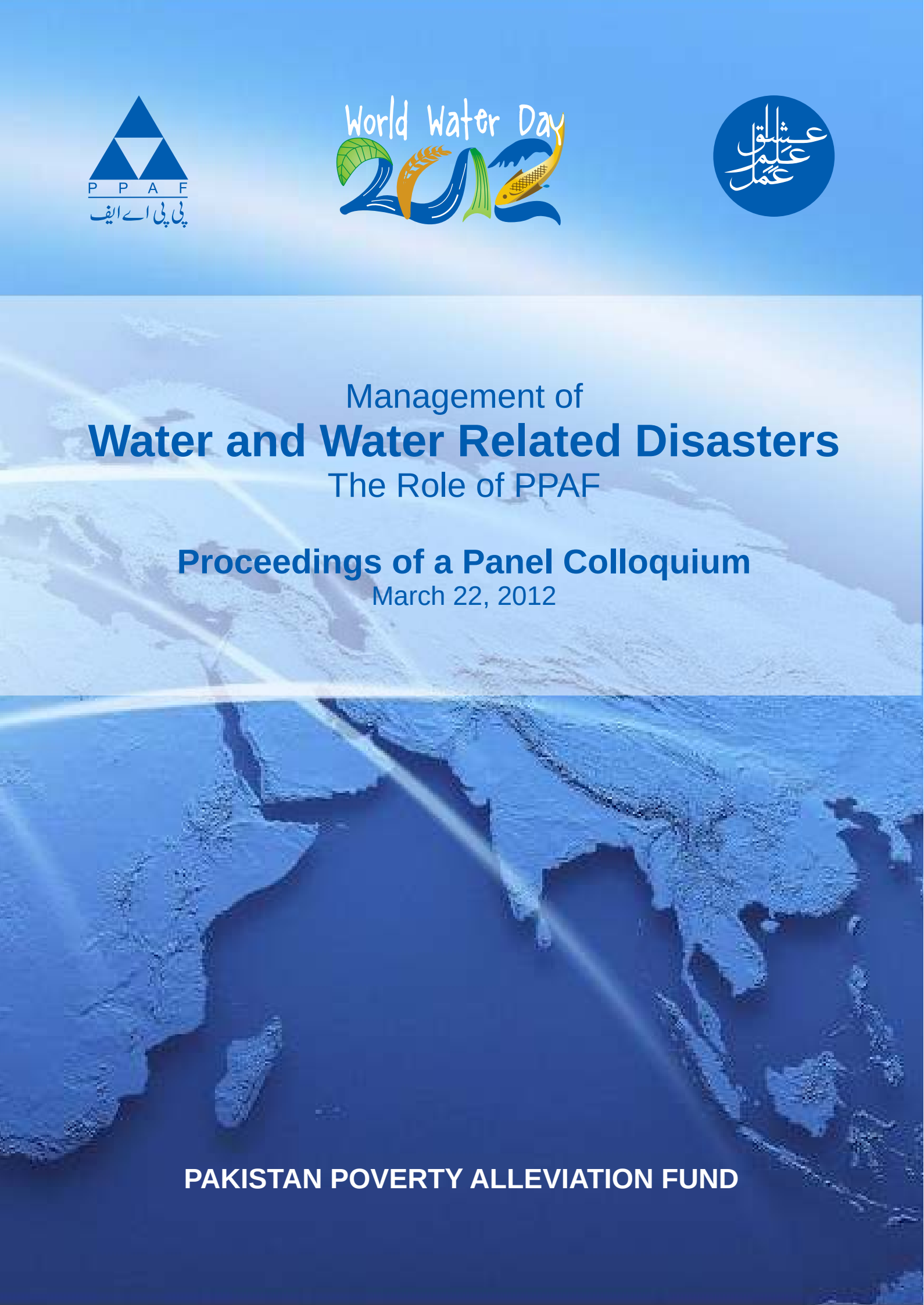

Management of
Water and Water Related Disasters
The Role of PPAF

Proceedings of a Panel Colloquium
March 22, 2012

PAKISTAN POVERTY ALLEVIATION FUND

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Annexures

1. Introduction

Pakistan is among the top ten water- stressed countries. It suffers from the paradox of high frequency of floods as well as droughts. Challenges to water management emanating from scarcity and abundance of water abound: inability to store surplus water, overexploitation of groundwater, slow recharge of aquifers and contamination of existing sources. The inevitable consequence is reduction of per capita water availability from 5,300 cubic metres in 1951 to 1,200 cubic metres[1] in 2012. Projections are that by 2020 water availability will go further down to 855 cubic metres. Climate change, population growth and industrialisation have contributed to the declining trend.

Glacier melts and monsoon rains are the primary sources of water in Pakistan and there are no additional sources to meet the growing domestic, industrial and agricultural demands. The total available surface water is about 153 million acre feet (MAF) and the total ground water reserves are approximately 24 MAF.

Excogitating over the increasing concerns for scarce water resources and disasters related to it, Pakistan Poverty Alleviation Fund held a panel colloquium on “Management of Water and Water Related Disasters: The Role of PPAF” organised at PPAF Islamabad, on the World Water Day-March 22, 2012. The objectives of the colloquium were to;

1. Disseminate information on water related issues
2. Share PPAF's achievements in addressing these issues and
3. Evolve a mechanism to tackle water related challenges

The panelist of the colloquium discussed various challenges in water sector in Pakistan inadequate water budgeting and accounting system absence of strategy to meet the gap and accessing clean water institutions responsible for managing the resource lack knowledge, information, relevant data and capacity to deliver. Besides, at the recipient level, there is lack in of community participation in water management, lack of awareness to conserve water and use clean water. The result is inefficiency in delivery network, aging infrastructure, wasteful farming practices, ignoring the importance of water crop alignment, low productivity per unit land, poor quality of water leading to multiple cross cutting impact and little attention to storing water whether at the community level or at the national level.

The colloquium provided an opportunity to explore divergent and competing points surrounding water resource management while it stimulated dialogue around;

1. Whether to have large dam to address country's water shortage during low flow season, store seasonal flood waters and generate electricity?
2. Look underground and not just upstream for enhancing low flows but then how to strategically and sustainably manage groundwater?
3. Middle class has improved access to water but not the poor. How to increase the access for all? Traditional ways of harvesting water at the community level involving indigenous knowledge and local expertise be explored.
4. If access is not a major issue then focal point should be improving sanitation services to in turn improve water quality.
5. Policy framework is missing to give directions for managing water resource crisis of the country.
6. Where policies exist but how to improve policy implementation?

[1] IUCN, Pakistan Water Gateway; http://cms.waterinfo.net.pk/?q=node/159

The discussions led to the decision to form a Pakistan Water Forum with the eight panellists as its founding members and the members of the executive committee. The key objective of the forum is to achieve consensus on major water sector issues and their solutions.

Framing the issues, the panellists propounded that the future hinges on; gathering technical and legal knowledge providing a multi-stakeholder platform comprising water experts, media, civil society, politicians, experts in international laws to understand different perspectives, identify key priorities, determine an institutional framework for the application of gathered knowledge and capacitating current institutions for delivery of services.

This document constitutes the record of the proceedings of the colloquium. It includes four presentations and panel discussions with eight panellists (Programme of Activities at Annexure I). The document is available on the Internet.

2. Summary of Proceedings

Mr. Zaffar Pervez Sabri, Group Head Energy, Infrastructure and Disaster Management (EIDM), PPAF in his welcome address, expounded on the objectives of the colloquium. The programme constituted panel discussions and presentations of a group of people who were knowledgeable and well- informed and had specific points of view about sustainable management of the water resources of the country. The following speakers participated;

- Mr. Shams-ul- Mulk, President, GIK Institute of Engineering Science &
- Technology, (Chairman)
- Lt. General (R) Nadeem Ahmed, Ex Chairman, NDMA, and Ex Dy. Chairman
- ERRA,(Co- Chairman)
- Mr. Ali Hassan Habib, Director General, WWF Pakistan, Discussant
- Mr. Izhar Hunzai, Ex Chief Executive, AKRSP, Presenter/Discussant
- Mr. Amer Zafar Durrani, Senior Infrastructure Specialist, The World Bank, Islamabad, Presenter/ Discussant
- Mr. Farhan Sami, Team Leader-WSP, The World Bank, Islamabad, Presenter/Discussant
- Ms. Simi Kamal, Water Sector and Gender Specialist, Discussant
- Mr. Zaffar Pervez Sabri, Group Head (EIDM), PPAF, Presenter/Moderator

Profiles of the panellists are placed at Annexure II.

Presentation topics varied to reflect the wide ranging concerns of water management for food security, drinking water quality and its linkages with sanitation services and understanding distribution of water in the regional context. The following four presentations were made;

- "Integrated Water Resource Management and Food Security," by Izhar Hunzai
- "Drinking Water Supply and Sanitation," by Farhan Sami
- "Re-understanding the Indus Basin; Lessons from the Ganges Basin Study," by Amer Z. Durrani
- "Sustainable Management of Water and Water Related Disasters- The Role of PPAF and the Way Forward," by Zaffar Sabri

Mr. Zaffar Pervez Sabri moderated the panel discussions. Given below is a synopsis of the presentations. Full text of the presentations is reproduced at Annexure III.

2.1 Session One: Facilitative Presentations and Panel Discussion

2.1.1 Presentations

1. Integrated Water Resource Management and Food Security -Izhar Hunzai

Mr. Izhar Hunzai pointed out the two dilemmas Pakistan faces; too much water, too little water. He brought to the fore that the country is among the top 10 water stressed countries. There are water, food and energy shortages and then there are frequent floods. The implications are to prepare for frequent cycles of droughts and floods but current level of preparedness is poor.

Key challenges of the water sector are;

1. 80% of cropped area is irrigated and 96 % of water used goes into agriculture, however, water efficiency is low.
2. Water quality is questionable.
3. Pakistan is slow at using more efficient technology in agriculture.
4. Infrastructure to regulate, store and convey water is degraded.
5. Pakistan lacks in water accounting system to record how much water is available, how much is supplied, how much is required, how to fulfill the needs?
6. How to finance the investment needs, how to leverage public funds, bring in donors and attract private funds?

Vision to ensure water and food security;

1. Developing a water budgeting and accounting system.
2. Developing standards for professional monitoring of water resources.
3. Developing a strategy for ensuring clean water supply.
4. Using technology for water efficiency and having water-crop realignment in view of the limited water resources.
5. Ensuring water efficiency throughout the agriculture process from the very beginning to the very end-cultivation, post-harvesting and processing.
6. Involving community in management decisions.
7. Engaging public for awareness on issues, behaviour change and getting their support for reform measures.

Mr. Hunzai proposed a nationwide Integrated Water Resource Management (IWRM) Plan for economic, social and environmental equity reflecting the following dimensions;

a. Economic dimension: invest in upgrading infrastructure and productivity enhancing technologies.
b. Social dimension; provide minimum quantity and quality of water especially to small farmers and urban poor.
c. Environmental dimension; have enough water for ecosystem service, reduce pollutants from polluting water sources and recycle water to balance eco system.

Sharing his experience of PPAF and Aga Khan Rural Support Programme in northern Pakistan, Mr. Hunzai elaborated how more land has been brought under agriculture by;

1. Preventing water losses through public extension workers, trained community extension members.
2. Using technology for higher yields.

3. Mobilising community and including women in the process.
4. Investing in road infrastructure.
5. Promoting cash crops, value chain and financial services.

He further enumerated the measures taken in northern areas of Pakistan illustrating sustainable use of resources. Now 6.4% of land is under agroforestry as against 4% under natural forest; further, renewable energy sources have been developed thus reducing the burden on forests.

2. Drinking Water Supply and Sanitation - Farhan Sami

Mr. Farhan Sami gave an overview of the Water and Sanitation Program of the World Bank. The program provides technical assistance, policy advice and capacity building in over 24 countries to improve access; to water and sanitation services for the poor. The program has regional offices in Africa, East Asia and the Pacific, Latin America and the Caribbean and South Asia.

Drinking water is a must for survival; however it is not given much importance. In Pakistan, 92% households have access to water and 78% have access to sanitation. However, the real issue is beyond access; access to what quality of water? Statistics show that middle income people see improvement in water access. Likewise, the poorest 40% in South Asia have barely benefited from sanitation programmes.

He pointed out some stresses in Pakistan's governance system and resulting inability to cope with natural catastrophes. Floods losses of 2010 equate to US $9 billion; there is insecurity and conflict in FATA displacing millions of people and disrupting public services; government spending on water and sanitation is < 0.2% of GDP.

In his view, institutions need to be fixed and pumping in money is not the solution, e.g., present allocation of US$15 billion for FATA where 90% population is still rural will not improve the situation unless institutions are strengthened.

Looking at the Millennium Development Goals, Pakistan has met the goal of access to water and sanitation services. But quality of water is the issue and not quantity. Despite high access to water and sanitation, some startling facts are;

a. Less than 25% receive safe water and 200,000 children die each year due to water related diseases.
b. Per capita water is less than 1,000 m^3/capita/year (at places).
c. Climate change will reduce glacial melt by 40% in Indus by 2050.
d. 52 million (27%) people defecate in the open everyday.

Mr. Sami drew attention to open defecation and intermittent supply rather than continuous as the major causes of water contamination. Poor water quality in turn has repercussions on household health and economy. The total economic cost of poor sanitation for the year 2006 was estimated at 343.679 billion PKR which is 3.94 % of GDP.

If seen globally, much poorer countries in Africa have better social indicators than India and Pakistan and access to social services needs to be improved upon. Of these services, while

water is needed for existence, sanitation is fundamental and in disaster situation it becomes more important. Contaminated water affects household health and people suffer mostly from e-coli and diarrhea.

Mr. Sami emphasized on establishing institutional linkages, giving open technology choice for sanitation, practicing sphere standards in providing water and sanitation services in disaster situation. He suggested that;

1. Local government and public health engineering departments should be linked with Provincial Disaster Management Authority (PDMA).
2. PPAF should coordinate with PDMA and be part of such WATSAN clusters and link with non-governmental relief organizations to respond to emergencies.
3. Two competitive investments are: infrastructure or giving awareness for behaviour change resulting in good health and hygiene practices. PPAF should provide infrastructure and social mobilisation for behaviour change.
   a. Advocacy for hand washing.
   b. Develop communal latrines.
   c. Targeted subsidy.
   d. Drinking water supply projects and rewarding communities and partner organizations who demonstrate good schemes.
4. PPAF should consider providing pit latrines during floods to at least confine excreta.

Sphere standards of water supply and sanitation should be followed[2]

3. Re-understanding the Indus Basin: Lessons from the Ganges Basin Study - Amer Z. Durrani

Mr. Amer Zafar Durrani presented Ganges Strategic Basin Assessment Study prepared by Dr. Claudia Sadoff of the World Bank. The study was conducted under South Asia Water Initiative (SAWI) which aims to facilitate regional cooperation in sustainable use and management of the water resources of the Himalayan Rivers in addressing development challenges and the impacts from climate change.

Mr. Durrani gave a context of the study followed by methods utilised and key findings. The Ganges Basin houses some 650 million people. Nepal is the upper riparian. In the basin, surface water as well as underground water is used. The basin houses the largest mangrove eco system in the world.

The assessment adopted three methods;

1. Mike Basin Model to model the surface water of the Ganges and understand the dynamics of groundwater, water balance, water quality & floods.
2. Economic optimisation model to explore economic trade-offs & the distribution of benefits from new storage projects in the basin .
3. Literature review, focus group discussions, survey to understand the social impacts & responses to water variability.

[2] Sets of common principles and universal minimum standards in life-saving areas of humanitarian response; http://www.sphereproject.org/about/

Key findings of the assessment are;

1. The largest 23 dams would hold only 18% of Himalayan water annual flow.
2. Flooding is more precipitation base and upstream storage reservoir will cause little impact on mainstream and only modest impact in tributaries. Tributaries overflow because of rainfall and embankment failures.
3. To protect communities, hard and soft, transboundary and local interventions focusing on flood management instead of flood protection are needed.
4. Augmenting low flows by upstream water storage will only make a little difference to low flows. However, the best use and economic value of additional flow is unclear as studies show water does not appear to be the key factor limiting productivity and additional low season water could harm waterlogged areas. If agriculture area increases only then additional flow is required in low season.
5. The best way is to use tube-well if ground water usage is strategically & sustainably managed.
6. Hydropower is the largest benefit if dams are built.

Mr. Amer Durrani concluded by emphasizing on the need to re-imagine the Indus Basin. Specific points made were;

a. For regional floods, focus on information & institutions, not just infrastructure.
b. For water storage to enhance low flows, look underground, not just upstream.
c. Hydropower development & trade of electricity in the basin remain very promising.

2.1.2 Panel Discussion- I

Mr. Izhar Hunzai

Mr. Hunzai highlighted the potential of hydro power on upstream of Tarbela and introduction of new management practices at community level to have locally-owned approach to harvest water using new technologies.

Ms. Simi Kamal

Ms. Simi Kamal shared that Pakistan has the lowest production per unit of water per unit of land. It is the right time to think about deficiencies in water related policies and make strategies and design economic and social policies to solve them. The following need to be looked into;

1. There are downstream issues-areas that do not have access to Indus Basin, how to address their needs.
2. Water conservation, how to promote it.
3. Urban agriculture, how to promote it.
4. Implementation of water related laws and control measures.
5. Maintenance of infrastructure assets, how to repair them by leveraging local funds.

Mr. Farhan Sami

Mr. Farhan Sami called attention to thinking globally and acting locally to manage the limited amount of water on earth and taking action at the local and community level to manage water

and food supply in the country. He was of the view that the policies should focus on;

1. Conservation strategies.
2. Improving agriculture efficiency as Pakistan's water efficiency is very low at 33- 44%.
3. Increasing crop production per unit of land. Wheat production is 2,000 kg per hectare in Pakistan compared to 4,000 kg per hectare in Egypt and 6,000 kg per hectare in Israel. By using water efficiently, more crops could be cultivated.
4. Enhancing water storage capacity and increase capacity of dams as 90% of Indus water is from glaciers.

Mr. Ali Hassan Habib

Certain factors that apparently are not related should also be factored in as they impact water management issues. Mr. Ali Hassan Habib, giving example of bottled water, stated that there are limited options and the society is pushed to use bottled water as alternate to tap water. However, many do not have even that choice and are forced to use whatever quality of water is available to them.

Negative impacts of interventions are not assessed. Pollution contaminates water while construction within the embankment restricts the flow of water and limits the capacity of the river. Pakistan is facing problem of decreasing life of its dams. There are ways to manage water resources, e.g., biological measures, reforestation and tree plantation, in upstream of Yangtze River has reduced river silt and increased the river's capacity by 3 times[3].

Lt. General (R) Nadeem Ahmed

Lt. General (R) Nadeem Ahmed shared his experience in emergency response following the 2005 earthquake and 2010 floods. Because of the earthquake, all drinking water schemes had collapsed as they were based on springs. When redesigning the schemes, it was decided to make them earthquake resistant and not prone to flood.

