



Hisaar Foundation

a foundation for water, food and livelihood security

Proceedings of the International Conference
December 4th and 5th, 2013 | Karachi, Pakistan



Water Cooperation in Action:
From the Global to the
Grassroots





Organizing Committees

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Credits

Editors

Ms Simi Kamal
Mr Zohair Ashir

Contributing Editors

Mr Nasir Ali Panhwar
Ms Amina Siddiqui
Ms Sanaa Baxamoosa

Reporters

Ms Amina Siddiqui
Ms Farkhanda Aurangzeb
Mr Nasir Ali Panhwar
Ms Rabiya Ijaz
Ms Sairah Khalid
Mr Wasif Rashid

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Ms Simi Kamal (Member)
Mr Salman Sarwar Butt (Member)
Mr Tofiq Pasha Mooraj (Member)
Mr Pervaiz Iqbal, BBCL, (Member)
Dr Sono Khangharani (Secretary)

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Mr Nadeem Siddiqui (Member)
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Ms Sanaa Baxamoosa (Member)
Mr Syed Ziauddin (Member)

Event Management



provided the event management services

Design and Layout

Ms Sabah Baxamoosa
I.D.E.A. Consulting



ideaconsultingpk@gmail.com

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Foreword

The United Nations declared 2013, as the International Year of Water Cooperation which recognized that cooperation was essential to strike a balance between different needs and uses, sharing of water resources equitably, and using water as an instrument of peace. Hisaar Foundation, in keeping with its vision and commitment to promote water cooperation in Pakistan held an International Conference “Water Cooperation in Action – From the Global to the Grassroots”, in Karachi on 4th and 5th December, 2013. This report summarizes the Conference proceedings and the outcomes of the deliberations held during the Conference.



Today, we live in very trying and difficult times in Pakistan, greatly afflicted by the violent geo-political scenario where headlines on a daily basis are dominated with sad news of death and destruction. However, the social and economic challenges, such as issues related to water, food and livelihood security need to be addressed regardless of the environment surrounding us. The suffering caused by poor policies and the implementation of these issues in many ways is much greater than the damages caused by extremism and militancy. The neglect of water and food as a core issue and impact of its insensitive or untimely implementation on human suffering is severe, be it in the form of health, education, livelihood and environment. It goes to the credit of Hisaar Foundation, its partners, its supporters and others who encouraged us to hold such an event against this challenging backdrop. It indeed is a good omen for the players in the water sector that they can rely upon such resilience from its stakeholders.

This Conference led by Hisaar Foundation was facilitated by the support and encouragement from a number of key stakeholders and institutional partners of Hisaar Foundation, mainly, Pakistan Poverty Alleviation Fund (PPAF), International Network for Capacity Building (Cap-Net), Water & Sanitation Programme (WSP), World Bank, International Development Research Centre (IDRC)-CRDI Canada, Multinet Pakistan (Pvt) Ltd, United Bank Limited (UBL), Lotte Chemical Pakistan Ltd, Raasta Development Consultants (RDC), Engro Foundation, Panjwani Charitable Foundation, Actionaid, Health and Nutrition Development Society (HANDS), Pakistan Petroleum Limited (PPL) and AASA Consulting. Over a period of six months preceding the Conference, thousands of hours were spent by the Steering Committee of the Conference along with its very important Academic and Management sub-committees to ensure that both the substance and the style of the Conference fulfilled the highest standards to which Hisaar Foundation always aspires.

It is our expectation that the publication of the Conference proceedings will act as a catalyst for greater activism on the water, food and livelihood security front and will serve as a source of generating and implementing many new ideas and solutions contained in this report. Along with the Conference decisions documented in the “Karachi Declaration on Water Initiatives 2013,” we at Hisaar Foundation pledge to work diligently in implementing them and help Pakistan and Pakistanis to overcome the challenges of water, food and livelihood security.

Zohair Ashir

Chair

Hisaar Foundation



Introduction

This Conference has been a labour of love for getting diverse groups together on a single platform to talk about water cooperation in Pakistan’s fragmented social and political milieu, in a city beleaguered by unrest and tensions. Yes, Karachi maybe a city of contradictions, but it is still recognized by its zest for life, its vigor and vitality and for being ‘mini-Pakistan’ – a place where people from all over the country have created the proverbial melting pot and a rainbow of languages, cuisines and cultures. And indeed we had participants from the global to the grassroots, from 10 countries and from every corner of Pakistan.



In terms of outcomes, the Conference has produced the ‘Karachi Declaration on Water Initiatives 2013,’ a network of universities to work on water disciplines to meet the impacts of emerging challenges on water management and produce appropriate water professionals, linkages across the board, a multi-stakeholder leadership and a stronger voice of women. It launched several books and reports, provided space for debate and discussions and has put together a wealth of papers and experiences.

As Chair of the Academic Committee for this Conference, I had the opportunity to work closely with other members of this committee. Dr Pervaiz Amir, Dr Daanish Mustafa and Ms Farzana Ahmed Saleem gave freely of their valuable time to design the academic content of the Conference, debate and select themes and topics, set objectives, lay out the format for papers and presentations, review papers and manage sessions. Mr Khalid Mohtadullah provided guidance, key inputs and critique at appropriate times and Mr Nasir Ali Panhwar gave inputs in session management, reporting and preparation of this Report. This group also put together the declaration and is continuing to provide support in streamlining the outcomes of the Conference.

Looking ahead I see the Karachi Declaration feeding into the forthcoming deliberations of the Planning Commission of Pakistan, the Network of Pakistani Universities on Water becoming the harbinger of academic excellence and public-private partnership cooperating to solve water problems – from the grassroots to the global.

Simi Kamal

Chair
Academic Committee



Acknowledgements

First and foremost we would like to thank all our partners and sponsors, in particular Pakistan Poverty Alleviation Fund (PPAF) for their support and cooperation throughout this Conference. Without their assistance this Conference would not have been successful. Their logos appear in this publication and they are individually named in Section 2.3. We would particularly like to thank Mr Qazi Azmat Isa, CEO and Mr Zaffar Pervez Sabri, Senior Group Head-Public Goods and Services (PGS), Pakistan Poverty Alleviation Fund (PPAF) for their support and interest.



Special thanks also to the following persons who worked very closely with us:

- ◆ Ms Seema Tahir, Airwaves Media (Pvt) Ltd, who provided support in documenting and airing Hisaar Foundation's jingle and public service messages. She also provided facilitation to Hisaar Foundation in TV One, News One television shows during the Conference
- ◆ Mr Pervez Iqbal, BBCL and his team for excellent event management. He and his team created the very relevant ambiance and support system in organizing the Conference smoothly
- ◆ Mr Sarwar Mushtaq, ECKOVA Productions for Conference filming and photography.
- ◆ Performers Group Mashooque, Sukaar Foundation for making this Conference beautiful and memorable by highlighting the water issues of a rural woman

We would like to thank Mr Zohair Ashir, Chairperson and Ms Simi Kamal, Chair, Academic Committee of Hisaar Foundation for giving their precious time, commitment and invaluable strategic guidance which was integral to the Conference. We also appreciate Mr Khalid Mohtadullah, Dr Pervaiz Amir, Dr Daanish Mustafa, Ms Farzana Ahmed Saleem and Mr Wasif Rashid, for their valuable inputs during the Conference, Mr Nasir Ali Panhwar and Ms Kausar Hashmi for compiling the Report.

