water distributions compounds the problem of poverty in Pakistan. Research points to the fact that 70 per cent of the water is appropriated by around 30 per cent of the head end users. In many cases, 50 per cent of farmers in tail reaches do not receive water at all. Heavy reliance on tube well pumpage in the tail reaches causes secondary salinization. The unreliability and inequity of canal supplies has increased due to increased demand, forcing farmers to use more groundwater towards tail ends of the distribution system, where recharge is the minimum, badly affecting yield and land quality in these areas.



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