Post earthquake rebuilding activities showed that the impact of providing water supply on communities' improvement in quality of life is manifold. Water was available to 98% households in the earthquake devastated areas, but distance from the source and quality of water was the challenge. Households spent 4-6 hrs a day in fetching water. Two measures were taken to address the water crises situation in the earthquake affected areas; First, the new schemes proposed were based on gravity flow and community water storage was located not farther than 75 metres from homes, and water of desirable quality tested by Pakistan Council for Research on Water Resources (PCRWR) was supplied. The availability of clean water closer to home had positive influence on the lives of the households;

1. Women had free time to put into livelihood activities.
2. Girls were able to attend school because of fewer household chores.
3. Healthcare cost reduced.

[3] ... over the past 10 years to reduce river silt by protecting forests and planting trees around the dam and in the upper reaches of the Yangtze River. The effort has resulted in the reduction of 100 million tons of silt a year...; Http://www.ibiblio.org/chinesehistory/contents/07spe/specrep01.html.

Second, rain water harvesting was proposed. The new shelter provided by Pakistan army had corrugated iron sheet roofs. Rainwater from the roofs was stored in reservoirs by individual households for animals, livestock and for household purposes. Lt. General Nadeem gave example of an intervention in Azad Jammu and Kashmir, where 700 households in the community requiring 1000 gallon per household per day harvested rainwater and were able to get 700,000 gallons of water without building a dam or suffering from political implications of the activity.

Raising concerning for storing surplus water, Lt. General Nadeem shared that SUPARCO has identified 4 natural depressions in level ground-three in desserts and one in Punjab. Large reservoirs can be constructed by damming these natural depressions. If additional command area is brought under agriculture then country's food insecurity could also be addressed and options of large storage dams be ruled out.

Mr. Shams-ul-Mulk

Sifting through the controversy whether to have large infrastructure projects or small, Mr. Shams-ul-Mulk stated large rivers require large infrastructure projects. On River Indus, which is 12 miles wide, it is not possible to make small irrigation project and address the water crisis situation of the country. Only large projects could do so.

Mr. Mulk shared that for 30 years Pakistan has experienced scarcity and abundance of water-the tragedy of Kalabagh dam and the country's inability to store surplus water. If WAPDA's (Water and Power Development Authority) plan had been followed, Kalabagh dam in 1990s and then Bhasha Dam in 2,000, the 2010 flood wouldn't have become a major entity but just one summer flood. Because of not having Kalabagh Dam, 85,000 cusecs of flood water on June 20, 2010 could not be stored. Out of the total volume of water, 20,000 cusecs were stored at Tarbela leaving around 60,300 cusecs to flow down. At present, Pakistan has 2 large dams and 68 small and medium dams on average holding 8,000 acre feet of water. Around 150 small dams are needed to replace one Kalabagh Dam. It took 50 years to build 68 small dams, so 150 small dams will take a long time.

Alluding to the debate surrounding the construction of Kalabagh Dam and apprehension that in the event of maximum floods areas of Khyber Pakhtunkhwa will be inundated, he argued one province that will not be affected by floods is Khyber Pakhtunkhwa and one province that will suffer the most by not constructing Kalabagh Dam is Khyber Pakhtunkhwa. The issue of Khyber Pakhtunkhwa is how to have water with the same ease of access as the other three provinces. The effect of decisions of today will be known 10 years later as infrastructure construction will take that long.

Mr. Mulk then sketched the future that 15 years from now the rest of the provinces will receive water through gravity and will pay Rs. 500 *Aabiyana* (water tax) per acre a year. A person at Dera Ismail Khan (KP) will be 15 to 150 ft above the River Indus and he will have two options to raise the water to this level, either have Kalabagh dam or pump groundwater.

Since the dam is not there, pumping will cost Rs. 5,000 per acre a year. Equitable distribution of resources and the same ease of access to water to all provinces mean no other option but Kalabagh Dam.

Highlighting the importance of institutional capacity, Mr. Mulk said that if institutions exist and have capacity then work gets done. The institutions that deal with water resources in Pakistan were created when water was in access. Earlier, per capita water availability was 5,000 cubic metres and now it has gone down to 1,000 cubic metres. These institutions can no longer work because now it's a question of shortages and the game of shortages is different from surpluses. So, the entire institutional architecture needs to be renewed for delivery of services.

Mr. Shams-ul-Mulk reflected on the performance of WAPDA, which made some unimaginable successes and some tragic mistakes. Indus Water Treaty was signed in 1960 and the world's largest development project ever conceived, Mangla dam built in 10 years, was contrary to the expectations of the international community (economists, experts, and media). However, WAPDA was able to take the challenge and finish the work on the dam in due time then only because it had people who understood the problem, the need and had leadership to act. For any successful work, Mr. Shams-ul-Mulk continued, two qualities are required;

1. Institutional capacity to deliver whether irrigation works, education, electricity or justice.
2. Availability of correct information. Since there is famine of truth, no appropriate decision has been made so far.

2.1.3 Questions and Answers

Question-1: Mr. Mushtaq Mirani, Sindh Rural Support Programme (SRSP)

Water at places is sweet but in lower Sindh it is brackish. The quality of aquifers depends on how much water is recharged. Land is waterlogged in Sindh and water goes down the river into the sea. How to make water more productive and use it efficiently? There is need to work on water logged and saline lands.

Answer: Mr. Shams-ul-Mulk

Indus aquifer is one of the largest collections of underground water. The quality of the aquifer depends on the how much water is recharged into the aquifer. If no recharge then the danger is making good aquifer brackish. Work needs to be done on how to have sufficient amount of water to recharge the aquifers. So, water quality management and efficiency are important.

The World Commission on Dams (2000) reports when foreseeing the future schemes, water sector values will determine what needs to be done. The values are;

- Efficiency
- Equity
- Participatory decision making
- Sustainability
- Accountability

Efficiency has a very high place in the scheme of implementation.

Question-2: Mr. Suleman Abro, Sindh Agricultural and Forestry Workers Coordinating Organization (SAFWCO)

Around 30% water is drinkable and 70% brackish. At places arsenic content is high in drinking water. The problem has not been addressed either at the provincial level or at the federal level. People do not have access to clean drinking water. Why any measures have not been taken yet?

Answer: Ms. Simi Kamal

There are several disconnects in the country's water policy and implementation;

a. The present policy framework was designed in 60s and now the reality on the ground has changed.
b. There are a lot of experimentation and many success stories in terms of how some of the water issues have been tackled but they are all disconnected.
c. The academic research does not get translated into action: it is not being taken up by the industries or supported by government to formulate policies.

The question is how to put these concerns together to respond in a positive way to the issues as Pakistan is no longer a water surplus country. Also, there are different problems at different places. So, there isn't one solution to fix all. The people need to identify what are some of the issues to look at.

There is no water policy, there are no policy makers because people do not protest and seem to be sitting back thinking that somebody, somewhere else will take charge. "Nobody else is going to take charge: We have to take charge. Whether it means movements, getting out on the street, coming out with clear articulation of demands that people want to be fulfilled. Pressure has to be put to tell the government a few specific things that need to be done in 5 or 10 years out of many things that nobody will be interested in. People have to educate the policy makers about their needs.

All the politics around agriculture and sugarcane cultivation, people know that but people do not protest. Recently a small women's movement in Pakistan has been able to achieve by enacting legislations of concern to women (referring to laws pertaining to protection against harassment of women). To deal with water issues similar type of pressure is needed so that legislators are forced to take on the kind of action people want them to take. People have to tell the legislators specific things they want done. There is need of a forum where people could come to consensus.

Under the 18th Amendment, the fact that provinces are responsible in handling their waters, people have to force their provinces to get the provincial requirements fulfilled.

Comment: Mr. Aftab Ahmed, CEO, Human Resource Development Society (HRDS)

Arsenic issue has been here for the last 2 decades. UNICEF in 2000 conducted a case study to know reasons of arsenic in various areas of Pakistan. PCSIR and PSRWR were involved and around 200,000 water samples were collected from south Punjab in Multan, Bahawalpur and Rahim Yar Khan. A small component of the study was imparting

awareness to people on how to differentiate arsenic water from clean drinking water instead of providing high quality of filters. It was a very successful study but then the project was shelved in 2008. Till now, no research has been conducted and even doctors do not know how to treat patients who have consumed arsenic water.

Drinking water is the first priority but there are no institutions for new social scientists to learn about procedures and standards to follow in supplying clean water and receive training on water, sanitation and hygiene (WASH) services.

Question-3: Mr. Khadim Hussain, Badin Rural Development Society (BRDS)

Using hybrid seeds is costly when there are already issues of weak social protection system, food security, and livelihood. Also, provinces don't have drinking water policy.

Answer: Mr. Izhar Hunzai
Using hybrid seeds and having more productive seeds does not mean finishing the local variety of seeds. Every area has competitive advantage and can benefit from seasonal differences. Some 20 years back, there was no concept of selling fruit in northern areas of Pakistan and considered against the cultural norms. Around 90% of apricot would go wasted. Now they use technology, process it, add value to it and sell it. So, prudently use science and technology to enhance livelihood. Likewise, buckwheat was diet of the poor earlier and now it is the diet of the rich, however, its productivity has decreased over time and needs research to increase productivity. Research organizations in China have genetically improved buckwheat seeds which yield 3 times more than the local variety here in Pakistan. So, Pakistan should also adopt technology to increase productivity.

Answer: Mr. Amer Durrani
While interventions are made at the local level, the act of more expansive thinking has stopped. Ironically, local citizens/voices think they are expert at everything. There is famine of experts just as there is lack of truth and knowledge. To address the water issues, Pakistan needs expert people like Mr. Shams-ul-Mulk belong to the profession of water, understand hydrology, bring a global perspective on water and talk at macro level of what overall Pakistan needs to do in terms of the basin.

Water and food are highly politically charged. Quoting Einstein, Mr. Durrani said, “the way to solve a problem is to sometimes forget how you got there.” So the way forward is people should learn to think globally, collect information and knowledge and sit and make decisions on how to manage the water resources of the country and forget what happened in the past (referring to IWT).

Answer: Mr. Farhan Sami
There is a lot of policy work going on in Pakistan. Sindh has also approved a water strategy but then what difference is it going to make at the end what about the result.

Sindh has approved a water policy, but what about the result. Sindh has allocated Rs. 11 million to sanitation but would that money bring about change. The question is about the process in order to have a successful outcome.

Local government institutes are a norm (provincial and federal) have training curriculum designed in the 80s which is currently being revised with support from World Bank's Water

and Sanitation Program. Local government will that way come to know of the innovative ways. PPAF may use these training modules for the training of its partner organizations.

Efficiency is very important but Pakistan's problem is not around water scarcity but it is around management. Water management is not going to be solved through dams (alone); dams are part of the solution.

Question-4: Mr. Ghulam Mustafa, HANDS, Sindh
The UNDP access figures on drinking water and sanitation of 2010-11 represent post flood situation or of the past; the activities need to be based on the current situation?

Answer: Mr. Farhan Sami
The Joint Monitoring Report of the United Nations released in March 2012 has 2010 data. But after the floods the situation must have changed. The data shows that access number is always good; percentage of households with access to water is high according to all household surveys, such as Pakistan Social and Living Standards Measurement-access to water is 92% and that to sanitation is 89%. These are all right figures and figures vary from one dataset to another. The parameters of donors are different and it depends on how best each dataset is used. But whatever the figures are, access is not an issue.

Observations: Mr. Hayatullah, HELVETAS Consultants
In Chitral more than 2,000 communities have been organized and more than 12,000 hectares area has been brought under irrigation. What needs to be known is;

1. How many more communities are there in Chitral to be organised?
2. How much more area to be brought under irrigation?

Filling depressions with water in Sindh will raise water level in the areas which are already saline.
Drainage is bad and needs to be looked into need for legal points of discharge (LPOD)

Question-5: Dr. Allah Nawaz Samoo, GM HID, PPAF

Pakistan is the least contributing country to environmental pollution because of coal power. India is going to increase its proportion of coal based energy to 60% and China to 40%. In this scenario, is Thar Coal is an option in the interest of long term energy security of the country?

Answer: Mr. Izhar Hunzai
All sources of energy should be used and even coal.

2.2 Session Two: Facilitative Presentation and Panel Discussion

2.2.1 Presentation

1. Sustainable Management of Water and Water Related Disasters- The Role of PPAF and the Way Forward - Zaffar Sabri

Mr. Sabri gave a global, national and local perspective of water;

- 97.5% water on earth is saline and only 2.5% is fresh. Of the freshwater, less than 1% is accessible for human consumption
- Globally, only 8% of freshwater is used for domestic purposes, 70% for agriculture and the remaining 22% for industries; in low and middle income countries freshwater usage for agriculture increases to 82%
- Global average surface temperature and sea level is on the rise
- The world is experiencing frequent flood
- Pakistan is one of the most water stressed countries

Regionally, India is building dams and controlling Pakistan's waters. India has built 36,000 acre-ft capacity Baglihar Dam and now building 1.2 million acre-ft capacity Gyspa Dam. Pakistan's freshwater is depleting both in quality and quantity.

Pakistan scores high on the drought as well as flood frequency index. The country has transitioned from a water scarce country to water stressed country where per capita availability has decreased to 1000 cubic metres per year.

Pakistan's storage of water per capita is also low. The country has water reserves of 20 days as against 200 days of India.

The country's irrigation efficiency is at 30%, besides, there is sea water intrusion and contamination of ground water. Consumption of unclean water has health burden and consequent lost in earning days. It costs the country's economy to the tune of Rs. 112 billion per year.

Out of 120 districts of the country, 85 are vulnerable to various types of disaster. 80% of these districts, i.e., 68 districts are vulnerable to water related disasters. District poverty ranking and occurrence of disaster overlay shows districts with high poverty incidents are also more vulnerable to disaster, implying disaster tends to exacerbate poverty situation.

Mr. Sabri then presented the work of PPAF in response to global, regional and local water trends. The interventions range from promoting use of low delta crops, promoting change in cropping pattern in response to emerging climate change scenario, taking drought mitigation and preparedness measures to providing water efficient irrigation systems, having locally generating micro- hydro electricity (district of Chitral has the largest micro- hydro projects in the world), establishing waste water treatment systems; ensuring environmental and social intactness of the interventions, and building community capacities for disaster risk management and preparedness. The interventions made following 2005 earthquake and 2010 flood were post disaster efforts. Now PPAF has mainstreamed disaster risk preparedness in all its interventions.

The water related interventions of PPAF have been delivered through 27,000 community organizations and 45 union council institutions and benefitting 12 million people.

2.2.2 Panel Discussion- II

Mr. Shams-ul-Mulk
Mr. Shams-ul-Mulk explained how Indus Water Treaty (IWT) differs from any other water treaty and its implications. Usually, water treaties are about sharing rivers' waters, however, Indus Water Treaty talks about sharing the Indus Basin. Eastern rivers belong to India and western rivers to Pakistan irrespective of the quantity of water the rivers hold. The countries have to manage whatever quantity of water their respective rivers carry. Pakistan has accepted this and there shouldn't be any attempt to modify the treaty now.

The rivers originate from areas occupied by India and people have established traditional uses of these rivers such as drinking water supply and hydro projects. India asserts that it has unlimited rights for hydro production. This cannot be accepted as (in that case) the asset (rivers) would not belong to Pakistan if India has unlimited rights to it. Giving limited rights is understandable but not unlimited rights as in this case.

He advised leaving the Indus Water Treaty untouched is the best option for Pakistan. If reopened, Pakistan will lose whatever rights it has. It is the quality of implementation of the treaty that needs to be looked into.

Highlighting the need for taking an action for construction of another water reservoir in the country, Mr. Mulk informed that just like human system dams have limited life. It is only that Tarbela Dam is huge that it has been accepting 600,000 tonnes of silt every day for the last 40 years.

Reflecting on the controversy of Sindh turning into a desert upon construction of Kalabagh Dam, Mr. Mulk found the views of leaders of Sindh in direct discord with the interest of people of Sindh because the leaders are not aware of the facts and figures. Before the construction of Mangla Dam 36 million acre-feet was diverted to Sindh while after the dam the province receives 43 million acre-feet. Mangla and Tarbela have been able to give 7 million acre-feet to Sindh. So, post dam construction situation shows no reduction in water going to Sindh.

Mr. Izhar Hunzai
Mr. Hunzai underlined the need to renew institutions and infrastructure to address water issues. He endorsed the idea of creating Pakistan Water Forum and having PPAF, a solid organizational support behind the collaborated efforts. Since most of the ground realities have changed, it is time to renew institutions and infrastructure grounded in new knowledge. The best way is to put heads together for managing precious water resources and transfer this knowledge to the next generations.

Mr. Hunzai envisaged the forum to be an upgraded forum. It should be knowledge- driven, technology- driven and transparency- driven. It should have clear terms of reference for the executive body members, and should be participatory-bring all the relevant knowledge at one place for students, teachers and communities professionals to access and interface with other regional and national forums to promote ideas and ideals of water management in the 21st century.

Mr. Farhan Sami
The pressure on Pakistan that India is building Baglihar Dam will keep increasing as economic divide will increase. India is considered to be a regional superpower. History tells

upper riparian[4] flex muscles and twist the arm of lower riparian. Helsinki Declaration (1992) which describes protocols and bindings on upper and lower riparians should be referred to resolve water issues of Pakistan with the upper riparian. Mr. Farhan Sami underscored the need for an integrated solution while keeping dialogue open with India and internally focusing on efficiency, conservation, and behavior change.

Real issues in water sector are;

1. A vision to chalk out how to use the boon of water in every sector: drinking water, agriculture, environment, industry.
2. No motivation among people. Behaviour change has to take place at grassroots level and at the decision making level for little things of conservation, use of new technology and regulations can influence water usage.

Mr. Sami discussed if the proposed forum's terms of references are to work on the above issues then a product vision could be made through participation of sector specialists.

Mr. Ali Hassan Habib

Mr. Ali Habib supported the formation of Pakistan Water Forum and emphasized that the forum should adopt some external constraint as internal constraints that are usually labelled as external barriers in the flow of work.He was optimistic that the forum as representative of Pakistan's civil society will be a strong force and the members together could achieve a lot and overcome many challenges. Three strategies he suggested for the forum to follow; balance, lobbying and adopting constraints which are seemingly external.

Mr. Zaffar Sabri

Supporting Mr. Ali Habib, Mr. Zaffar Sabri added that by turning parameters into variables in the equation of development one could wrestle with constraints and complexities and move them around.

Lt. General Nadeem Ahmed

Lt. General Nadeem Ahmed made two points regarding constitution of the Pakistan Water Forum;

1. Need champions for a cause-water challenges.
2. Need ownership of political leadership and bureaucrats.

In light of this, Pakistan Water Forum can become a championing forum if it has an appropriate mix of people from the parliament, media and civil society so that their concentrated voice can create a difference. Besides, politicians and bureaucrats, who deal with water issues at the national and provincial levels, should be among the forum members so that willingness of the bureaucracy could make an impact.