We acknowledge the cooperation of all the members of the three Conference Committees (Steering, Academic and Management Committees) who provided extensive support. We would also like to extend our acknowledgement to all the organizations who participated in the exhibition and participants who registered and paid to attend.

At Hisaar Foundation, we would like to extend our deepest gratitude to all the hard working and efficient staff members Ms Saleha Atif, Mr Syed Ziauddin, Ms Sanaa Baxamoosa, Mr Nadeem Siddiqui, Ms Kausar Hashmi, reporters/note takers, e-Team/social media team and volunteers for their contribution in the Conference.

And last but not least, I want to extend our deepest appreciation to Mr Zain Ashir for designing 'Bubbles' as Conference Mascot and Mr Maazin Kamal for photography.

Dr Sono Khangharani
CEO
Hisaar Foundation



Karachi Declaration on Water Initiatives 2013



Dr Daanish Mustafa Presenting Karachi Declaration

At the conclusion of the conference, the following Declaration prepared with the consensus of all the participants and delegates was read out at the Closing Session:

“ We, the delegates, recognize that there are multiple values that a society seeks to realize from water beyond its obvious economic and health benefits. Water’s significance to culture, religion, identity, aesthetics and sense of community is often overlooked in water policy. The emerging water cooperation paradigm must reflect these multiple values.

There is a dire need to develop human resources in the water sector to engage with and realize the range of societal values.

Whereas there are good facilities for training water-related engineers, there is an urgent need for greater investment in water-related research and instruction through the social and natural sciences.

This multi-stakeholder gathering calls for re-centering equity, access and climate adaptation as the core values in water management. Therefore procedural and distributive transparency and justice in the allocation of water should be ensured.

Likewise, the right to access water to satisfy multiple values of the community. Furthermore, a move away from a normal view of water towards a management paradigm that puts a premium on planning inwards from environment and conflict-ridden extremes.

The Conference recognizes the important linkages amongst the government, the civil society and Public-Private Partnerships.

Media needs to be sensitized to encourage rational discourse especially in the realm of benefit-sharing, inter and intra transboundary debates. Civil society must emerge as an institution providing a forward-looking posture in the form of think-tanks.

Effective cooperation must ensue sharing the range of benefits associated with water. We believe that women are the most potent force in the water sector, who need to realize their true potential. Cooperation in water is both a prerequisite and an imperative, and must be predicated upon principles of equity and justice.

The vision forward for all lies in translating the tremendous knowledge and learning that took place during the previous two days into a viable and actionable agenda”.



1.0 Background

Water is vital for life, pivotal for human development and necessary to keep our environment healthy. With increasing population, economic development and changing lifestyles, the world's limited water resources are under pressure leading to increased competition for water and creating situations of conflict and potential for conflict. But water can be used as an instrument of peace and development as every action involving water management requires effective cooperation between multiple actors whether at the local or international scale. This Conference was aimed at reaching out to all the stakeholders in finding solutions to water problems through cooperation and unity of action.

The UN declared 2013 as the International Year of Water Cooperation. The United Nations Educational, Scientific and Cultural Organization (UNESCO) was appointed by UN-Water to lead this initiative.

The goals of the International Year of Water Cooperation included:

- ◆ Raising awareness on the importance, benefits and challenges of water cooperation
- ◆ Enhancing knowledge and developing capacity for water cooperation
- ◆ Sparking concrete and innovative action towards water cooperation
- ◆ Fostering partnerships, dialogue and cooperation around water as a top priority, during and beyond 2013
- ◆ Strengthening international cooperation among institutions, users, social and economic sectors and others in order to reach a consensus on Sustainable Development Goals for the post 2015 era which will effectively address our future water needs

In this backdrop, Hisaar Foundation organized a two-day International Conference titled "Water Cooperation in Action - from the Global to the Grassroots" on December 4th-5th, 2013 in Karachi, Pakistan. The Conference opening was attended by a rich and diverse variety of stakeholders from within and outside Pakistan, with great enthusiasm and fervor. The over 850 participants included prominent water sector experts, representatives of the government, corporate and business sectors, civil society organizations, NGOs, academia, media, youth and women. A total of 850 people participated in the Conference and the closing session was attended by 400 people.

1.1 Scope and Aims of Karachi Conference

The scope of the Conference reflected the theme of the 2013 UN International Year of Water Cooperation, which recognized that cooperation was essential to strike a balance between different needs and uses of water, sharing of water resources equitably, and using water as an instrument of peace. Promoting water cooperation implied an interdisciplinary approach bringing in civic, cultural, academic, scientific and technological factors, as well as ethical, social, political, legal, institutional and economic dimensions. By sharing research findings, technical solutions, innovations and experiences at different levels, policy level dialogue on water cooperation was initiated for ensuring conservation, sustainability and integrated management of water resources in Pakistan and the South Asian region.

The aims of the Karachi Conference were to:

- ◆ Reach out to all critical stakeholders – government, academia, civil society, media, business and corporate sectors, urban and rural communities, and experts on water to consider water challenges and use water cooperation as the basis of feasible options to move forward
- ◆ Identify strategies and policies for promoting and implementing water cooperation in relevant contexts
- ◆ Identify and promote capacity building in addressing the challenges of water cooperation



The Hisaar Foundation Organizing Team at the Conference



1.2 Conference Committees

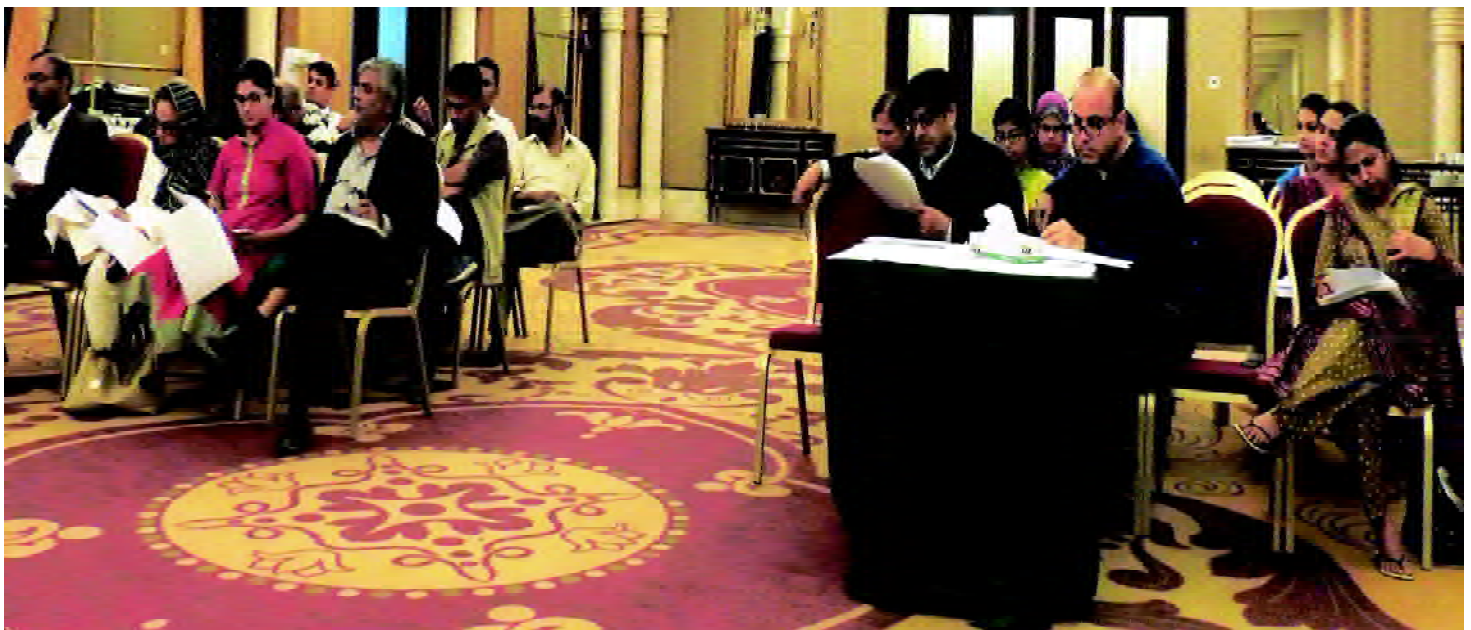
The Conference was anchored by its Steering and Academic Committees, which comprised of leading water sector experts of Pakistan, including Mr Khalid Mohtadullah, Ms Simi Kamal, Dr Pervaiz Amir, Dr Daanish Mustafa, Mr Zaffar Sabri, Ms Farzana Ahmed Saleem and Mr Nasir Panhwar. Its Steering Committee comprised of leading figures from business, professional and philanthropic communities, as well as from the water and environment sectors. These included, Mr Zohair Ashir, Ms Nadira Panjwani, Mr Tofiq Pasha Mooraj, Mr Salman Sarwar Butt, Ms Meher Marker Noshirwani and Dr Sono Khangharani. The Management Committee was led by Dr Sono Khangharani.

1.3 About Hisaar Foundation

Hisaar Foundation – a Foundation for Water Food and Livelihood Security is a not-for-profit organization established in 2003. The Foundation provides a platform for identifying solutions relevant to the water-food-livelihood nexus and implementing them through local, national, regional and international partnerships and cooperation. It promotes Integrated Water Resources Management (IWRM) and water conservation in different contexts.

Over the past 10 years, Hisaar Foundation has worked extensively on building the cooperation paradigm in Pakistan through its Water Partnerships and Women and Water Networks (WWNs). To date, it has formed 11 urban and rural water partnerships at different levels, and 12 WWNs across Pakistan. It has developed and delivered 17 emergency support campaigns responding to floods, earthquakes and other disasters. It has spearheaded numerous regional initiatives and engaged extensively with government at federal, provincial and local government levels, with media and corporate sector. It has developed cooperation with 23 implementing partner organizations and 34 sponsoring partner organizations. These include several Rural Support Programmes, Universities, Pakistani and international banks and companies, Engro Group, the Federation of Pakistani Chambers of Commerce and Industry (FPCCI), NGOs and CBOs.

Hisaar Foundation has extensive links with several international organizations, including the Global Water Partnership (GWP), Center for Affordable Water and Sanitation Technologies (CAWST), International Network for Capacity Building (Cap-Net), South Asian Consortium for Interdisciplinary Water Resources Studies (SaciWATERS), Affiliated Network for Social Accountability (ANSA), George Washington University and others.



Conference Committee



2.0 Conference Coverage and Participation

The Conference was designed to attract both academia and professionals, as well as people from a range of sectors on the premise that water is everyone's business.

2.1 Conference Sessions

The two- day Conference had 20 sessions. These included an Opening Plenary on Day 1 and a Closing Plenary and Partners' Meeting on Day 2. There were 17 parallel sessions as under (copy of Conference Schedule attached as Appendix A) :

Day 1 (December 4, 2013)

Session 2A	Stakeholder's Talkback: The Public -Private Partnership Dialogue on Building Ownership
Session 2B	Beyond Boundaries: Building Peace through Cooperation
Session 2C	Water Cooperation for Tangible Economic Benefits
Session 2D	Water & Health: Challenges & Experiences
Session 3:	Conference Exhibition
Session 4A	Success Stories of Women Water Professionals in Water Cooperation
Session 4B	The Role of Academia: Framing Water Cooperation Initiative
Session 4C	Water Related Disasters: Conquering through Cooperation
Session 4D	Media: Catalyst for Change & Cooperation or a Silent Spectator
Session 4E	Cap-Net Members' Networking Meeting

Day 2 (December 5, 2013)

Session 5A	Fighting Poverty: Water Cooperation for Social Development
Session 5B	Mega-City Water Partnership: Showcasing Karachi Water Partnership
Session 5C	Youth Assembly (Part 1): Exploring Emerging Water Leadership
Session 5D	Women Voices: Strategies for Unleashing the Most Potent Force for Change
Session 6A	The Lead Stakeholder: The Government's Agenda and Commitment to Water and Sanitation Cooperation
Session 6B	The Role of Academia: Bringing together Water Cooperation Initiative
Session 6C	Youth Assembly (Part 2): Harnessing Youth Assembly for Concrete Action
Session 6D	Changing Demands for Knowledge, Technology and Capacity Development for Water Cooperation

2.2 Conference Exhibition and Performances

In addition there was an exhibition in which the following organizations participated:

- ◆ Pakistan Poverty Alleviation Fund (PPAF)
- ◆ Health and Nutrition Development Society (HANDS)
- ◆ Thardeep Rural Development Programme (TRDP)
- ◆ Micro Drip (Pvt) Ltd
- ◆ Sukaar Foundation
- ◆ Pure Water Technology
- ◆ Water and Sanitation Programme (WSP), World Bank
- ◆ Unilever-Pakistan
- ◆ Hisaar Foundation

Theatre was featured on two occasions by the 'Mashooque Group', Sukaar Foundation, from a rural area in southern Pakistan.



2.3 Conference Sponsors

The sponsors of the Conference reflected a range of social development and corporate sector organizations. The main sponsor was Pakistan Poverty Alleviation Fund (PPAF) that came on board very soon after the announcement of the Conference and was a consistent and very supportive partner.