[4]The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) is intended to strengthen national measures for the protection and ecologically sound management of transboundary surface waters and groundwaters; http://www.unece.org/env/water

2.2.3 Concluding Remarks by the Chairman

Mr. Shams-ul-Mulk congratulated PPAF for establishing Pakistan Water Forum. Focusing on the needs of 'tomorrow,' Mr. Shams-ul-Mulk spelled out the questions that mirror the future needs of the nation in order to sustainably manage water resources of the country.

1. Does the country need to firm up its irrigation network for efficiency and sustainability of water usage? Need more water or less water?
2. Is electricity needed? Is it needed at affordable price or any price? Pakistan has enormous market for electricity at affordable prices for domestic, agricultural and industrial purposes.
3. How to have flood protection especially at the southern end of the basin? Don't people have right to have protection against flood?

He argued for having dams as there is single infrastructure option which can generate cheap electricity, offer flood protection and sustain water resources by address the capacity needs in times of surpluses in floods and shortages in low season.

Contrary to the critics' belief that Mangla and Tarbela have destroyed Pakistan, these projects supply electricity at the lowest cost as compared to alternative sources;

a. Mangla, Tarbela and Ghazi Barotha supply 29 billion units @1 Re and 2 Paisas per unit.
b. Nuclear energy Rs. 5 and 30 paisas per unit, second best alternative.
c. Furnace oil electricity provided Rs. 12 and 4 paisas per unit; mostly used.

Mr. Shams-ul-Mulk concluded by emphasizing on reaching a consensus on the needs of the people and determining the type of institutional framework. He was of the view that options are available and people of Pakistan should not suffer from the consequence of prejudices of leadership. The people should be informed and given knowledge to reach a consensus at;

1. Do people need cheap electricity or costly.
2. Do people need flood protection or not.
3. Do people need more water during summer or less water.

To achieve what is needed, institutions matter and for that;

1. Identify the type of institutional framework needed for the type of work that has to be done.
2. Build the capacities of the existing institutions. There is no need to create new institutions as a lot of resources is needed for.

For building capacities of the existing institutions, gap analysis be conducted which entails;

a. Conducting capacity audit of the current institutions.
b. Identifying gaps, holes and deficits.
c. Knowing what is required to build capacity.
d. Gaining knowledge of land, water and human beings.
e. Building capacities of the institutions in the light of indentified gaps.

2.2.4 Wrap-up/ remarks by CEO PPAF

CEO PPAF Mr. Qazi Azmat Isa profoundly complimented the colloquium panellists for sharing knowledge, experience and wisdom. He thanked the presenters for insightful, diverse and stimulating presentations. Articulating the views of the speakers, he pointed out the areas to work on;

1. Investing in sanitation to address the water quality issue.
2. Carrying out interventions in a devolved manner through communities-which is the foundation of all PPAF work.
3. Building capacity of institutions that are involved in delivery of services to ensure fair play as it is done around the globe.

Mr. Isa expressed his commitment of working with the panellists through the work of Pakistan Water Forum as formed by the PPAF. He looked forward to embarking upon the journey to intelligently and judiciously manage water resources of Pakistan.

3. The Way Forward - Reaching Consensus

Since there is no single solution to address water issues of Pakistan, the need is to move toward a comprehensive solution based on well- informed, organized and result- oriented debates. Foremost requirement is an authentic information base on all legal and technical aspects of the subject to facilitate meaningful dialogues with India both as partner of Indus Water Treaty and as an upper riparian. Many lower riparian countries have successfully exercised their rights, so Pakistan should as well. This information base will also help in restoring inter-provincial trust and moving forward with consensus building for major water sector initiatives. In order to be better informed about all global and regional developments than be surprised with these, Mr. Zaffar Sabri proposed to form a Pakistan Water Forum with the objectives to;

- Have organized, knowledge- based, discussions to build a national consensus on major water management issues
- Develop an authentic, techno-legal information base to facilitate timely, result-oriented dialogues with India as an IWT signatory, and as a lower riparian-
- Develop national, provincial and area specific strategies for climate change mitigation and adaptation
- Promote diffusion of institutional and technological innovations in the entire spectrum of water management

Mr. Sabri proposed the platform of Pakistan Poverty Alleviation Fund for the secretariat of the forum. He also proposed that the Chairman, Co-Chairman, and Panel Members of the World Water Day event at PPAF may form the First Executive Body. The proposal for the formation of the forum was seconded by all panellists and agreed to by all participants. Post colloquium responses of the panellists are presented in Annexure IV.

In order for the forum to be successful, the panellists identified the following essential characteristics;

1. Knowledge- based technology- driven and transparent forum should bring all the relevant knowledge at one place and make it accessible to others to use and benefit from and promote ideas and ideals of water management in the 21st century.

2. Build consensus on key priorities, needs of the people on the basis of information and knowledge and advocate and lobby the government and legislators to deliver the same.
3. Build a vision for the future focusing on how to prudently use water for various purposes and bring about behavior change in the people.
4. Determine the type of institutional framework required based on the identified needs and build the capacity of the current institutions to deliver the services.
5. Provide a multi-stakeholder platform that gathers water experts, parliamentarians, media, civil society and bureaucrats for concentrated voice to impact the outcome.
6. Adopt and view constraints as internal factors that stimulate activities instead of limiting them.

4. Photo Gallery


Management of
Water & Water Related Disasters
The Role of PPAF


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Management of
Water & Water Related Disasters
The Role of PPAF


Management of
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World Water Day
2012

ANNEXURES

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عشق علم عمل

" Civilization has been a permanent dialogue between human beings and water."

(Paolo Lugari)

Annexure- I:
PROGRAMME OF ACTIVITIES

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عشق علم عمل

" So many people that I've seen can't get clean water. It's a crime."

(Shawn Carter)

World Water Day – March 22, 2012

Management of Water and Water Related Disasters: The Role of PPAF

A Panel Colloquium

PPAF Office, Main Hall, 1 Hill View Road, Banigala, Islamabad

Programme of Activities

9:00 Registration

9:30 Chairman, Co-Chairman, and Panellists take their seats

9:40 Recitation from Holy Quran, by Adnan Ishaq, ME, W&E Unit, PPAF

9:45 Address of Welcome and Introduction to the Colloquium Objectives and Format, by Zaffar Sabri

10:00 Session One: Facilitative Presentations and Panel Discussion

- "Drinking Water Supply and Sanitation," by Farhan Sami
- "Integrated Water Resource Management and Food Security," by Izhar Hunzai,
- "Re-understanding the Indus Basin: Lessons from the Ganges Basin Study," by Amer Z. Durrani
- Panel Discussion

11:45 Tea/Coffee

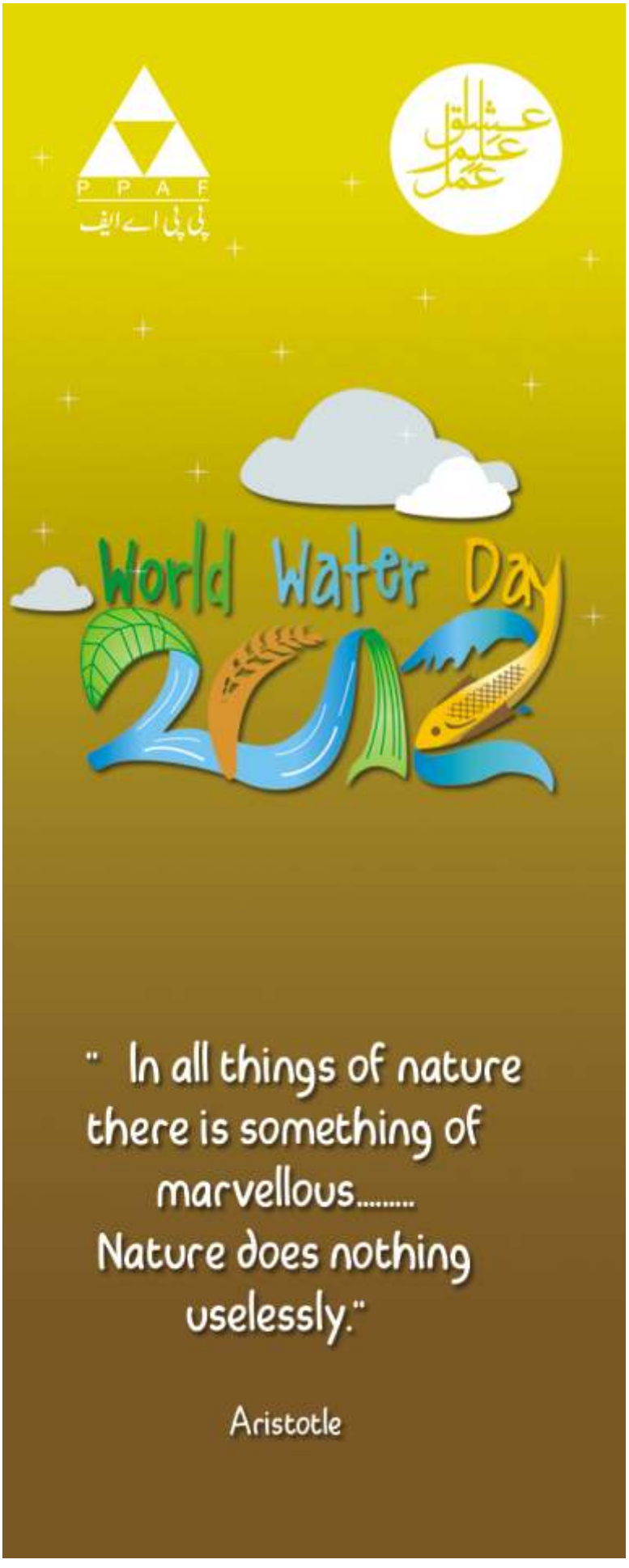
12:00 Session Two: Facilitative Presentation and Panel Discussion

- "Sustainable Management of Water and Water Related Disasters – The Role of PPAF and the Way Forward," by Zaffar Sabri
- Panel Discussion

12:45 Wrap-Up by Qazi Azmat Isa, CEO/MD PPAF

13:00 Concluding Remarks by the Chairman

Lunch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World Water Day
2012
" In all things of nature there is something of marvellous.....
Nature does nothing uselessly."
Aristotle

Annexure- II:
PROFILES OF PANELLISTS

P P A F
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عشق علم عمل

" Water and air,
the two essential fluids
on which all life depends,
have become
global garbage cans" .

(Jacques Yves Cousteau)

Mr. Shams-ul-Mulk

Mr. Shams-ul-Mulk has an illustrious career in the field of engineering and technology. In acknowledgement of his services he was awarded Hilal-i-Imtiaz in 2007. He has held the chair of Sarhad Development Authority and WAPDA. He was Chief Engineer Tarbela Dam Project, General Manager, Kalabagh Dam Project and supervised construction of Ghazi Barotha Hydropower Project. Mr. Mulk also served Pakistan as the caretaker Chief Minister of KP from 2007 to 2008.

By profession, a civil engineer, Mr. Mulk has been a consultant to the World Bank and a member of the Technical Committee on Water Resources. He was the founding chairman of Pakistan Water Partnership, the country chapter of the Global Water Partnership Stockholm, Sweden. He has served on several eminent boards including Society for the Promotion of Engineering Sciences and Technology in Pakistan as president, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology as member, and Sustainable Development Policy Institute as chair. Currently, he is the President of the GIK Institute of Engineering Sciences and Technology.

For his outstanding services, Mr. Mulk has been awarded honorary Ph. D degree by the University of Engineering and Technology, Lahore.

Lieutenant General (Retd.) Nadeem Ahmed

Lieutenant General Nadeem Ahmed (Retd) has served Pakistan Army for about four decades years during which he held prestigious command and staff positions besides heading different national agencies.

As Chief Military Coordinator, Federal Relief Commission, he was responsible for strategizing and supervising the 2005 earthquake relief operations while as Deputy Chairman, Earthquake Reconstruction & Rehabilitation Authority. He led the relief, rehabilitation and reconstruction phases of the earthquake stricken region.

Lt. General Nadeem Ahmed has also served as Chairman, Special Support Group, established to assist the 3.2 million Internally Displaced Persons affected by the complex emergency in KP province and FATA. As Chairman, National Disaster Management Authority, he commanded successful response missions after various disasters such as Attabad land slide/lake crisis, the Air Blue crash and Kyrgyzstan unrest during which he led evacuation efforts of 250 stranded Pakistani students and brought them home.

Lt. General Nadeem's leadership and expertise was tested and proven again when he guided his team to handle emergency response after 2010's massive floods across Pakistan.

Currently, he is Member Abbotabad Commission appointed to investigate the presence and killing of Osama Bin Laden in Pakistan.

Mr. Ali Hassan Habib

Mr. Ali Hassan Habib is an electrical engineer and environmental scientist by profession. He has been working with World Wildlife Foundation, Pakistan since 1995 where he currently holds the position of Director General. He has worked for the global WWF Network in various capacities.

Mr. Habib began his career with ICI, Pakistan, as an engineer and worked on energy projects and led several hazard operation assessments. For 8 years he served as chair of Asia Pacific Network of WWF International.

Devoting his time to various non-profit and civic activities, he serves as Vice President of board of trustees of the Adventure Foundation of Pakistan. He is member board of trustees of Himalayan Wildlife Foundation, Islamabad. Member National Commission on Biotechnology, member board of Education, Earth Sciences Institutes and member board of trustees for Aziz Jehan Begum Trust for the Blind, Lahore.

Mr. Izhar Hunzai

Mr. Izhar Hunzai holds a masters degree in International Development and has been in the development field for over 20 years with experience of working in varied geographic areas of Pakistan, Sri Lanka, South Africa, Norway, Tajikistan, Italy, Egypt, Indonesia and Uzbekistan. For eight years he served as General Manager /CEO of Aga Khan Rural Support Programme. At present, he is a freelance consultant working as water sector specialist.

Mr. Hunzai has a wide array of interest that include governance, natural resource management, small-scale community infrastructure, renewable energy and carbon services, gender equality, disaster management, youth engagement, microfinance and enterprise development.

Mr. Hunzai was on the panel of experts who helped prepare Vision 2030, Pakistan and has authored a background paper titled A Just and Sustainable Society. He has also served on boards of distinguished development institutions in Pakistan including First Microfinance

Bank and Rural Support Programmes Network. He is presently serving in the Senate of Karakoram International University and is on the board of Pakistan Industrial Development Corporation.

Mr. Amer Zafar Durrani

Mr. Amer Zafar Durrani is currently working for the World Bank on regional trade and transport facilitation and related governance issues in South Asia Region as well as on the resident transport sector cluster for the World Bank in Pakistan. He has previously covered these areas for the Bank in Bhutan, Lao PDR, Philippines, Georgia and Nepal. Pre-Bank he has worked on projects in the transport sector with Construction Companies, Consultants, Academia, and Government, in Pakistan, Italy, and USA.

Mr. Durrani is acknowledged for providing transport policy advice and opinion formulation assistance to a large range of clients in the public and private sectors in various countries and to organizations such as UNCTAD, Chartered Institute of Logistics and Transport, IUCN, various chambers of commerce and industry, IMMTA, WCO, GAC Shipping, University of Birmingham, National Defense University (Pakistan), Iranian Customs.

In recent years, Mr. Durrani has been part of a Bank team working on developing a governance analysis toolkit for customs and border management with a focus on post-conflict countries.

Mr. Amer Durrani holds a civil engineering degree from the University of Texas at Austin and is the author of many diverse publications.

Mr. Mohammad Farhan Sami

Mr. Mohammad Farhan Sami is working with the World Bank and heads the country team of water and sanitation program-South Asia for improving water and sanitation services through policy and institutional reforms.

Mr. Sami went on to earn a bachelors degree in Civil Engineering from University of Engineering and Technology, Lahore and a masters degree in Water Resources and Environmental Engineering from University of Texas, Arlington.

With over seventeen years of experience, Mr. Sami has worked in Pakistan as well as USA with organizations Associated Consulting Engineers, Euroconsult Pakistan, WWF, ADB, UNDP and IUCN.

Ms. Simi Kamal

Simi Kamal brings with her over 30 years of multidimensional experience with both civil society and private sector organizations at the global and national levels.

Currently, Ms. Kamal holds the dual position of Chair and Chief Executive of Hisaar Foundation. She is Chief Executive of Raasta Development Consultants and Chief of Party of Gender Equity Program of USAID in Pakistan. She is also Advisor to the Water for Food Institute, University of Nebraska (USA).

She continues to be a dynamic speaker and prolific writer on such topics as water issues, environment, climate change, gender relations and donor-NGO-government nexus in the developing world as consultant for government of Pakistan, United Nations agencies, the World Bank and Asian Development Bank.

She has served on many boards, task forces and committees in Pakistan and abroad, including Global Water Partnership, UNEP Working Group on River Basins. She has also been Vice Chair of Thardeep Rural Development Program.

Mr. Zaffar Pervez Sabri

Mr. Zaffar Pervez Sabri is the Group Head for Energy, Infrastructure and Disaster Management, at Pakistan Poverty Alleviation Fund. Realizing the need to develop integrated interventions for efficient use of depleting water resources in the country and community managed coping mechanisms for water related disasters, he spearheaded the establishment of Water Management Center at PPAF. The centre now renamed as Water & Energy Unit, has undertaken landmark initiatives in drought mitigation and preparedness, integrated water efficient irrigation and community managed hydropower development.

With a basic degree in civil engineering, Mr. Sabri has a Master of Engineering degree in Human Settlements. He also studied Infrastructure in a Market Economy at the Harvard Kennedy School. Among various technical reports. He authored, his report on 'The Implementation of Habitat Agenda in Pakistan' was presented to the General Assembly of the United Nations.

Earlier, Mr. Sabri headed a multidisciplinary development consulting organsation and led a number of teams responsible for formulating drinking water supply and sanitation, solid waste management and low income housing for funding by the Asian Development Bank and the World Bank. He also served as General Planner with the Ministry of Land Affairs & Municipalities of the Sultanate of Oman and as General Manager with Pakistan Environmental Planning and Architectural Consultants.