Main Sponsor

- ◆ Pakistan Poverty Alleviation Fund (PPAF)

International Sponsors

- ◆ International Network for Capacity Building (Cap-Net)
- ◆ International Development Research Centre (IDRC)-CRDI Canada
- ◆ Water and Sanitation Programme (WSP), World Bank

Corporate Sponsors

- ◆ United Bank Ltd (UBL)
- ◆ Multinet Pakistan (Pvt) Ltd
- ◆ Engro Foundation
- ◆ Lotte Chemical Pakistan Ltd
- ◆ Pakistan Petroleum Limited (PPL)

Social Development Sponsors

- ◆ Health and Nutrition Development Society (HANDS)
- ◆ Raasta Development Consultants
- ◆ Action Aid Pakistan
- ◆ Panjwani Charitable Foundation
- ◆ AASA Consulting

2.4 Conference Mascot

The Conference Mascot was named “Bubbles” and he appeared throughout the Conference and was also used to deliver media messages before, throughout and after the Conference.

2.5 Conference Media Engagement

The Karachi Conference provided the prime opportunity for Hisaar Foundation to recreate its image and create awareness amongst the target audiences. In order to streamline our efforts and to create a strong online presence, the initial targeted social media outlets were Facebook, Twitter, Blog, Vimeo and websites.

Facebook

Hisaar Foundation’s Facebook page was revitalized to attract more fans and create awareness about the Conference. An advertisement campaign, targeted to a specific audience was launched to announce the Conference. The ad campaign did remarkably well and generated more than 2200 likes in 4 days! The Facebook page was also used to share news and reports about water related issues in Pakistan and the world. Photographs, water-saving tips, water facts, updates on Hisaar Foundation activities are also posted on a regular basis.

Twitter

A twitter account was created prior to the Water Conference. One of the main campaigns on twitter was the daily countdown to the Conference. Secondly, twitter was used to create a buzz around the theme of “water cooperation”. We also regularly posted all news reports on water issues in Pakistan. Water saving tips, water facts, and Hisaar activities were also tweeted about prior to the Conference. During the Conference, twitter was used for live feeds about the Conference. We had volunteers in each room tweeting about the sessions in real time. We had several hundred tweets over the 2 day duration of the Conference. The objective was to develop mini reports of each session and to capture everything being said.

Website

The website contained all Conference related information and was also the primary medium to submit registrations. The website was also used to elicit papers and speakers for the Conference. The website will also be used for sharing resources and all papers, presentations and photographs will be archived here.



Ms Khawar Mumtaz and Mr Khalid Mohtadullah



Mascot Blog

Bubbles the Mascot was also created for the Conference. Consequently it was decided that Bubbles would be the mode of communication. Therefore a blog was created for Bubbles. This blog was used to give greater detail about the Conference, e.g. organizers, speakers, sessions, etc.

Vimeo

Hisaar Foundation is using Vimeo to create an online library of all videos available. The Bubbles jingle, all public service announcements, and media reports about the Conference can all be viewed on Vimeo. Hisaar Foundation has extensively begun using social media channels, each of which serves a specific purpose in the larger social media strategy set forth for the coming years.

Twitter: @HisaarF

Facebook: facebook.com/hisaarfoundation

Vimeo: <https://vimeo.com//user23038552>

Advertisement in Newspaper

The Express Tribune, a leading daily newspaper of Pakistan provided support to Hisaar Foundation in terms of printing our ad for the Conference in the 3rd December, 2013 edition of its newspaper.

Media Engagement with TV One

TV One provided support for one month in documenting and airing Hisaar Foundation's jingle and public service messages and also provided facilitation to Hisaar Foundation in TV One and News One television shows during and before the Conference.

ECKOVA Productions

ECKOVA Productions provided support for filming and photography during the two days of the Conference.

Media Coverage

The Conference was extensively covered by electronic and print media teams and the event was reported in their respective news channels, newspapers and other programmes.

The following electronic and print media participated in the Conference:

PRINT

Daily Dawn	Daily Balochistan
Daily Times	Daily Nai Baat
Express Tribune	Sindh Tales Daily
Business Recorder	The Ailan
Daily Kawish, Sindhi	Daily Nawai Sindh Kar
Daily Awami Awaaz, Sindhi	Independent News
Daily Jeejal, Sindhi	Pakistan
Daily Sindh Express	Jeevay Pakistan
The News	Jehan Pakistan
The Nation	Daily News Zone
Daily Aman, Karachi	Daily Pakistan
Press Daily Motion	Daily Shakti
Daily Awam	Farozaan Magazine

TV

Pakistan Television (PTV)	Hum TV
Royal NEWS	Abb Tak
TV One	Capital TV
KTN	CNBC Pakistan
Business Plus	Samaa TV
Geo News	Mehran TV
Health TV	

RADIO

Radio Pakistan	FM 103
FM 107	FM 93
FM 105	

2.6 Conference Participation

The Karachi Conference brought together about 850 participants, not only from Pakistan, but also from USA, UK, India, Nepal, Sri Lanka, Bangladesh, UAE, Tanzania and Tajikistan.

This event was attended by participants from the corporate sector, international development organizations, embassies, government, non-governmental organizations, universities, faculty members, students, volunteers, Hisaar Foundation's Governors, Council Members and staff members and women from WWNs to discuss issues and propose solutions for promoting and implementing water cooperation.

Approximately 250 people also attended the Conference dinner and gala night. Closing plenary session was attended by more than 400 people.



Conference Sponsors

We wish to thank our sponsors whose support and encouragement made it possible for us to hold this International Conference.





3.0 Proceedings of the Conference

This section summarizes the Conference proceedings. A list of all presentations and distribution material is attached as Appendix B at the end of the report and detailed proceedings are given in the CD inserted in the pocket at the end of the Report.

3.1 Setting the Scene and Identifying Challenges (Session 1 - Opening Plenary)

Speakers: Mr Zohair Ashir, Chairperson, Hisaar Foundation

Mr Khalid Mohtadullah, Senior Advisor, UNDP, IWMI and GWP and Council Member, Hisaar Foundation

Mr Farhan Sami, Pakistan Country Coordinator, WSP, World Bank

Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation

The opening plenary session focused on welcoming the delegates, identification of key issues in water, identifying the key players/stakeholders in the water sector, sharing expected outcomes of the Conference, the government's position on water and the next steps (what Conference would deliver).



Mr Wasif Rashid

The Master of Ceremony was Mr Wasif Rashid. The speakers and presenters included, Mr Khalid Mohtadullah, Senior Advisor, UNDP, IWMI and GWP and Council Member, Hisaar Foundation, Mr Farhan Sami, Pakistan Country Coordinator, WSP, World Bank, Mr Zohair Ashir, Chairperson, Hisaar

Foundation and Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation. The Conference began with recitation and translation from the holy Quran by Ms Hina Ayub, a student from a partner school in Gulshan-e- Iqbal Town.

Chairperson's Welcome and Launching of Hisaar Foundation's First 10 Years Report

Mr Zohair Ashir, Chairperson, Hisaar Foundation made his welcome address, formally launched Hisaar Foundation's First 10 Years Report and gave an introduction of Hisaar Foundation (The Hisaar Foundation Story) and its contributions in the water sector. Mr Ashir welcomed all the participants and delegates and said that, he was pleased to see that women water professionals from Nepal, Sri

Lanka, Bangladesh and India had also come to the Conference to share their experiences and success stories. He also appreciated the presence of the media in large numbers and the role this sector had played in raising a voice on water issues.

Mr Ashir said that, "this day was an important landmark not only for Hisaar Foundation but for the entire water sector because a major water conference was being held in South Asia that had brought together all stakeholders on common ground to discuss the water issues that were at the heart of all our problems". He said that, water was the basic resource and affected us all and that we may run out of it sooner than energy, hence made it "everybody's business".

He elaborated that, the issues of water confronting Pakistan were of mammoth proportions since it had already been classified as water scarce and it was estimated that by 2025, it would be classified as water stressed. He said that, Pakistan was already down to 30 days of storage supply which was way below the universal standard of the recommended 1000 days of storage. The grave issues of water availability confronting Pakistan were even more alarming, given that it was a country primarily dependent on agriculture and hydro power.



Mr Zohair Ashir, Chair Hisaar Foundation delivering the opening address



It had been a long standing desire of Hisaar Foundation to hold an international level water conference in Pakistan. With 2013 being declared as the International Year for Water Cooperation by the United Nations, Hisaar Foundation a proponent and advocate of cooperation, felt that it was an appropriate time to hold this Conference and bring together all stakeholders on a common forum to discuss water issues, recognize their responsibilities to the resource and realize the urgent need for collective participation and response.

Karachi was chosen as the Conference venue because it is home to a diverse set of stakeholders which include policy and decision makers, corporate sector, care givers and community. Through this Conference, he said, which represents a good blend of experience, we aim to show that while the ultimate responsibility is that of the government, we as key stakeholders cannot ignore or relinquish our role and responsibilities towards this very important resource. He added that, if we fulfill our responsibilities conscientiously, we will be able to redress our issues.

The Chairperson appreciated the support provided to Hisaar Foundation by Pakistan Poverty Alleviation Fund (PPAF), International Network for Capacity Building (Cap-Net), Water Sanitation Programme (WSP)- World Bank, International Development Research Centre (IDRC), Panjwani Charitable Foundation, United Bank Ltd (UBL), Multinet Pakistan (Pvt) Ltd, Engro Foundation, Lotte Chemical Pakistan Ltd, Pakistan Petroleum Ltd (PPL), Action Aid, HANDS, AASA Consulting and Raasta Development Consultants (RDC) and said that, this very intensive and informative Conference would not have been possible without the support of these partner organizations.

Mr Ashir then made a presentation on Hisaar Foundation, its work and contribution in terms of concept, innovative approaches, water solutions and partnership development in the water sector. Hisaar Foundation, he said, had originated in response to the severe drought that had affected parts of Pakistan in 2000. Initially supported by two private organizations, Hisaar Foundation was formally registered as a not for profit organization in 2003.

A volunteer driven organization, led by the Board of Governors, which not only gives it time but also provides intellectual and professional services free of charge, Hisaar Foundation has since its registration emerged as a platform for bringing together issues of water, food and

livelihood. Through its organizational themes of creating amongst stakeholders, developing solutions and emergency support, it has been instrumental in developing and anchoring the concepts and models of Area Water Partnerships (AWPs), Urban Water Partnerships and Women and Water Networks (with Global Water Partnership), as well as the concepts of Cost Synergy (with Cap-Net), Mutual Accountability and Total Water Solution.

He said that, Hisaar Foundation has devised and implemented innovative programmes of water systems, school water and sanitation rehabilitation programme and food security in remote areas. It worked on linking every drop of water with every grain it produces and came up first with project Aab (water) and then project Aab-o-Daana (water and food), and has helped foster several initiatives and a consortium on water. It has extensively educated the media on water issues and also introduced the water partnership concept into Pakistan, set up many models, including Karachi Water Partnership, Town Water Partnerships and a range of rural partnerships.

It has developed and disseminated water facts and water conservation guidelines, developed and promoted low cost safe water solutions, including locally made water filter plants and led several emergency relief and rehabilitation campaigns.

A social activist organization with deep links with international organizations, Hisaar Foundation also plays the role of think tank on water and environmental issues and is linked to several international universities and water institutes. At the end of his presentation, the Chairperson launched Hisaar Foundation's First Ten Year Report, which he said,



Bubbles: Hisaar Foundation mascot



Mashooque Group Performers

proudly encapsulated the Foundation’s long struggle and efforts in the development of innovative ideas, programmes and projects and solutions to alleviate the issues confronting the water sector in Pakistan.

Mr Ashir informed that, Hisaar Foundation had introduced a character “Bubbles” and as the official Mascot of the Foundation, it would now be featured in all forums. The Bubbles jingle, prepared in the spirit of cooperation, by a leading TV channel, TV One was aired at the occasion.

Speakers and Presenters



Mr Khalid Mohtadullah

Mr Khalid Mohtadullah, Senior Advisor, UNDP, IWMI and GWP and Council Member, Hisaar Foundation, while sharing his views on the need for water cooperation on River Indus, said that, it was a great privilege to be a part of the Conference and that Hisaar Foundation should be complimented on its hard work. Prior to his presentation titled ‘Water Cooperation in Indus: Some Perspectives’ he shared

some thoughts on water cooperation as follows:

- Since the water that was available to us was all that we had and it did not recognize geographical boundaries, it should and must be shared for common benefit. If the resources were not shared, the scarcity of water could threaten our food, energy

and economic growth and lead to water competition and conflicts and since water was a basic universal requirement, its need and availability underpins all other needs

- The declaration of 2013, by the UN, as the Year of Water Cooperation, reflected the need for urgent negotiation and cooperation on water issues not only at the national but also at the international level. Cooperation benefits all and brings together multiple stakeholders and facilitates communication right from the local to the global level.
- Last 2000 years history had shown that water had been the catalyst for cooperation and not conflict and had proven that it can create results that were beneficial to all. The time had come for all of us to overcome our cultural and political conflicts and move towards sharing of the resource. He was optimistic that if countries within the South Asia region cooperated and shared their water resources, we could overcome our water availability issues.

Speaking in the context of Pakistan’s water issues, he said that, if 19 countries in Europe could share the water of one river and six countries in South East Asia could share the water of one river, why could India and Pakistan not equitably share the water of River Indus. Water sharing was imperative for the prosperity of the region, especially in the light of the World Bank study, which highlighted that water use was globally increasing at twice the rate of water growth and that it was also estimated that by 2025, 1.8 billion people were expected to be water scarce and 2/3 of the world water stressed. We as stakeholders needed to emerge as one voice and push for water sharing for effective and efficient availability of water for our future population.