Annexure- III:
PRESENTATIONS

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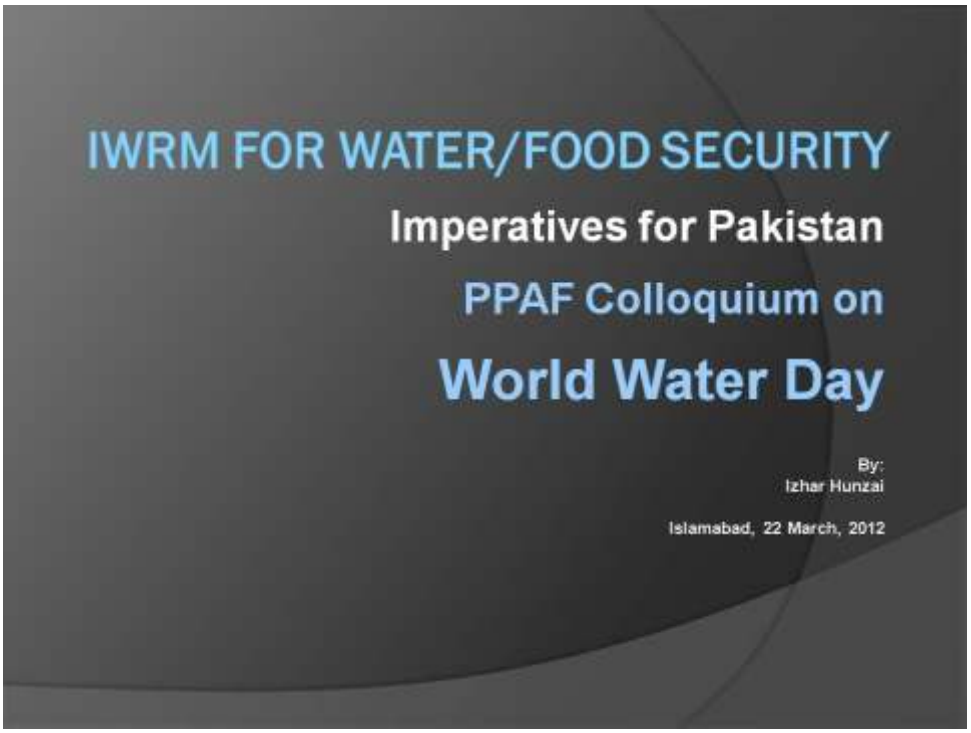
عشق علم عمل

World Water Day 2012


IWRM FOR WATER/FOOD SECURITY
Imperatives for Pakistan
PPAF Colloquium on
World Water Day
By:
Izhar Hunzai
Islamabad, 22 March, 2012

Too Much Water, Too Little Water

- Pakistan is among the top ten water stressed countries in the world
- Higher when key vulnerabilities, such as water, food & energy shortages, natural disasters and climate change impacts are considered together
- Frequent cycles of droughts and floods and the consequent variability in water supply and quality are to be taken seriously
- Preparedness to cope with such insecurities and risks is poor at best

The Food Water Nexus

- About 80 percent of all cropped area is irrigated, which contributes 90% of total food production
- 2/3rds of rural population depends directly or indirectly on agriculture for livelihoods
- Currently, some 96% of all water used each year is for agriculture
- Competition for available water resources from industry, urban and domestic uses is intense

Key Issues in Water/Food

- Infrastructure to regulate, store and convey water is degraded—no major investments in over ten years—groundwater use is increasing
- Water use efficiency among the lowest in the world and crop productivity stagnant over a decade
- Post harvest losses among the highest at 15-20% in cereals and up to 40% in perishables
- But the most serious problem is lack of an adequate policy response and public ignorance about the looming water/food crises

A Water/Food Vision for Pakistan

- *Water Accounting*: current and projected water availability and usage must be regularly updated
- *Water quality:* a national strategy for clean water and water recycling
- *Water use-efficiency:* particularly in agriculture through new technology and transparent water markets
- *Water stewardship:* meaningful involvement of communities in management decisions
- Water/crop realignment: R&D on less water intensive crops
- Public engagement and education, behavior change, mobilizing grassroots support for bold reforms

Focus Areas for Effective IWRM

- A basin and sub basin-wide approach, involving all related sectors and actors: economics, social equity and environment
- Focus on resource-use efficiency, productivity and sustainability—develop performance benchmarks and specific indicators
- Employ new technology in all sectors, from efficient use of irrigation to crop production and post harvest—devise financing mechanisms
- Incentivize private sector investments to upgrade infrastructure, especially small and medium-sized

Contours of a National IWRM Plan

- *Economics:* invest in upgrading infrastructure and productivity enhancing technologies; focus on resource use efficiency and value addition; promote transparent water markets
- *Social Equity:* ensure adequate quantity and quality of water for food and other needs, specially for small farmers and urban poor
- *Environment: ensure adequate provision of water for ecosystem services; reduce water pollutants, promote recycling*

Way Forward

- *Policy instruments:* review, update, prioritize and implement, existing policies and initiate bold reforms in the light of new challenges
- *Resource development:* devolve authority to provinces, districts and municipalities for land and water resources development and management
- *Resource use efficiency:* Incentivize use of new technology in all sectors along the value chains
- *Benchmarking and monitoring: create an autonomous and specialized professional body*
- *Institution building*: reform, integrate, upgrade, capacitate
- *Stakeholders participation:* promote public forums, engage with media
- *Financing: leverage public/ donor financing to attract private capital; develop a range of financial products and services, from farm to industry and sector levels*

Case Study in IWRM

PPAF/AKRSP Partnership in Northern Pakistan

IWRM: Economics

- *Extensive agriculture:* <120,000 ha of new land developed by co-investing with communities in over 2000 small irrigation schemes;
- *Intensive agriculture:* prevention of losses thru community extension workers, introduction of new technologies for higher yields;
- *Market access:* over 400 farm to market roads; promoting cash crops and value chain and financial services

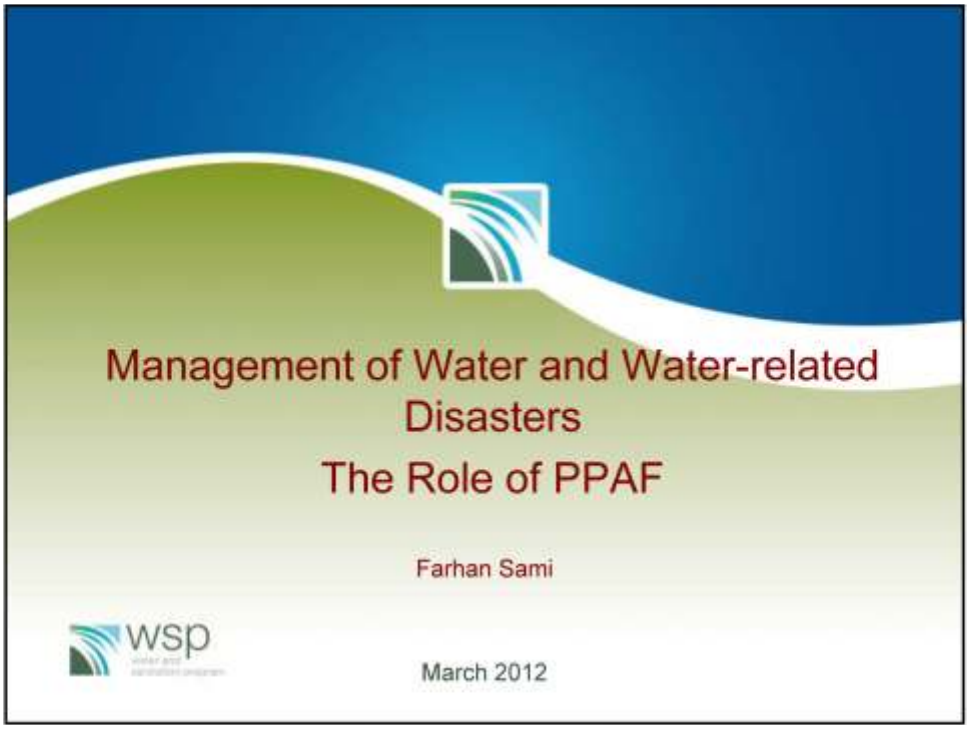
IWRM: Social Equity

- Social mobilization of communities, including women, ensuring broad participation in local development
- Equitable distribution of new land developed and targeted subsidies for the poorest in asset creation, such as land terracing
- Strengthening community-based social protection systems

IWRM: Environmental Sustainability

- Over 40 m trees planted on slopping and flood-prone lands
- Agroforestry cover now greater (6.4 %) than natural forest cover (4%) in the north;
- Reduced pressure on natural forests by developing renewable energy sources from over 300 MHUs
- Community based climate change mitigation and adaptation actions through CDM/carbon services

Thank you and let's renew our commitment to sustainable management of our finite natural resources


Management of Water and Water-related Disasters
The Role of PPAF
Farhan Sami
wsp
March 2012

WSP Overview

- WSP is an international partnership administered by the World Bank with 30 years of experience
- WSP provides technical assistance, policy advice, and capacity building in over 24 countries to improve access to water and sanitation services for the poor.
- Operates globally with regional offices in Africa, East Asia and the Pacific, Latin America and the Caribbean, and South Asia.

The poorest 40 per cent of the population in Southern Asia have barely benefited from improvements in sanitation

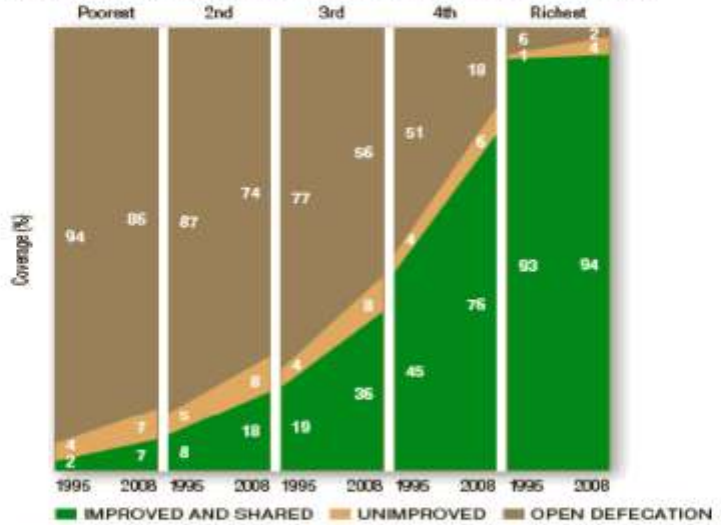


FIGURE 35

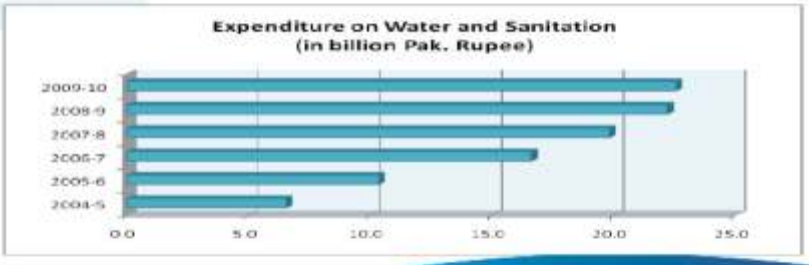
Southern Asia: Sanitation coverage trends by wealth quintiles, based on population-weighted averages from three countries, 1995-2008

Source: India: National Family Health Survey 1993, 1999, 2006; Bangladesh: DHS 1993, 1997, 2000, 2004, 2007; Nepal: DHS 1996, 2001, 2006

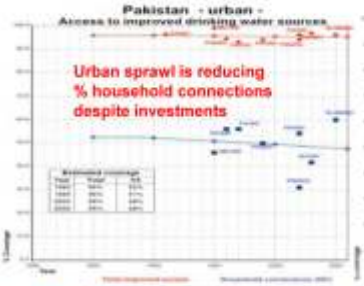
Pakistan at a glance

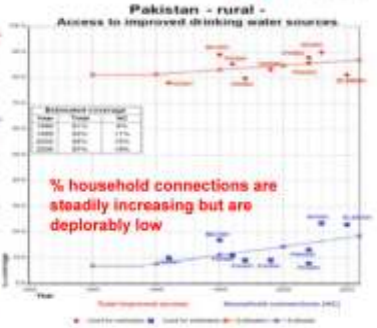
Population	173 million
Poverty line	36% < $ 1.25
Access to Water	92%
Urban	95%
Rural	91%
Access to Sanitation	78%
Urban	98%
Rural	

- Complex and contested governance -18th constitutional amendment
- Emergence of new institutional structures
- Catastrophes – Floods damage of US$ 9 billion
- Security crisis – FATA
- Government spends < 0.2% of GDP on WSS



Water





- Pakistan has met its MDGs
- Quantity is not the problem – QUALITY is!
- <25% receive safe water and 200,000 children die each year due to water related diseases
- Per capita water is less than 1000 cm3/capita
- Climate change will reduce glacial melt

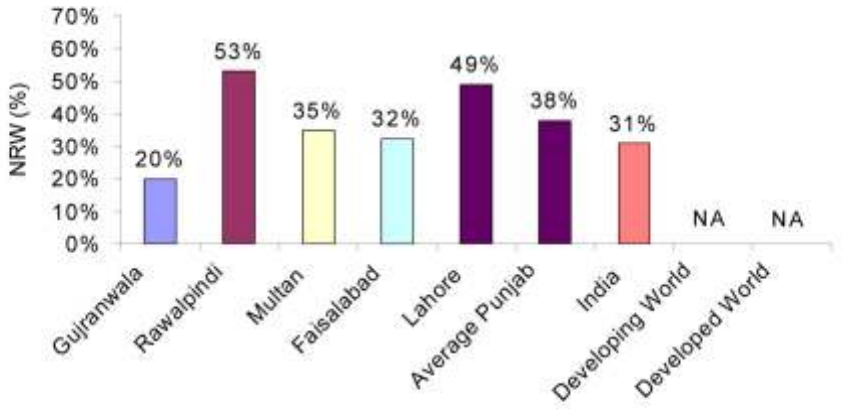
Sector Statistics

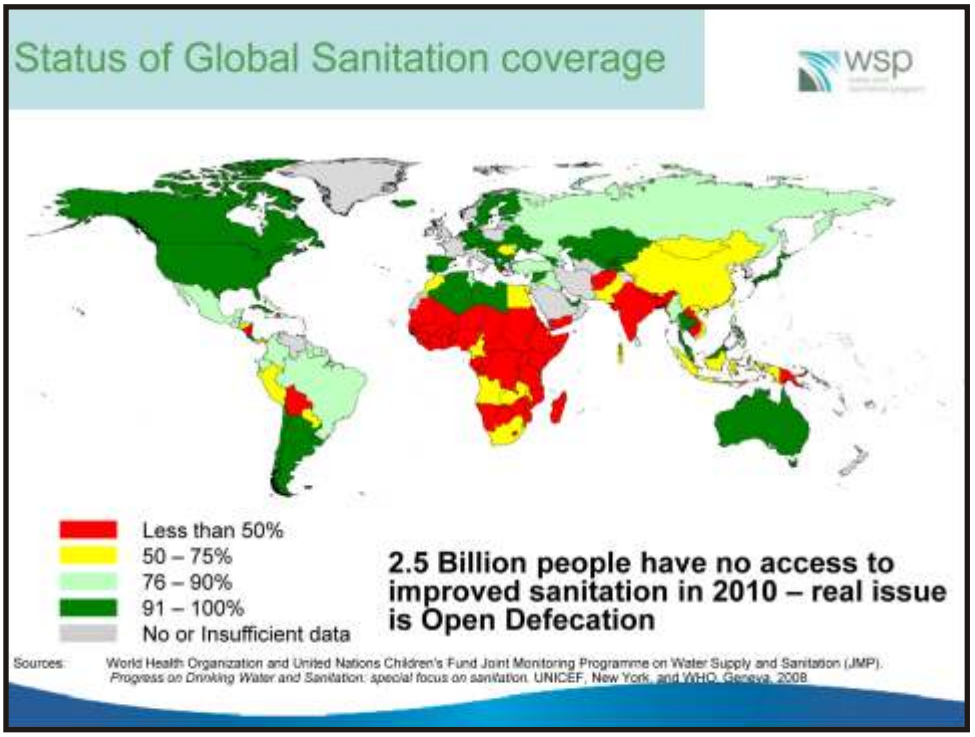
- Access to water = 92%
  - Urban 95% Rural 91%
- Access to flush/ non-flush latrines = 78%
  - Urban 98% Rural 67%

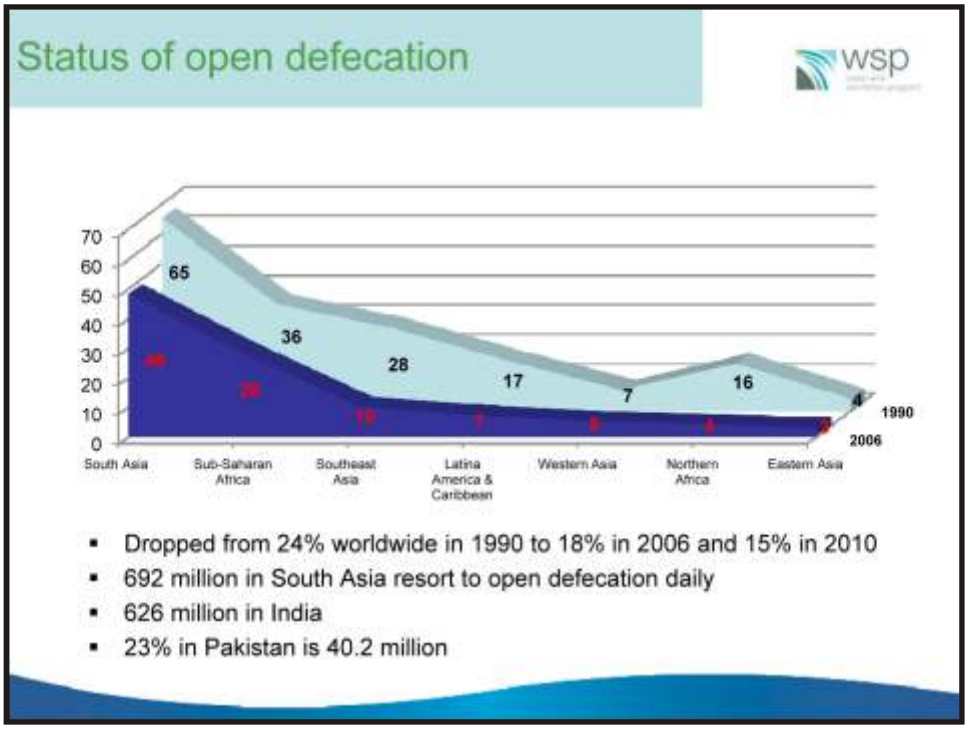
Water Quality stays a major concern < 25%

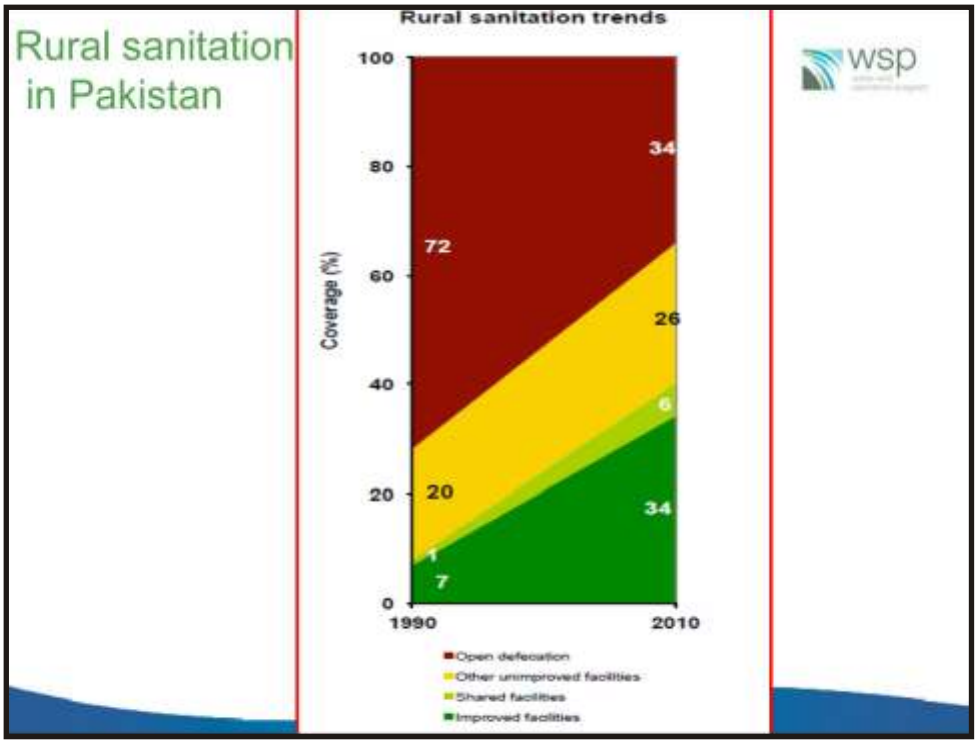
52 million (27%) people defecate in the open everyday