Through his presentation, Mr Mohtadullah highlighted that the Indus Basin was the world’s largest glaciated region and its snow and glacial melts contributed more than 50% of the total Indus flow. Of the total water available in the Basin, Pakistan drew 63% and India 36% and out of the share that Pakistan got, 93% was used in the agricultural sector and 7% in other sectors.

Climate change impacts have greatly affected the glacial areas, he added, and water availability had been reduced to 1050 cum/capita and water shortage was projected at 14.9 MAF. As a result, ground water levels had fallen and water quality had deteriorated. Changes in the seasonal



pattern of river flows due to early start of snow and glacier melting at elevated temperatures and combined with shrinking, glacier volumes would also have serious implications for storage of irrigation water and its supply for kharif and rabbi crops, would have implications that an agricultural economy like ours, could ill afford. The situation in Pakistan, he added, was very grave, with World Bank study figures indicating that, our water flow was reducing alarmingly and that we had already reached at the threshold level of available water resources and that by 2025, we would require 30% more water than today to meet our rising demands.

The Indus Water Treaty, he said, had serious gaps which should be looked into because it did not have provisions for how the parties should respond to the variations in water flow that climate change causes, nor did it address water quality or pollution or transboundary aquifers and not even sharing data on ground water resources.

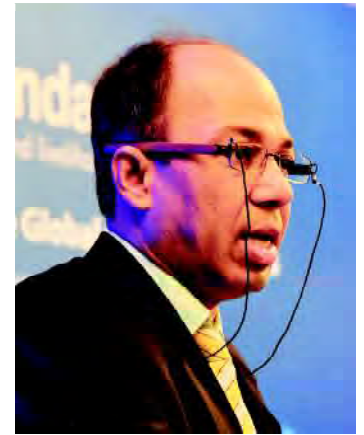
Mr Mohtadullah concluded that, the way forward was to take the following transboundary initiatives:

- ◆ Joint monitoring and data sharing – climate change impacts, glacier melt and monsoon pattern change
- ◆ Transboundary flood and drought management
- ◆ Joint research on enhancing food productivity
- ◆ Joint investment in developing energy resources of the Basin
- ◆ Joint efforts in water use efficiency plans
- ◆ Initiating trans-boundary energy sharing agreements
- ◆ Creating a strong cross-border nexus of water, food and energy
- ◆ Vigorous follow up to resolve common basin challenges

He concluded that:

- ◆ This could only satisfactorily happen if we were eminently prepared with good science and sound database before embarking on an exercise like this
- ◆ It was everybody's responsibility not only governments
- ◆ There was immediate need for think tanks on relevant subjects and public debate on important issues
- ◆ Support of track I and track II negotiations was necessary
- ◆ This would create informed public opinion
- ◆ Indus Water Treaty not to be renegotiated but improved to the extent possible

Mr Farhan Sami, Pakistan Country Coordinator, WSP, World Bank, said that, this was a very important Conference given that the world we were living in was facing a mammoth crisis of water resources and a growing dependency on cooperation to resolve these issues. It was through cooperation that our ancestors found solutions of how to get more food, share what they had and thus initiated the science of cooperation.



Mr Farhan Sami

He believed that the time had now come for modern man to take another leap towards cooperation to equitably and efficiently resolve issues. He was very optimistic that since Pakistan had all the given potential required to foster cooperation and being a resilient nation, we would find solutions.

Given the rapid urbanization of Pakistan and the overwhelming burden it was putting on our resource, there was urgent need, he reiterated, for bringing about reforms through bottom - up approach. What we must realize was that we do not have to look at the government but ourselves play a greater role in fostering cooperation. The Orangi Pilot Project (OPP) and projects like Lodhran had shown what involvement and cooperation of citizens could achieve and this approach of cooperation should be multiplied and replicated across the board.

He then gave a brief on the World Bank's Water and Sanitation Programme (WSP) and elaborated upon the projects and initiatives it had undertaken to improve the water and sanitation conditions in Pakistan. He said that, it had led or supported many of the advances made within the water and sanitation sector over the last three decades by sharing best practices across regions and placing a strong focus on capacity-building by forming partnerships with academia, civil society organizations, donors, governments, media, private sector, and others. WSP's work had helped to affect the regulatory and structural changes needed for broad water and sanitation sector reforms.



Ms Simi Kamal

Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation, shared that she was feeling very optimistic and upbeat about the Conference. It was a Conference not about words but action, because it aimed at reaching out to all critical stakeholders – government, academia, civil society,

media, business and corporate sectors, urban and rural communities and experts on water to consider water challenges and use water cooperation as the basis of feasible options to move forward, identify strategies and policies for promoting and implementing water cooperation in relevant contexts and identify and promote capacity building in addressing the challenges of water cooperation. She explained that, the two-day Conference included intensive concurrent sessions covering a wide range of issues and problems confronting the water sector. The content of the Conference included, talking to all stakeholders, transboundary and within country water-sharing and cooperation, benefits sharing, water and poverty, natural disasters and how to tackle them, water and health, the government agenda, water in a vulnerable world, media, youth assembly, women’s groups and academia on developing the required knowledge and skill base for managing water in the changing scenario.

“When we finish this Conference”, Ms Kamal said, “we will have a whole new agenda on the water sector and cooperation and a Conference Declaration would be made encompassing the outcomes and way forward that emerge”.

She also suggested that the Action Plan put forward by Mr Mohtadullah should be considered a roadmap.

Theatre Performance

The session closed with a performance prepared by Mashooque Group, Sukaar Foundation, depicting the situation of water and women in Thar. The traditional song narrated the story of a Thari woman who was not only responsible for raising the children but also fetching water. The performance was well received by the audience.

Conclusions

- ◆ Water was everybody’s responsibility, not only the governments
- ◆ Improvement and not renegotiation was required in the Indus Water Treaty (IWT)
- ◆ Action Plan put forward by Mr Mohtadullah should be considered a roadmap
- ◆ The time had now come for stakeholders to take a leap towards cooperation to equitably and efficiently resolve issues relating to water
- ◆ Spirit of cooperation at the national, regional and international level was essential to address the common goals and find solutions

Display and Distribution Material

- ◆ Hisaar Foundation’s First 10 Years Report, 2003-2013
- ◆ Presentation on ‘The Hisaar Foundation Story, Mr Zohair Ashir
- ◆ Presentation on ‘Water Cooperation on Indus-Some Perspectives’, Mr Khalid Mohtadullah
- ◆ Presentation on ‘Water Cooperation in Action-from Global to the Grassroots 2013-Conference Walk through’, Ms Simi Kamal



Delegates and Guests at the Opening Plenary



3.2 Stakeholder's Talkback: The Public-Private Partnership Dialogue on Building Ownership (Session 2A – Panel Discussion)

Chair: Mr Adnan Asdar, CEO & Executive Director, Multinet Pakistan (Pvt) Ltd and Chairperson, Karachi Relief Trust

Facilitator: Mr Zohair Ashir, Chairperson, Hisaar Foundation

Panelists: Mr Siddiq Sheikh, Advisor on Social Sector, FPCCI
Mr Roland D'Souza, Executive Member, Shehri
Mr Akbar Leghari, Special Secretary, Local Government
Mr Abdul Rahim Moosvi, President, Lyari Community Development Project (LCDP)
Mr Samar Ali Khan, MPA, Sindh Assembly and member of PTI
Dr Noman Ahmed, Professor & Chairman, Department of Architecture and Planning, NED University

The session on 'Stakeholder's Talkback: The Public - Private Partnership Dialogue on Building Ownership' focused on bringing together all the key stakeholders and answer the questions on how we could all co-exist more effectively by sharing water resources. The session was sponsored by Multinet Pakistan (Pvt) Ltd.