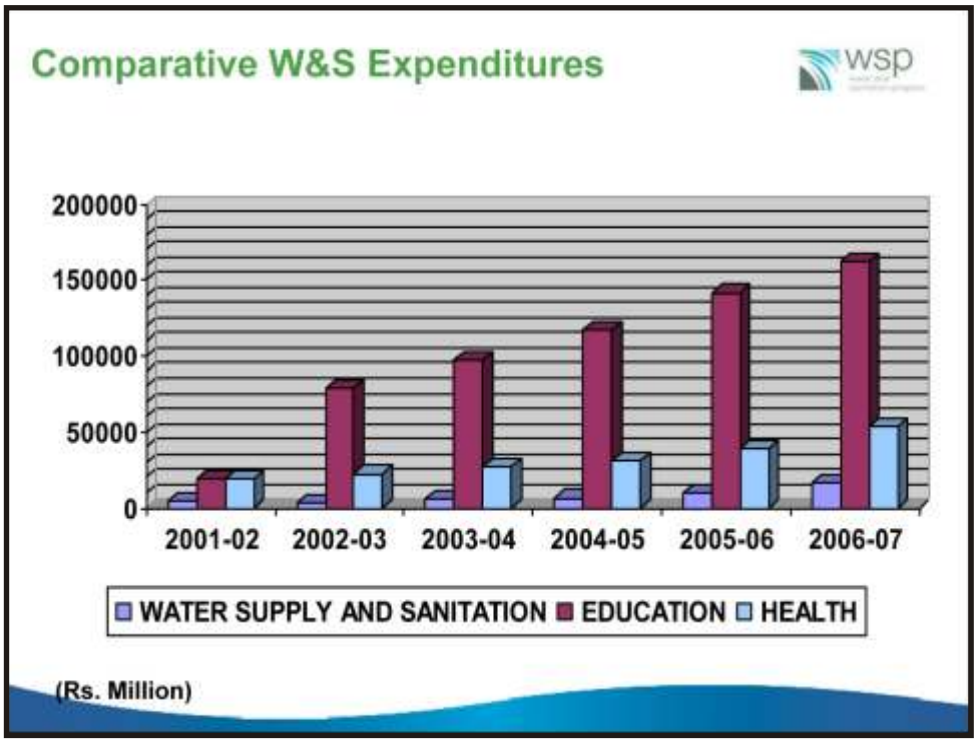
NON-REVENUE WATER




Status of Global Sanitation coverage
wsp
Less than 50%
50 – 75%
76 – 90%
91 – 100%
No or Insufficient data
2.5 Billion people have no access to improved sanitation in 2010 – real issue is Open Defecation
Sources: World Health Organization and United Nations Children's Fund Joint Monitoring Programme on Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: special focus on sanitation. UNICEF, New York, and WHO, Geneva, 2008


Status of open defecation
wsp
70
60
50
40
30
20
10
0
65
36
28
17
7
16
4
1990
2006
South Asia
Sub-Saharan Africa
Southeast Asia
Latina America & Caribbean
Western Asia
Northern Africa
Eastern Asia
Dropped from 24% worldwide in 1990 to 18% in 2006 and 15% in 2010
692 million in South Asia resort to open defecation daily
626 million in India
23% in Pakistan is 40.2 million


Rural sanitation in Pakistan
Rural sanitation trends
wsp
Coverage (%)
100
80
60
40
20
0
72
34
26
20
6
34
1
7
1990
2010
Open defecation
Other unimproved facilities
Shared facilities
Improved facilities

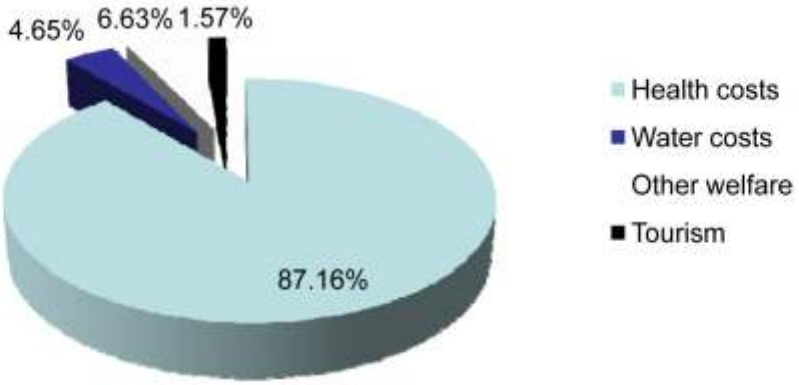

Comparative W&S Expenditures
wsp
200000
150000
100000
50000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
WATER SUPPLY AND SANITATION
EDUCATION
HEALTH
(Rs. Million)

The total economic cost of poor sanitation for the year 2006 was estimated as 343.679 billion PKR ($5.650 billion). This amount is equivalent to 3.94 percent of GDP in Pakistan.

Comparison of Estimated Costs

	Pakistan	Cambodia	Indonesia	Philippines	Vietnam	India
	Economic Cost					
	Percentage to GDP					
Health costs	3.43%	3.01%	1.21%	10.74%	0.44%	4.67%
Water costs	0.18%	2.39%	0.55%	3.43%	0.48%	0.51%
Environment	-	-	0.03%	-	0.20%	-
Other welfare	0.26%	0.61%	0.44%	0.40%	0.07%	1.29%
Tourism	0.06%	1.18%	0.06%	0.43%	0.11%	0.03%
Solid Waste Management	0.002%	-	-	-	-	-
TOTAL	4.53%	7.20%	2.30%	15.00%	1.30%	6.50%

Share of Economic Costs

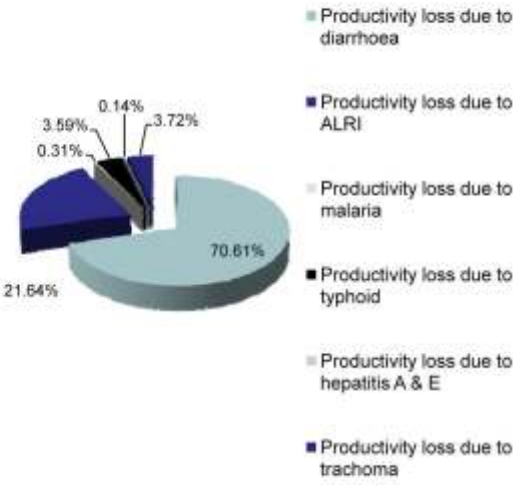


Probing disaster situation

Water is needed for existence but sanitation is fundamental

E-coli is the most major cause of disease or death

Probing disaster situation



- *60,000 persons die each year due to sanitation related diseases*
- *ALRI and Diarrhea are the 2-3 times more severe for under-weight children (Fishman et al 2004)*

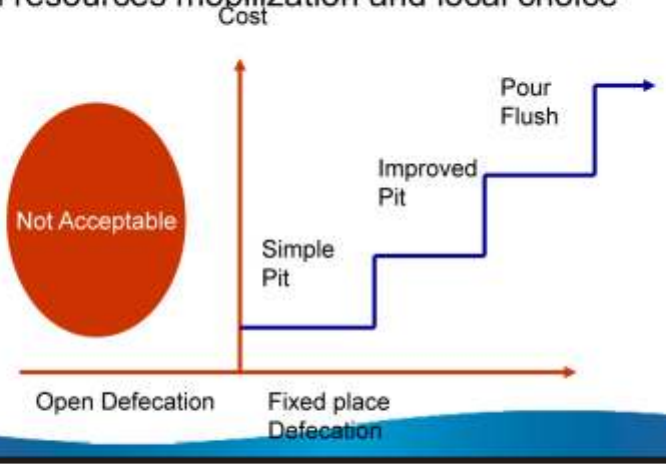
Addressing Disasters: Institutional Linkages

- LGs & PHED to get funds and priorities from PDMAs directly. Organizations like PPAF also establish coordination with PDMA
- PPAF to become part of emergency response group: WATSAN Clusters and/or link with dozens of non-government relief organizations
- PPAF to consider providing infrastructure and social mobilization for behaviour change e.g.
  - Handwashing advocacy
  - Develop communal latrines
  - Targetted subsidy
  - Drinking water supply schemes…rewards?

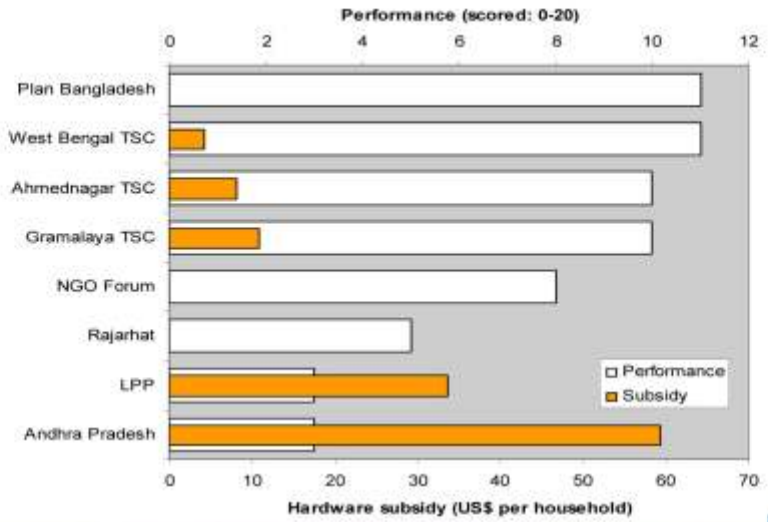
Addressing Disasters: Technology Choice as means of mobilisation

Open technology choice (minimum confinement of faeces)

Local resources mobilization and local choice



Addressing Disasters: Performance vs Hardware Subsidy



Addressing Disasters: Sphere Standards

wsp

Drinking Water Statistics			
Water Source	**Urban**	**Rural**	**Overall**
Tap Water	58	19	32
Hand Pump	8	38	28
Motor Pump	28	27	27
Dug Well	1	6	4
Other	6	10	9

- Sphere standards (water supply) – 15 lpc/day at 500 m and 15 min queuing time (max)
- Sphere standard (sanitation) - People have adequate numbers of toilets, sufficiently close to their dwellings, to allow them rapid, safe and acceptable access at all times of the day and night.

Options for Water Supply

wsp

- Eliminate wastage – NRW and introduce irrigation efficient methods
- POUT – community education on simple technologies
- Enabling environment for Water Safety Plans
- Is latrinisation an option ?
- Emergencies also have to be viewed from oral/fecal elimination……ODF


SAWI
Ganges Strategic Basin Assessment
Early Results
March 2012
Dr. Claudia Sadoff
The World Bank

South Asia Water Initiative (SAWI)

- Ganges Assessment is a **regional research** study supported by **SAWI**
- The **Objective of SAWI** is to facilitate regional cooperation in the sustainable use and management of the water resources of the Himalayan Rivers in addressing development challenges and the impacts from climate change

A partnership of Australia, Norway, the U.K. and the World Bank supporting efforts in the countries sharing the rivers that rise in the Greater Himalayas:

- Afghanistan
- Bangladesh
- Bhutan
- China
- India
- Nepal
- Pakistan

2

The Ganges Basinwide Assessment

Background

Context

- No comprehensive model of the world's most populous basin
- Identified gap in knowledge
- World Bank regional research (OP 7.50)

Objective

- Understand risks/opportunities in the Basin & possible futures
- Create a tool for information-based dialogue within & between countries

Components

- Nested suite of models
- Water systems simulation models
- Economic optimization model
- Social analysis

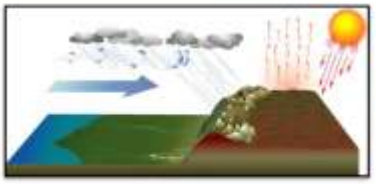
The Ganges Basin

The most populous in the world (~650m)

A massive, moving, varied river system

- High mountains & glaciers
- Vast plains, dominated by large irrigation systems
- The largest mangrove ecosystem in the world in the delta

Driven by the South Asia monsoon



4

The Ganges Basinwide Assessment

Methodology

Multiple models

Across disciplines

Public data

Converging picture of basin dynamics

Disciplines	Model	Objective
Water Systems	MikeBasin (&Mike11) Model	To model the surface water system in the Ganges
	Groundwater, SWAT water balance & water quality, flood modeling	To understand the dynamics of groundwater, water balance, water quality & floods
Economics	GAMS/economic optimization Model	To explore economic trade-offs & the distribution of benefits from new storage projects in the basin
	Commissioned research	Flood damages, ecosystem service values
Social	Literature review, focus group discussions, survey	To understand the social impacts of & responses to water variability

5

Key questions from a basin-wide perspective

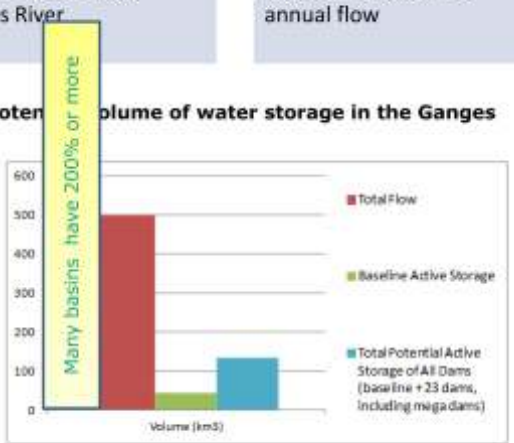
(study does not provide project specific recommendations)

6

Question	Commonly held perceptions	New Insights
Is there substantial **upstream reservoir storage** in the basin?	**Yes.** Large multi-purpose dams could regulate the extreme flows of the Ganges River	**Not really.** The largest 23 dams would only hold an additional 18% of the annual flow

Ganges Water Balance

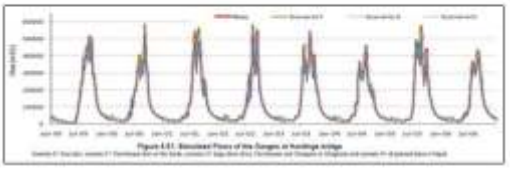
Poten lume of water storage in the Ganges



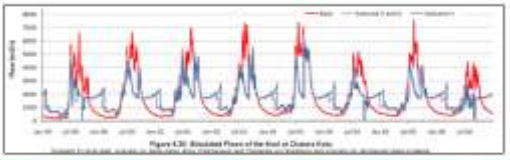
7

Question	Commonly held perception	New Insights
Can upstream water storage help **control basinwide flooding?**	**Yes.** Himalayan storage reservoirs are commonly seen as the answer to Ganges floods in the plains and delta	**Basinwide? No.** Too little to regulate the main stem **In sub-basins? Unlikely.** Reduces peak flows, but doesn't necessarily reduce floods

Little impact on mainstream



Modest impact in tributaries, but
- most rivers are fully embanked
- local rainfall & embankment failures cause most flooding



8

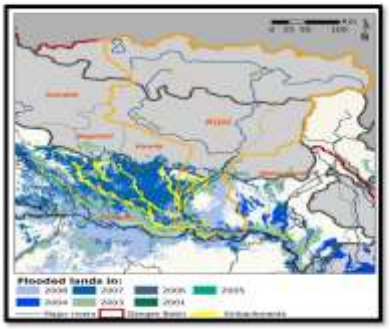
Upstream storage is not a sufficient strategy to control Bihar floods

SAWI SOUTH ASIA WATER INITIATIVE

Flooded Area

- Most of the flooded area in Bihar is outside the Kosi Basin

Embankments



- Most major tributaries are embanked
- Most floods (outside embankments) from direct rainfall & embankment breaches

9

Question	Commonly held perception	New Insights
Is large infrastructure the best strategy for **protecting communities?**	**Yes**. The most effective and reliable protection	**Not everywhere & not exclusively.** Hard and soft, transboundary and local interventions are needed

A shift from 'flood control' to 'flood management'

- Regional forecast and warning systems
- National/localized:
  - Embankment asset management
  - Drainage
  - Land zoning
  - Safe havens
  - Insurance
  - Communications

10

Question	Commonly held perception	New Insights
Can **low-flows** be **augmented** by upstream water storage?	**Yes**. Monsoon waters can be held upstream and released in the dry season	**Yes, but.** A small portion of the flood, makes a big difference to low flows But the best use and economic value of this water is unclear

Max. increase of 20-45 BCM

Volumes are still small relative to peak flows, so the integrity of the hydrological system is unlikely to be threatened

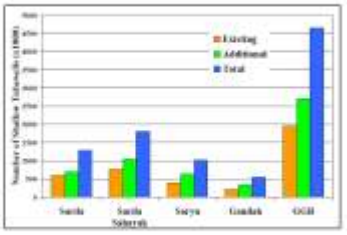
Best use & value of these increased flows **is unclear**

- Water does not appear to be the key factor limiting productivity
- In waterlogged areas additional low season water could harm
- Other values, i.e., ecosystems, navigation, municipal could be high but need study

11

Question	Commonly held perception	New Insights
Are there good **alternatives** or complements **to reservoir storage**?	**No**. Large man-made storage is the only option adequate for the scale of the challenge	**Yes.** Natural underground water storage, strategically & sustainably managed, could be used in the basin on a scale comparable to the full suite of dams considered in our models

Additional, sustainable groundwater resources available in the Ganges plains
In contrast to elsewhere in India



In the Ghaghra-Gomti Basin **2.5m new tubewells could be sustainably utilized** providing **groundwater storage** of over **20 BCM**

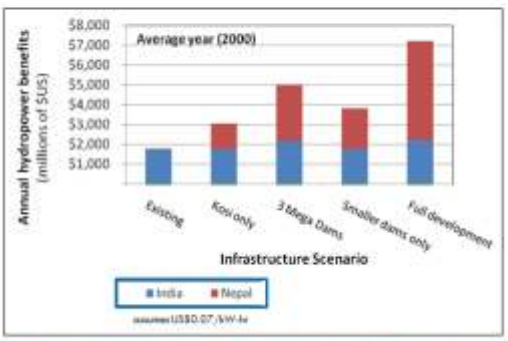
12

Question	Commonly held perception	New Insights
Is there substantial **untapped hydropower**?	**Yes**. A lot. Enough for domestic energy as well as significant exports	**Yes.** The 23 largest dams have an installed capacity of ~25,000MW (65-70 TWh) & a value of some $5bn/yr