Opening Remarks



Mr Adnan Asdar, Session Chair

Mr Adnan Asdar, CEO and Executive Director, Multinet Pakistan (Pvt) Ltd, said that, the representation of the stakeholder groups at this platform to discuss issues and share experiences in the realm of public- private partnership related to water was a welcome sign. This indicated the willingness of the stakeholders to sit together and identify solutions to the water problems affecting all of us.

Since 94% of the water in Pakistan, he continued, was used in agriculture and only 6% was available for other use, there was urgent need to bring about efficiency in the water resource. There was need to re-look into and revisit the IWT, so that it could be aligned to water sharing and cooperation. He went on to say that, since water had never been a priority in the last 67 years, the situation had gone from bad to grave and the need of the hour was that "We should keep aside the Kashmir issue and negotiate and deliberate on water which was the most important impending problem". The private sector, he reiterated, should lobby

and act as a pressure group to invoke greater participation from the government.

Mr Asdar informed that, as one of the largest exporters of denim jeans and cotton sheets, Pakistan was exporting water at a very low price. He informed that, while a pair of jeans required 2900 gallons to be produced, one cotton sheet used up 2700-2800 gallons of water during production. He went on to emphasize that, we should be careful in negotiating terms in public- private partnership. He also appreciated the Sindh government for being the first government in Pakistan to have passed a public-private partnership law.

Panel Discussion

Mr Siddiq Sheikh, Advisor on Social Sector at Federation of Pakistan Chambers of Commerce and Industry (FPCCI), gave a brief introduction of FPCCI. He said that it was an apex institution with 52 chambers federating across Pakistan and had 110 associations. It had several committees and that the Disaster Management Committee was one of them. He elaborated that, when this Committee had been constituted, the Federation had approached Hisaar Foundation to be a part of it. Hisaar Foundation had been invited to join this Committee not only because of its contributions in disaster management and relief work, but more importantly for its intellectual contribution and think tank work in the water sector.

He went on to elaborate that, as representatives of the private sector it was our duty to rally together and seek solutions on how best we could use our resources, and create awareness on the importance of using water with austerity. Mr. Sheikh said that, what was even more alarming was the fact that the 94% of water that was allocated for agriculture sector only irrigated 15-16m hectares of



agricultural land in Pakistan. It was time for the private sector to play its role and impress upon the government to address the problems confronting the water sector. It was important to educate the farmers on the need for making the right choice of crop for cultivation and the agricultural sector should be encouraged to choose crops that yield 'more crop per drop'.



Mr Akbar Leghari

Mr Akbar Leghari, Special Secretary, Local Government, began by saying that, the drinking water problems had destroyed the peace and tranquility of the people of Sindh. He was a witness to the ground realities of the water situation in Sindh and that water scarcity issues in Sindh were due to several reasons, which included the share of water allocated for

Sindh, poor and mismanaged infrastructure and water theft by head users, leaving little or no water for tail end user.

He also elaborated that, the wrong design and flow back of Left Bank Outfall Drainage and Right Bank Outfall Drainage systems had resulted in the seawater coming back into the agricultural lands, thereby increasing waterlogging and salinity. These issues combined with saline drain overflows during monsoon had resulted in water contamination and increased the plight of the people in Sindh. As a proponent of public-private partnership, he felt that this kind of partnership was an urgent need not only for drinking water but also essential for irrigation water management.

The participants were informed that, while the government had taken measures to redress the plight of the people and provided hand pumps for provision of clean drinking water, there was urgent need for installation of Reverse Osmosis (RO) plants. He urged the private sector to come forward and through public-private participation install RO plants in areas across Sindh.

Mr Roland D'Souza, Executive Member, Shehri, said he had been involved with an environmental organization Shehri which had been working on social issues affecting the urban population. While dealing with problems, he

said, we only talk about proximate problems and not the ultimate cause which is at the core of the problem. The root cause of water related issues, he said, was population growth. Pakistan's population since 1947 had increased by 600% and it was also estimated that by 2030, half the country would be urbanized, creating greater stress on the water resource. Thus, to address the issues of water, it was very important that we first control population growth. Population surge, he continued, was overwhelming our resource and the role of the public-private sector in relaying this message across the board was very important. He suggested that, through public-private partnership, the private sector should try and convince the government to play its role in creating awareness amongst the citizens and that the education sector should also be made to realize the instrumental role that it can play in advocacy and awareness raising on these issues.

Mr Abdur Rahim Moosvi, President, Lyari Community Development Project (LCDP), said that, he had been working with the marginalized people of Lyari for many years and trying to resolve their educational and economic problems. While working on these issues, LCDP realized that water, its availability and quality was an important problem that confronted the community. It was then that LCDP started to actively make efforts to engage in activities related to water and through collaboration with Hisaar Foundation established an Area Water Partnership (AWP) and a Women and Water Network in Lyari. Through the partnership it conducted several awareness and advocacy raising programmes on water issues, importance of water conservation and better management amongst the community especially women and educated the citizens on their role and responsibility towards the resource.

The association with Hisaar Foundation played an instrumental role in making them realize that water was not only their localized issue but was also a major concern for the rich and affluent as well. As an advocate of public-private partnership and an active member of such a platform, Mr Moosvi felt that, it was important that such partnerships be effectively used as a means of teaching citizens the important role they have to play in the conservation and preservation of this resource by changing their behaviour towards water consumption. It was also essential that the communities be made to realize that if the government had abandoned the schemes that had been initiated for their welfare, the community itself should work along with



the private sector, take ownership of these schemes on their own and work for their revival since they were for their benefit. He said that, this kind of partnership could also act as a pressure group to lobby with the government agencies on issues of corruption, mismanagement, lack of repair of infrastructure and the sheer lack of will and interest on their part to resolve water issues of the Province and in particular, that of Karachi.

Mr Asdar added that, while the involvement of the community and private sector was very important, the government should not be allowed to take a back seat and relinquish its responsibility. The private sector, he said, could only show the way but the real onus was still with the government to provide this resource and improve the lot of the people. If 20% of the government's water funds were handed over to the private sector in the spirit of partnership, the problems related to water faced by the citizens could be resolved.