Annual Hydropower Benefits

3 largest dams
- 19,000 MW installed capacity
- 35-45 TW-hr/yr power generated

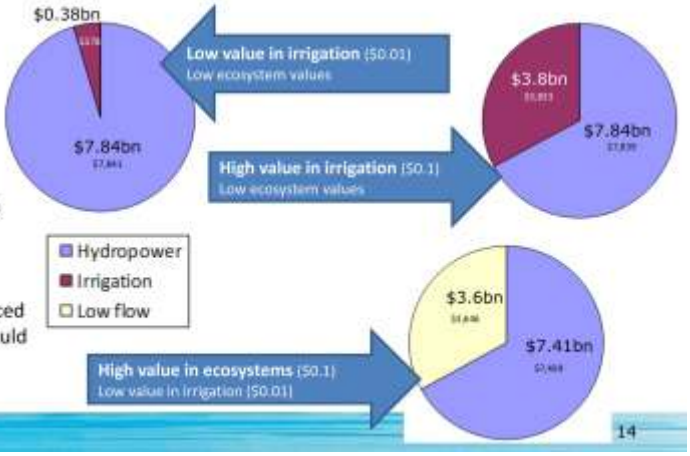
11 smaller dams
- 4,600 MW installed capacity
- 18 TW-hr/yr power generated (26-30 TWh/yr with 20 smaller dams)



13

Question	Commonly held perception	New Insights
What are the **cost & benefit sharing dynamics;** do downstream benefits justify compensation to upstream countries?	**Big benefits upstream & downstream.** Views vary widely about the upstream/downstream distribution of benefits	**Big benefits, mostly in hydropower.** Hydropower (upstream) would provide the overwhelming share of benefits from dams today

- Hydropower benefits are greatest
- Current agricultural productivity is low
- In the future if agricultural productivity rises dramatica then the distribution of benefits will change
- Ecosystem values of enhanced low flows are uncertain, could be significant

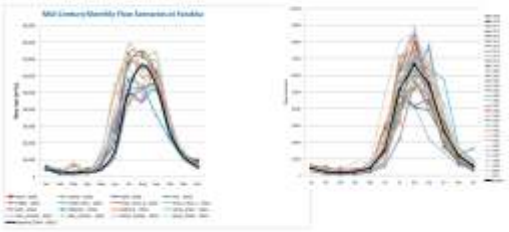


14

Question	Commonly held perception	New Insights
How will **climate change** impact the basin?	**Enormously.** Sea level rise, glacier melt and monsoon changes will be unprecedented	**Great uncertainty, but opportunities to act now.** A focus on managing current variability is a 'no regrets' strategy

- **Temperatures will increase** (snow accumulation/melt, evaporation, crop water needs)
- **Glaciers will melt faster** (but just 4% of basin flow)
- **Sea-levels will rise** (but needs to be considered with erosion/sedimentation)
- **Precipitation scenarios vary widely**
- **Study recommendations are generally robust to climate change**

Estimates of Runoff at the India-Bangladesh Border



Model predictions 2050 | **Historical data** 1970-2000

15

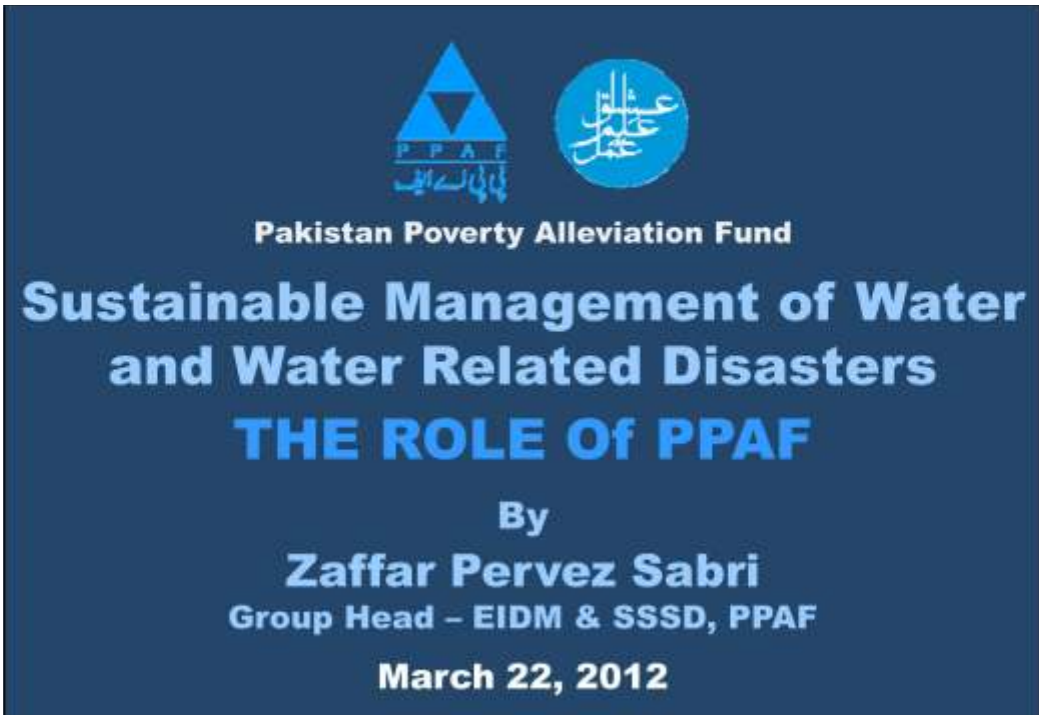
Take Away Messages from the Ganges Assessment

1. **For regional floods:**
   focus on information & institutions, not just infrastructure
   Upstream storage infrastructure cannot control flooding in the basin – real, immediate benefits can, however, come from cooperative regional monitoring & warning systems, coupled with localized flood responses
2. **For water storage to enhance low flows:**
   look underground, not just upstream
   Upstream storage can provide significant additional low season flows. Groundwater storage (i.e., in UP) can provide similar benefits, possibly more immediately & at lower costs
3. **Hydropower development & trade in the basin remain very promising**
   Significant potential to deliver clean peaking power & improve trade imbalances, and the benefit sharing calculus may be simpler if flood & agricultural water benefits are smaller

16

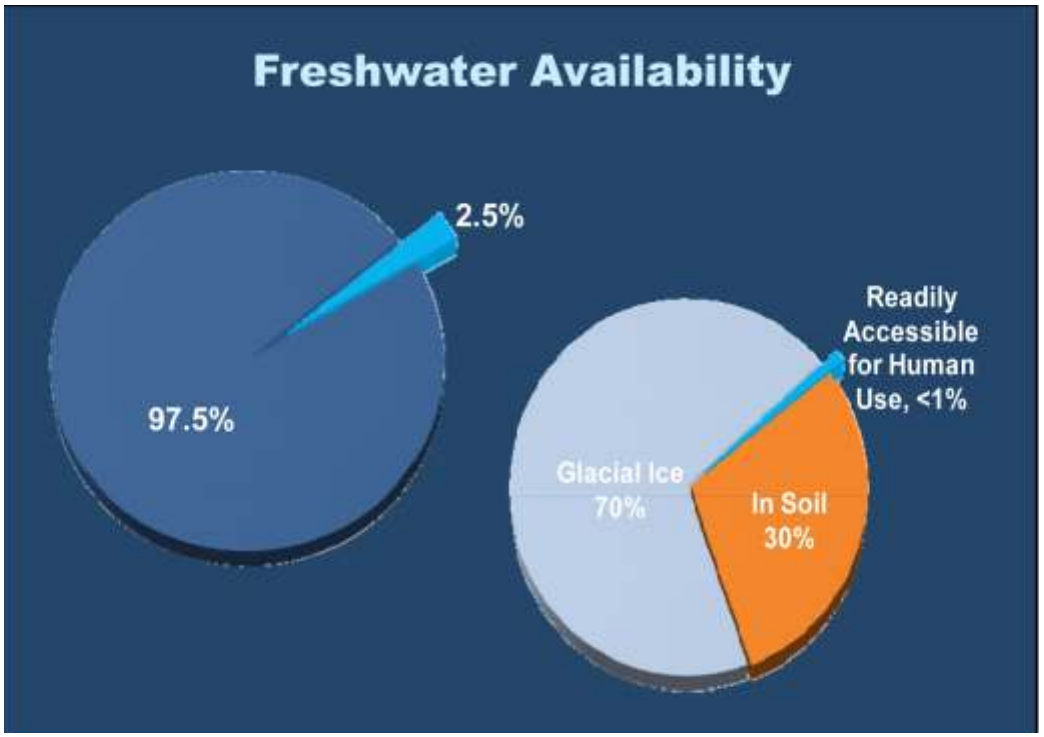
Thank you

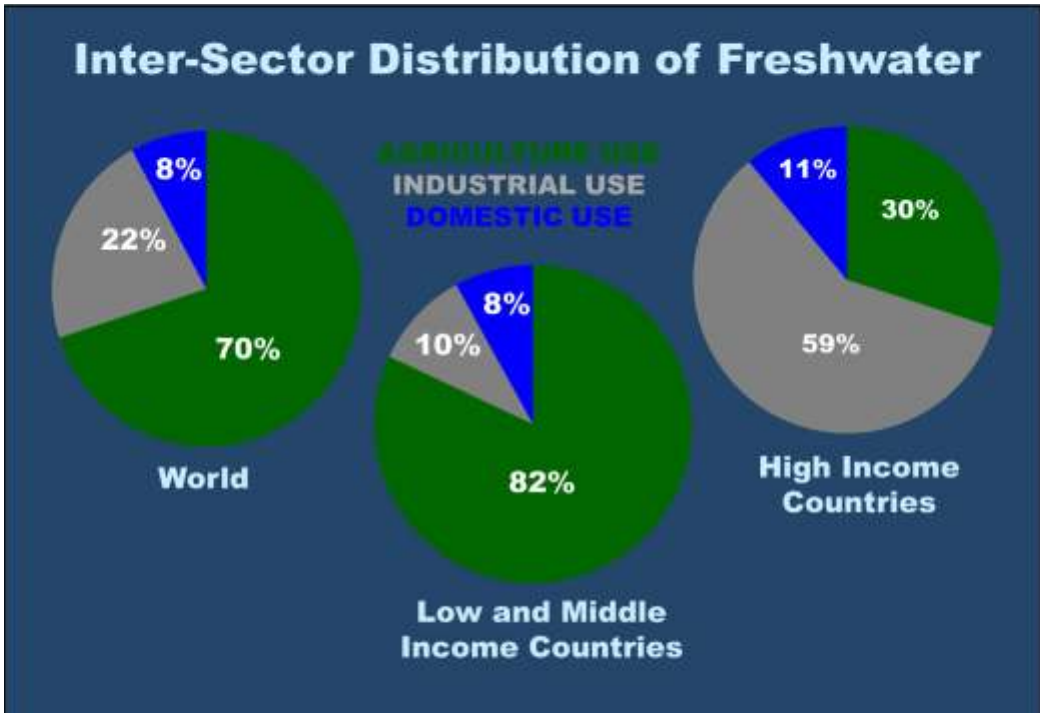
17

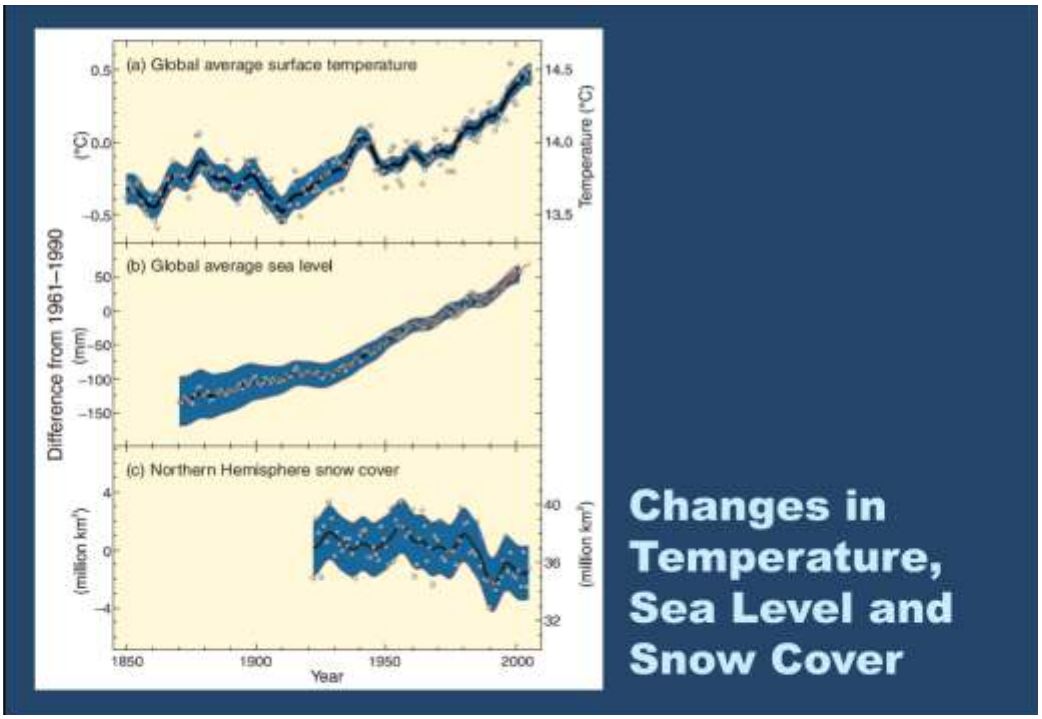

Pakistan Poverty Alleviation Fund
Sustainable Management of Water and Water Related Disasters
THE ROLE Of PPAF
By
Zaffar Pervez Sabri
Group Head – EIDM & SSSD, PPAF
March 22, 2012

CONTENTS

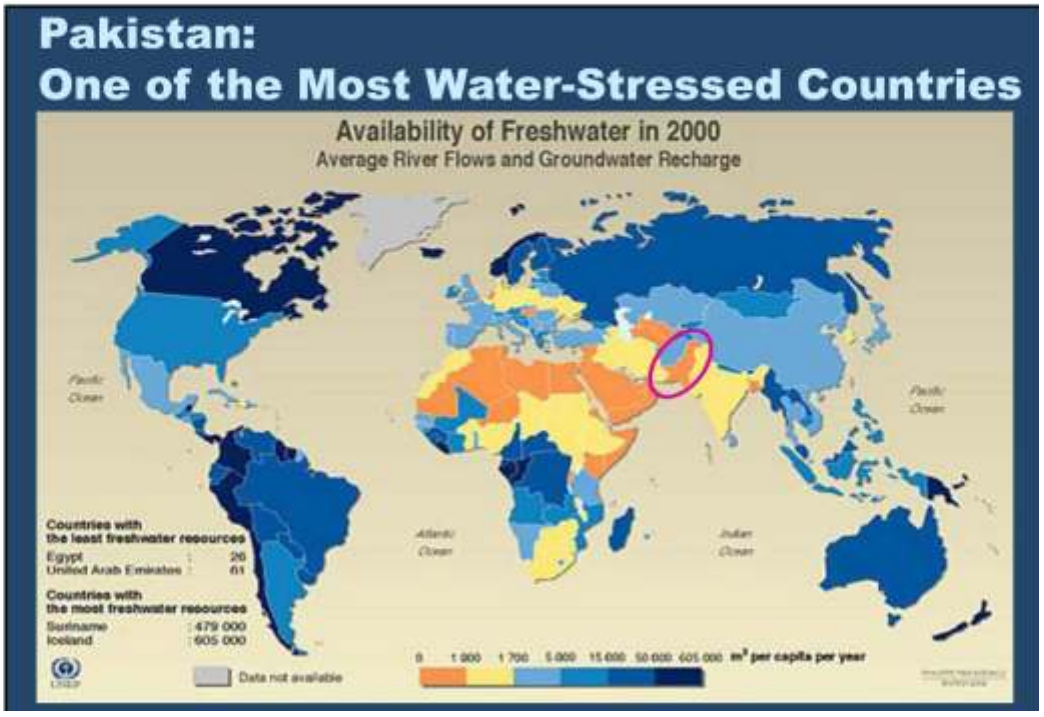
THE GLOBAL PERSPECTIVE


Freshwater Availability
2.5%
97.5%
Readily Accessible for Human Use, <1%
Glacial Ice 70%
In Soil 30%

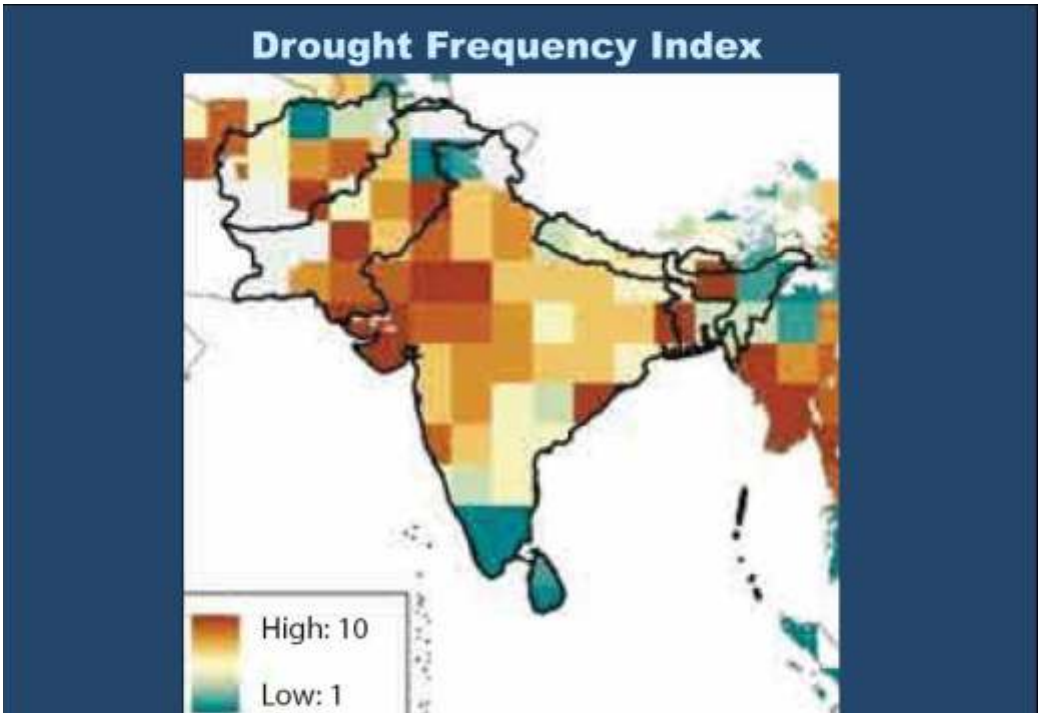

Inter-Sector Distribution of Freshwater
AGRICULTURE USE
INDUSTRIAL USE
DOMESTIC USE
8%
22%
70%
World
8%
10%
82%
Low and Middle Income Countries
11%
30%
59%
High Income Countries

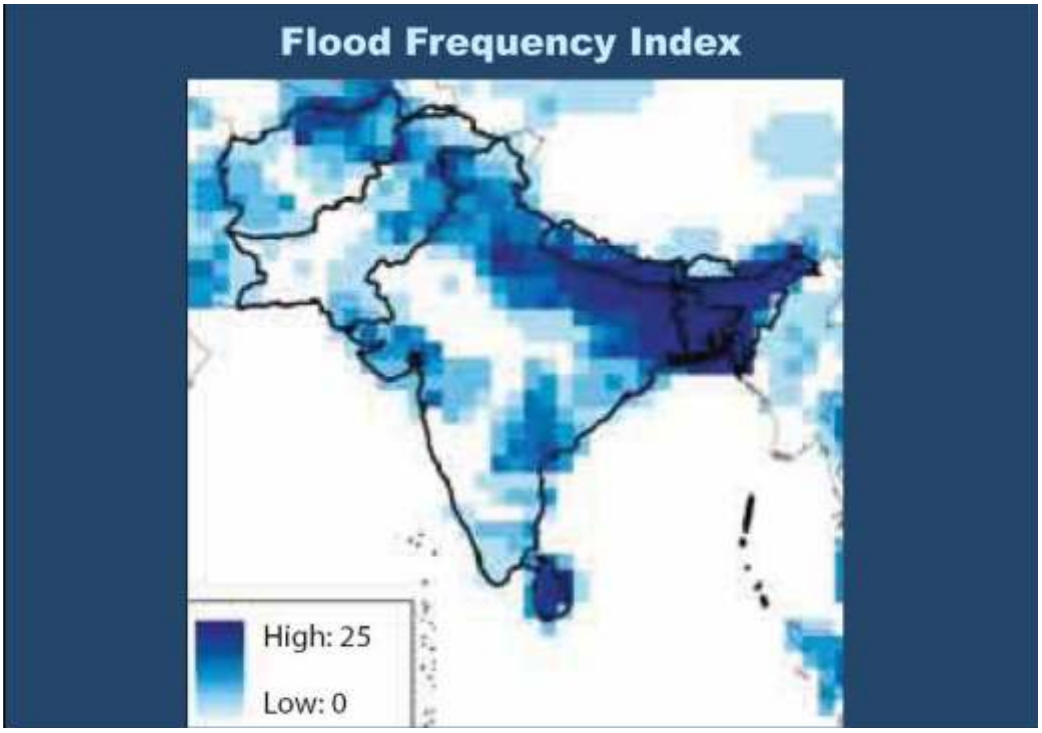

(a) Global average surface temperature
(b) Global average sea level
(c) Northern Hemisphere snow cover
Difference from 1961–1990
(°C)
(mm)
(million km²)
Temperature (°C)
(million km²)
Year
1850
1900
1950
2000
Changes in Temperature, Sea Level and Snow Cover

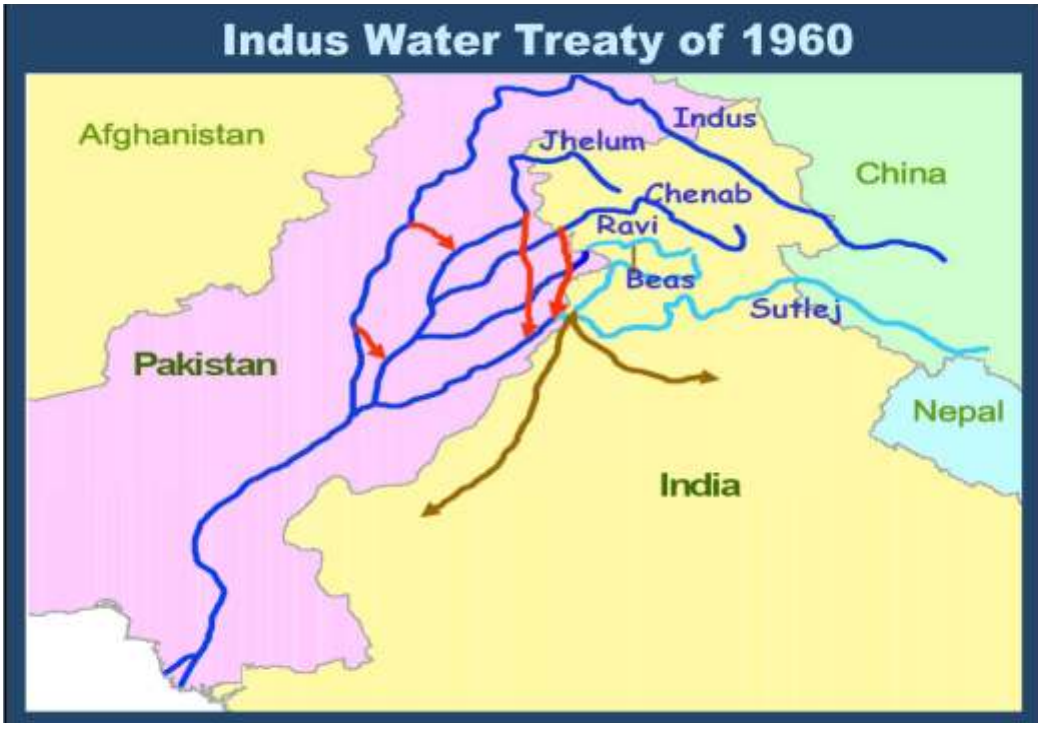

1988

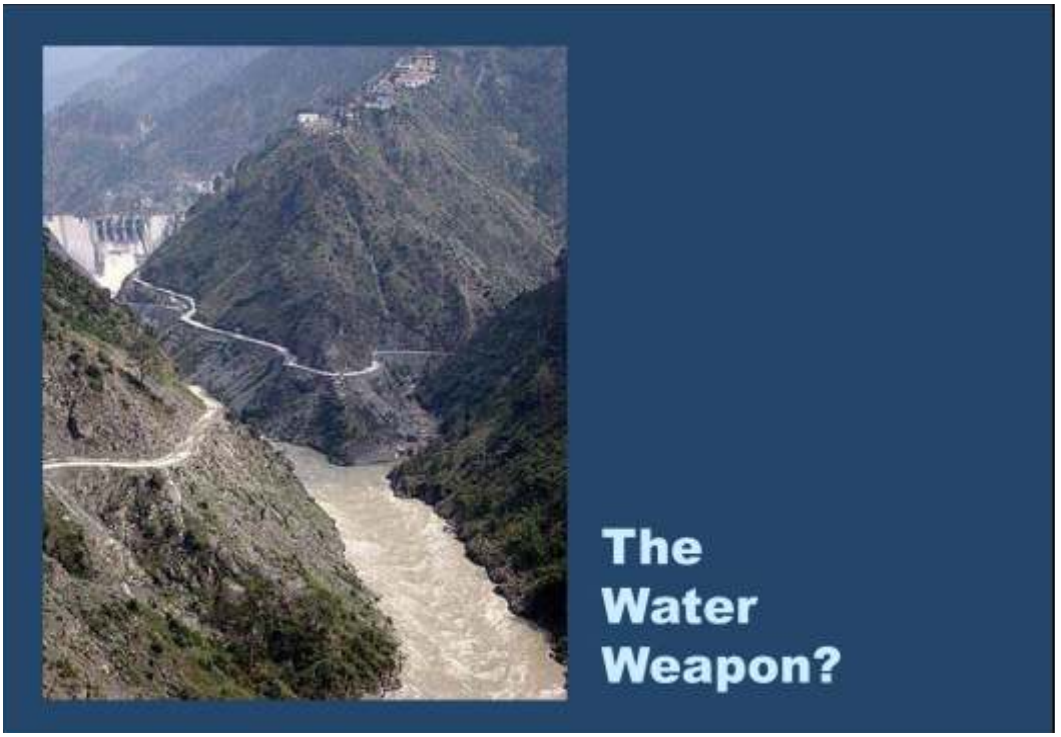

Pakistan:
One of the Most Water-Stressed Countries
Availability of Freshwater in 2000
Average River Flows and Groundwater Recharge
Countries with
the least freshwater resources
Egypt : 20
United Arab Emirates : 61
Countries with
the most freshwater resources
Suriname : 479 000
Iceland : 605 000
Data not available
m³ per capita per year

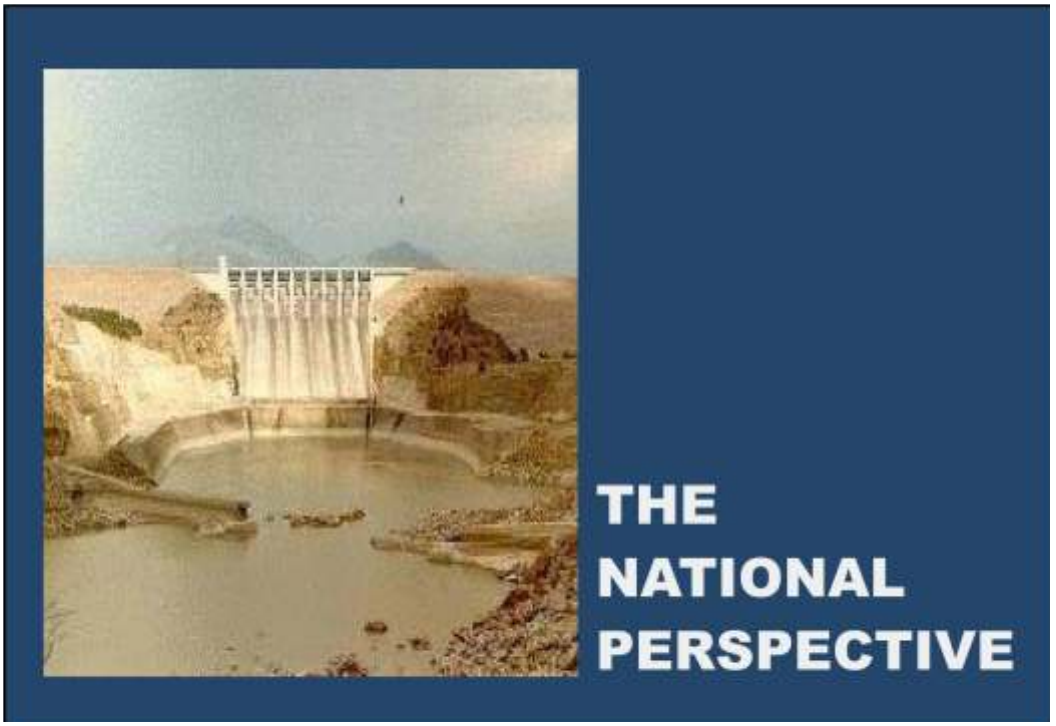

THE
REGIONAL
PERSPECTIVE


Drought Frequency Index
High: 10
Low: 1

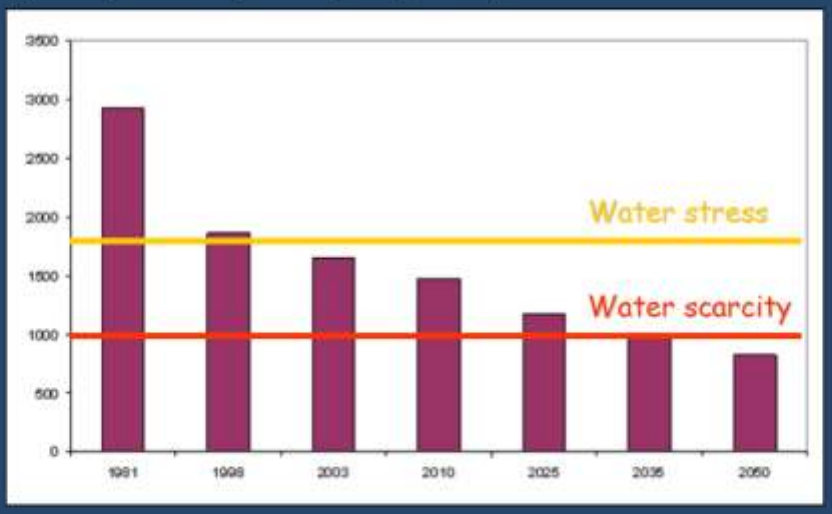

Flood Frequency Index
High: 25
Low: 0


Indus Water Treaty of 1960
Afghanistan
Jhelum
Indus
China
Chenab
Ravi
Beas
Sutlej
Pakistan
Nepal
India

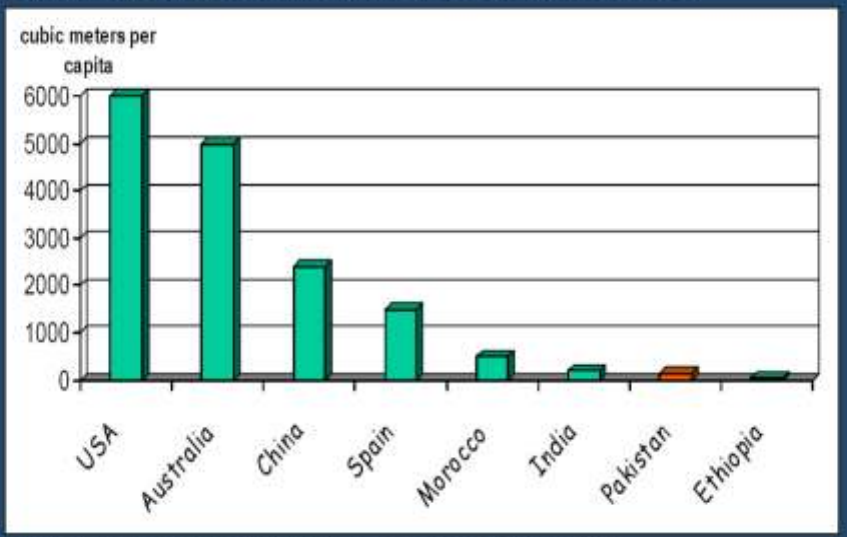

The
Water
Weapon?


THE
NATIONAL
PERSPECTIVE

Declining Per Capita Availability of Water in Pakistan (m^3 per capita per year)

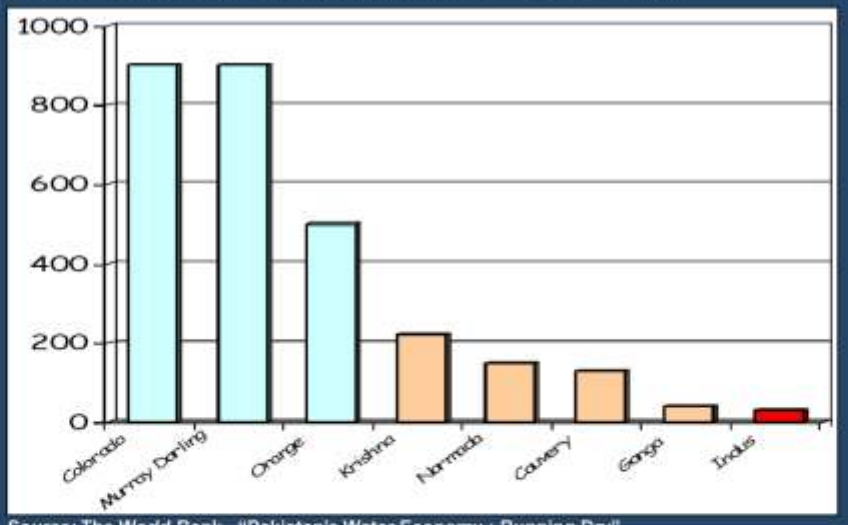


Storage per Capita in Different Semi-Arid Countries



Source: The World Bank , "Pakistan's Water Economy : Running Dry"

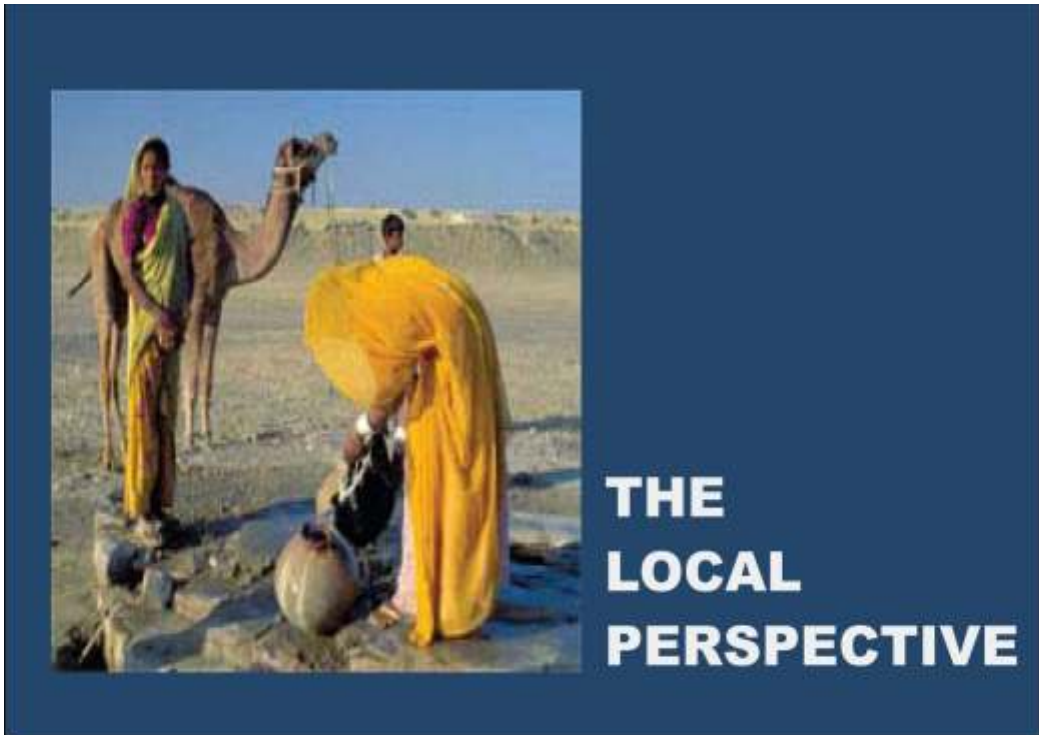
Days of Average Flow which Reservoirs in Semi-Arid Countries can Store in Different Basins



Source: The World Bank , "Pakistan's Water Economy : Running Dry"

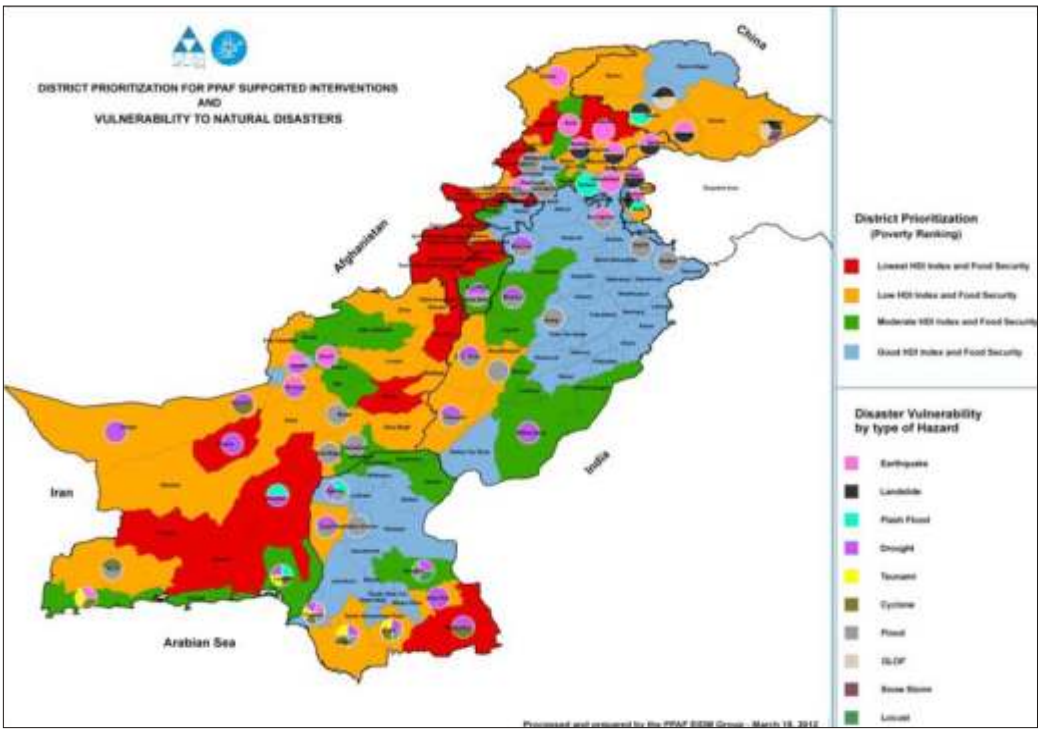
Use of Unclean Water Costs Heavily

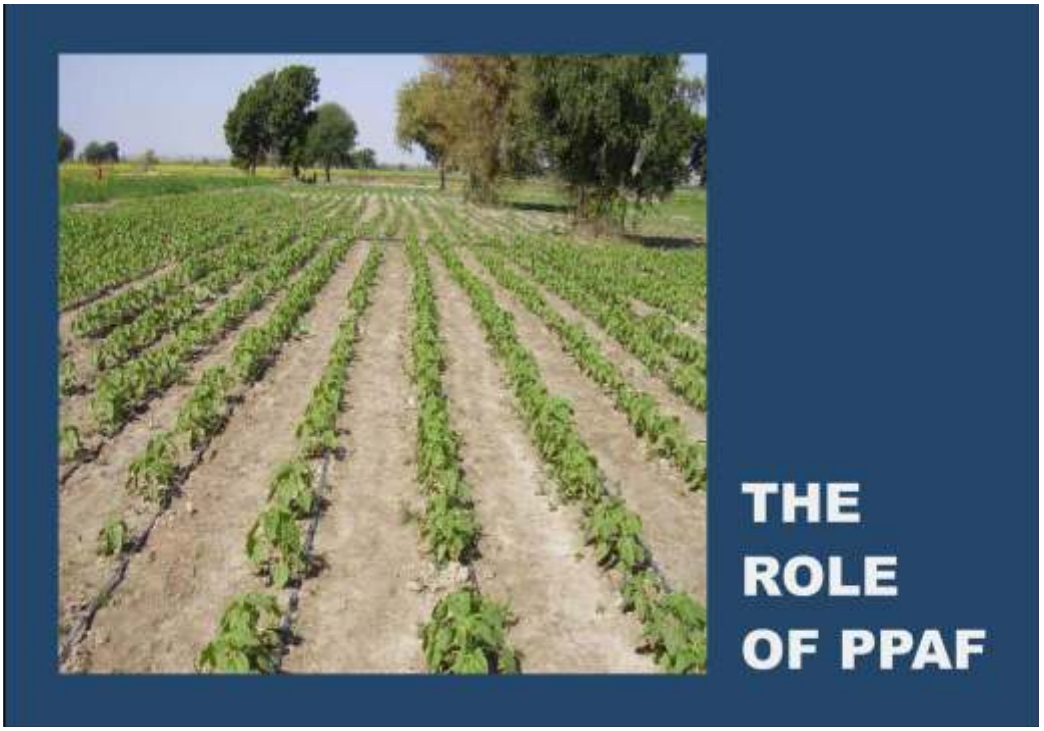
- Water, Sanitation and Hygiene Related Diseases Cost Pakistan Economy about Rs. 112 billion per Year,
- Over Rs. 300 million a Day, in Terms of Health Burden and Lost Earning.
- 250,000 Children of Less than 5 Years of Age Die Every Year due to Diarrheal Diseases.



Water Situation at Local Level

- Inefficient irrigation and agricultural practices,
- Vulnerability to Droughts and Floods
- Sea Water Intrusion
- Deteriorating Freshwater Water Quality
- Poor Access to Safe Drinking Water
- Frequent Water Related Disasters

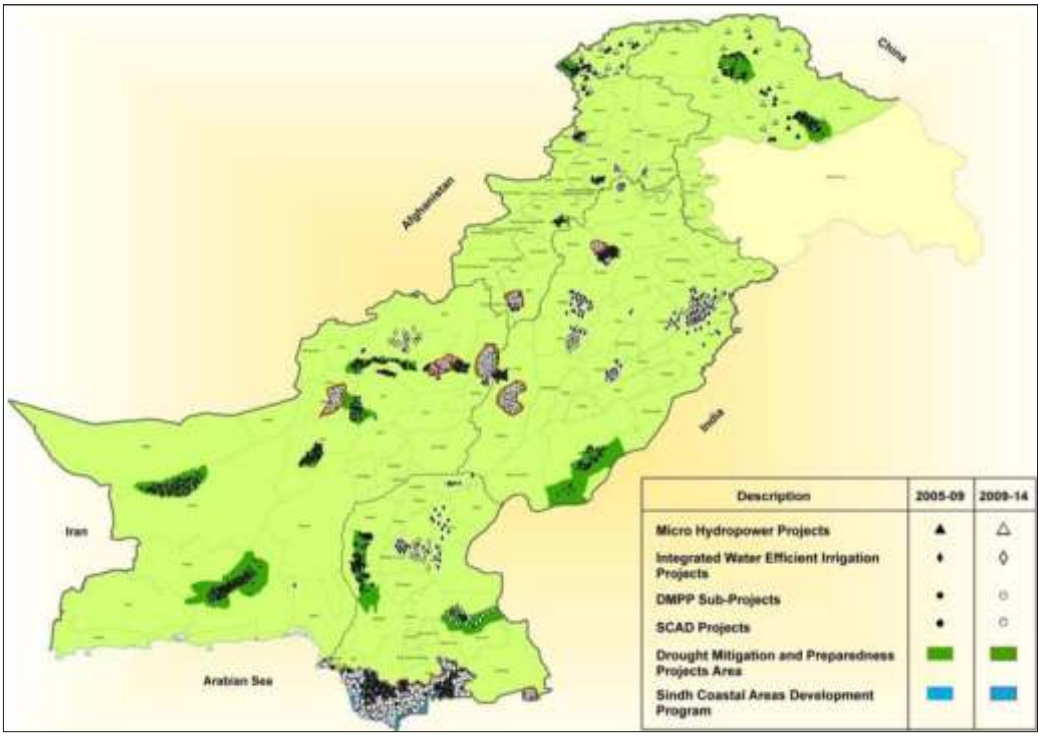

DISTRICT PRIORITIZATION FOR PPAF SUPPORTED INTERVENTIONS
AND
VULNERABILITY TO NATURAL DISASTERS
China
Afghanistan
Iran
India
Arabian Sea
District Prioritization
(Poverty Ranking)
Disaster Vulnerability
by type of Hazard

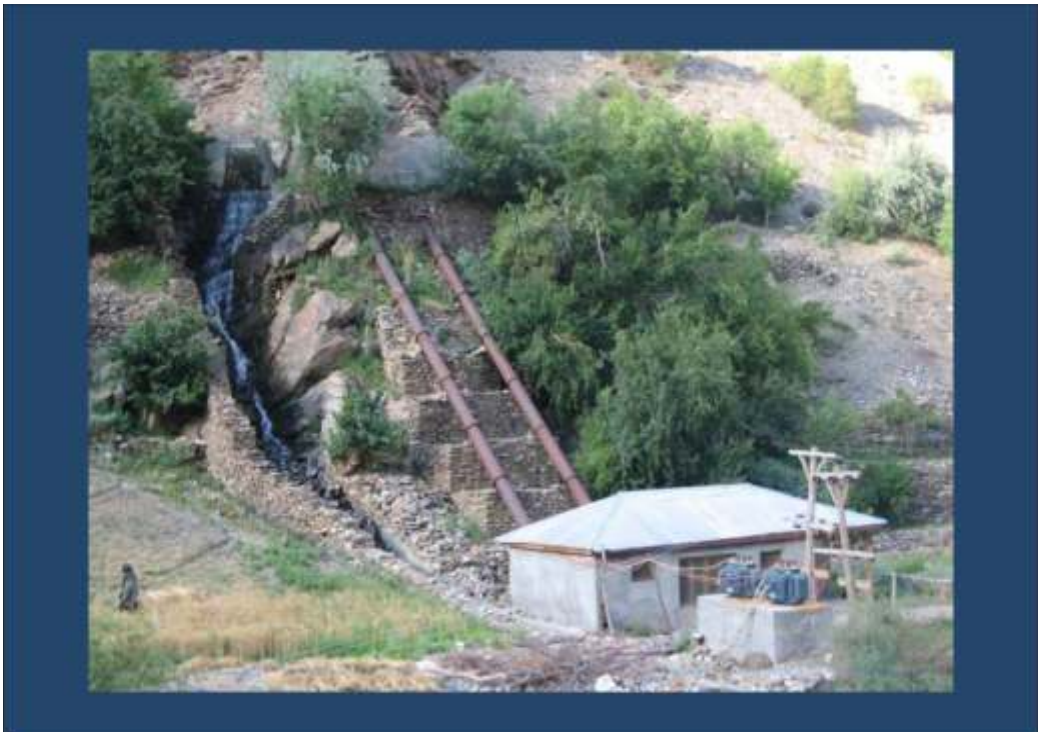

THE
ROLE
OF PPAF

The Range of PPAF Interventions

- Mitigation and Adaptation for Climate Change
- Drought Mitigation and Preparedness
- Integrated Water Efficient Irrigation Systems
- Harnessing Micro Hydroelectric Potential
- Community Based Water Treatment Systems
- Wastewater Treatment and Disposal
- Environmental and Social Management
- Disaster Risk Management & Preparedness

Disaster Management Cycle


China
Afghanistan
India
Iran
Arabian Sea
Description
2005-09
2009-14
Micro Hydropower Projects
Integrated Water Efficient Irrigation Projects
DMPP Sub-Projects
SCAD Projects
Drought Mitigation and Preparedness Projects Area
Sindh Coastal Areas Development Program



Achievements Till Date CPI and WEU (2000-2012)

• No. of Community Organizations	27,000
• No. of Task Forces/LSOs	45
• (Sub) Projects Completed	26,000
• Total Investment (Million US$)	154.00
• No. of Participating Beneficiaries	12 m

Pakistan Water Forum

Objectives

- Organized, knowledge based, discussions to build a National Consensus on major water management issues
- Developing an authentic, Techno-Legal Information Base, to Facilitate Timely, Result Oriented Dialogues with India, as an IBT Signatory, and as a Lower Riparian
- Developing National, Provincial and Area Specific Strategies for Climate Change Mitigation and Adaptation
- Promoting Diffusion of Institutional and Technological Innovations in the entire spectrum of Water Management

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Pakistan Water Forum

Secretariat

- Pakistan Poverty Alleviation Fund (PPAF)

First Executive Body

- Chairman, Co-Chairman, and Panel Members of Today's Event


THANK YOU

Annexure- IV:
POST COLLOQUIUM CORRESPONDENCE WITH PANELLISTS


PPAF
پی پی اے ایف
World Water Day
2012

From: Zaffar Pervez Sabri
Sent: 26 March 2012 18:52
To: 'shamsulmulk@hotmail.co.uk'
Cc: Qazi Azmat Isa
Subject: World Water Day 2012 Colloquium - Thank You

Respected Shams Ul Mulk Sahib,

I am writing on behalf of the Chief Executive PPAF, Qazi Azmat Isa, and the entire management and professional staff of PPAF, to express our profound gratitude to you for your inspiring participation in the captioned event, in the capacity of its Chairman. Your presence enormously lifted the profile of the event, substantially adding substance to its deliberations and meaning to its objectives.

I will soon get in touch with you, Sir, to seek your guidance in making the envisioned Pakistan Water Forum, a robust platform for well informed dialogues, among water professionals from diverse schools of thought. I am sure that under your enlightened leadership, we will soon be able to achieve a consensus on pressing national issues, related to sustainable management of water resources and water related disasters, in this abundantly bestowed country.

Best wishes and kind regards,

Zaffar Pervez Sabri
Group Head (Energy, Infrastructure & Disaster Management)

Pakistan Poverty Alleviation Fund,
1-Hill View Road, Banigala, Islamabad-Pakistan
Phone: (+92-51) 261 3935-50, Fax: (+92-51) 261 3931-33
UAN: (+92-51) 111 000 102, Website: ppaf.org.pk

From: Zaffar Pervez Sabri <Zaffar@ppaf.org.pk>
To: Nadeem Ahmed <nadem48@yahoo.com>
Sent: Monday, 26 March 2012, 19:11
Subject: World Water Day 2012 - Panel Colloquium - Thank You

Dear General Nadeem Sahib,

I am writing on behalf of the Chief Executive PPAF, Qazi Azmat Isa, and the entire management and professional staff of PPAF, to express our profound gratitude to you for your inspiring participation in the captioned event, in the capacity of its Co-Chairman. Your presence enormously lifted the profile of the event, substantially adding substance to its deliberations and meaning to its objectives.

I will soon get in touch with you, Sir, to seek your guidance in making the envisioned Pakistan Water Forum, a robust platform for well informed dialogues, among water professionals from diverse schools of thought. I am sure that with your continued interest and patronage, we will soon be able to achieve a

consensus on pressing national issues, related to sustainable management of water resources and water related disasters, in this abundantly bestowed country.

With best wishes and kind regards,

Zaffar Pervez Sabri
Group Head (Energy, Infrastructure & Disaster Management)

Pakistan Poverty Alleviation Fund,
1-Hill View Road, Banigala, Islamabad-Pakistan
Phone: (+92-51) 261 3935-50, Fax: (+92-51) 261 3931-33
UAN: (+92-51) 111 000 102, Website: ppaf.org.pk

From: Zaffar Pervez Sabri <Zaffar@ppaf.org.pk>
Date: Mon, 26 Mar 2012 19:21:43 +0500
To: Ihunzai@gmail.com<Ihunzai@gmail.com>;
Simisadaf@yahoo.com<Simisadaf@yahoo.com>; Ali Hassan
Habib<ahabib@wwf.org.pk>; adurrani@worldbank.org<adurrani@worldbank.org>;
msami1@worldbank.org<msami1@worldbank.org>
Subject: World Water Day 2012: Panel Colloquium - Thank You

Dear Colleagues,

I am writing to express our profound gratitude to you for your enthusiastic participation in the captioned event, in the capacity of presenters, panellists, and discussants. Your contributions added substance to its deliberations and meaning to its objectives.

I will soon get in touch with you, to seek your support in making the envisioned Pakistan Water Forum, a robust platform for well informed dialogues, among water professionals from diverse schools of thought. I am sure that with your continued interest and espousal, we will soon be able to achieve a consensus on pressing national issues, related to sustainable management of water resources and water related disasters, in this abundantly bestowed country.

With best wishes and kind regards,

Zaffar Pervez Sabri
Group Head (Energy, Infrastructure & Disaster Management)

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1-Hill View Road, Banigala, Islamabad-Pakistan
Phone: (+92-51) 261 3935-50, Fax: (+92-51) 261 3931-33
UAN: (+92-51) 111 000 102, Website: ppaf.org.pk

From: izhar hunzai [mailto:ihunzai@gmail.com]
Sent: 27 March 2012 11:06
To: Zaffar Pervez Sabri

Cc: Simisadaf@yahoo.com; Ali Hassan Habib; adurrani@worldbank.org; msami1@worldbank.org
Subject: Re: World Water Day 2012: Panel Colloquium - Thank You

Dear Zaffar,
Many thanks for your message and for focusing on an issue like water, which is central in Pakistan's development.

A structured dialogue is the way forward as there are many perspectives in the country and all must find an expression in a calm and serious manner. Our focus must be on IWRM in Indus BAsin, dealing with economic, social and environmental aspects of water resources.

I look forward to working with you on this key issue of national interest.

Warm regards
izhar

From: msami1@worldbank.org [mailto:msami1@worldbank.org]
Sent: 28 March 2012 19:22
To: Zaffar Pervez Sabri
Cc: adurrani@worldbank.org; Ali Hassan Habib; Ihunzai@gmail.com; Simisadaf@yahoo.com
Subject: Re: World Water Day 2012: Panel Colloquium - Thank You

Dear Zaffar sahib,

Of course it is a very much needed platform. Please count me in.
Best regards,

Farhan Sami
Country Team Leader, WSP-SA
The World Bank, Islamabad, Pakistan
Tel: 92 51- 9090611; Cell: 92 301-8550212; Fax: 9251-2826362
E Mail: msami1@worldbank.org; Web: http://www.wsp.org

From: adurrani@worldbank.org [mailto:adurrani@worldbank.org]
Sent: 27 March 2012 15:31
To: izhar hunzai
Cc: Ali Hassan Habib; msami1@worldbank.org; Simisadaf@yahoo.com; Zaffar Pervez Sabri
Subject: Re: World Water Day 2012: Panel Colloquium - Thank You

I second that proposal..

From: Simi Kamal [mailto:simisadaf@yahoo.com]
Sent: 27 March 2012 16:55
To: adurrani@worldbank.org; izhar hunzai
Cc: Ali Hassan Habib; msami1@worldbank.org; Zaffar Pervez Sabri
Subject: Re: World Water Day 2012: Panel Colloquium - Thank You

Thank you Zafar, for reviving a national platform on water. There was a big gap in this area since Pani Pakistan became inactive. My full support for your initiative!

Simi

From: ahabib@wwf.panda.org [mailto:ahabib@wwf.panda.org]
Sent: 26 March 2012 21:34
To: Zaffar Pervez Sabri
Subject: Re: World Water Day 2012: Panel Colloquium - Thank You

Dear Zafar sb
Many thanks for including WWF representation on this important event and forum, which was well organised and inspiring
We will provide support within the capacity of our organisation
With Best Regards
Ali Habib

From: Nadeem Ahmed [mailto:nadem48@yahoo.com]
Sent: 29 March 2012 11:48
To: Zaffar Pervez Sabri
Subject: Re: World Water Day 2012 - Panel Colloquium - Thank You

Thank you Zaffar Sabri, it was extremely knowledgable for me personally to hear very informed views from the experts who have been in the field for such a long time. I was just a novice. looking forward to see how we take this initiative forward and make the difference.
Thank you
Nadeem

Pakistan Poverty Alleviation Fund
1, Hill View Road, Banigala, Islamabad, Pakistan
Tele: +92-51-111-000-102 Fax: +92-51-261 3931-33
Email: info@ppaf.org.pk Website: www.ppaf.org.pk