Dr Noman Ahmed, Professor and Chairman, Department of Architecture and Planning, NED University, began by saying that the projections on Pakistan's population were based on the last census that had been conducted many years ago and thus in the absence of a more recent census, it was difficult to say what the actual population of the country was. While urbanization was a great opportunity for the economic growth of countries, it was a big problem for Pakistan. Migration on a large scale to urban areas was creating problems of mammoth proportions, because, while the population influx to cities was increasing, no infrastructural development was being done as far as the resources were concerned to adjust the population growth. He said that, with estimates that half of Pakistan would be urbanized by 2030, it was imperative that the government revisit its definition of urbanization and make efforts for the development of a regulatory framework that would make urbanization beneficial for the citizens and not turn them into victims. Capacity building could not be done without a regulatory framework and since both the marginalized and the affluent were affected by the basic lack of water resources, the public - private partnership could play an important part in creating ownership of the resource across the board.

Mr Samar Ali Khan, MPA, Sindh Assembly and member PTI, said that, while public-private partnership was there, the only side that was playing its role was the private sector. The government was ineffective in working for the benefit



*Mr Zohair Ashir, Chairperson Hisaar Foundation and
Mr Samar Ali Khan, Member Sindh Assembly*

of the people not because of a lack of funds, but more so because of lack of political will. The involvement of the private sector and the NGO culture, he added, had made the government more lethargic and had further absolved itself from its responsibilities.

He elaborated that, water was indeed the number one problem of our country but no serious thought was being given to it by the government. Though plans of action were being made in all resource sectors by the government, the people's participation at the policy making level and implementation level was next to nil.

Mr Khan said that, the entire water sector was in neglect with no regulated or recorded system of distribution and no plan for infrastructural rehabilitation of the pipelines. The mismanagement of funds and lack of initiative on the part of the government or agencies responsible for the resource to resolve the issues had further compounded the situation.

Questions and Answers

The panel discussion was followed by a lively and interactive question and answer session.

In response to a question as to what the elected representatives in parliament could do to encourage the government to initiate a movement in the right direction, Mr Khan said that, after attending parliamentary sessions, he felt that the government did not have the intention or the will to implement the laws. However, he went on to elaborate, that he and his colleagues were actively engaged in projects and programmes to resolve the water and sanitation problems, at the domestic and schools level in his constituency in Karachi.



When asked what the government was doing to promote drip irrigation the agriculture sector, Mr Lehgari replied that, the government was not doing much for the promotion of this technology. While drip irrigation should be promoted through an organized effort, the Government of Sindh, he added, did not have the required funds to promote or introduce the huge and costly drip irrigation projects.

Ms Farhana Iqbal, Chair of Committee for CMIS, FPCCI, said that, if possible we should use this session to prioritize what we can do and use the public- private partnership to act as a pressure group to take up these issues with the government. Mr Asdar suggested that, Hisaar Foundation should take the lead in this.

Another participant said that he had no question for the panelists, but would like to share his views on the water situation. He said that, availability of water was the constitutional right of the citizens and that it was the government’s responsibility to provide this resource. He requested all the stakeholders to work together to ensure the provision of this right. He also stated that, while privatization of the water sector was one option, solutions other than privatization should also be looked into.

Conclusions

At the end of the session it was concluded that:

- ◆ There was an immediate need to bring efficiency in the agricultural infrastructure
- ◆ The Indus Water Treaty needs be re-aligned with water sharing and cooperation
- ◆ The Kashmir issue needs be put aside and negotiation on water issues be initiated between Pakistan and India because it is the most important issue
- ◆ Crops that yield “ more crop per drop” should be promoted in the agricultural sector
- ◆ Cooperation of the industry should be sought to create awareness on water issues
- ◆ The government should provide financial incentive to the private sector to install RO plants in Sindh
- ◆ Awareness on water resources and the need for cooperation should be done through the involvement of academia



Session panelists sharing their views with the audience



3.3 Beyond Boundaries: Building Peace through Cooperation (Session 2B – Papers and Consultation)

Chair: Mr Mohammad Sardar Tariq, Executive Director, Pakistan Water Partnership (PWP)

Co-Chair: Dr Nilufa Islam, Ministry of Water Resources, Bangladesh

Facilitator: Ms Simi Kamal, Chair Academic Committee, Hisaar Foundation

Speakers: Mr A N G Abbasi, Water Specialist and Former Minister
Ms Fazilda Nabeel, Senior Research Fellow, Mahub ul Haq Human Development Centre (MHHDC), LUMS
Dr M S Shafiq, Private Sector Water Systems and Engineer

The session 'Beyond Boundaries: Building Peace through Cooperation' focused on understanding and agreeing to the need for working together and building consensus for transboundary basin management (on Indus Basin) and sharing waters within Pakistan (consider 'water sharing' on a number of criteria rather than water distribution alone). The session was sponsored by Hisaar Foundation.

Papers and Presentations

Mr Sardar Mohammad Tariq, Former Regional Chair, Global Water Partnership – South Asia (GWP-SAS) and one of Pakistan's leading water engineers, made his presentation on 'Water Management Issues Created by Indus Water Treaty (IWT) - Pakistan Perspective'. He traced the history of water disputes which emerged immediately after the partition of the sub-continent into two independent and sovereign states of India and Pakistan. He highlighted the firm views of India and Pakistan on riparian water rights prior to signing of the Treaty in 1960 and the conflicting principles put forward on the table by both sides. The Indians based their arguments on "equitable utilization" and pleaded that Pakistan got 75% of the water which was violation of the principles of "equitable utilization", while from Pakistan's side, the fact that it got only 75% of the water against 90% of the irrigated land was considered as violation of the principle of "appreciable harm". He further mentioned the strong reaction of Indian Lok Sabha against the Treaty. Both countries had difficult choices, as both depended upon position based arguments.

He informed that, the negotiations between India and Pakistan lasted for about nine years. The first proposal by David Lilienthal, Former Chairman of the Tennessee Valley Authority, suggesting formation of a single integrated basin authority to operate, maintain and distribute the Indus Waters between India and Pakistan, was straight away rejected by both India and Pakistan. David Lilienthal's proposal, he added, was visionary, envisaging a broader cooperation and resultant benefits.

He talked about the various other proposals put forward by both India and Pakistan, based on division of rivers and their water and with each side insisting on securing larger volume of water from the Indus River System. The final proposal put forward by the World Bank, as a desperate effort and accepted by both India and Pakistan, was a Partition Treaty devoid of larger spatial development



Dr Nilufa Islam and Mr Sardar M Tariq, Session Chair(s)



potentials. The Treaty, finally signed by both the countries in September 1960 was not the best for either country and had numerous management challenges. He focused on the issues and challenges created for Pakistan as a result of this Treaty and also described the strong public perception created within Pakistan.

At the end, he suggested that, both India and Pakistan should use water as a catalyst for development and not a source of conflict. Instead of invoking dispute resolution clauses, both countries should explore the possibility of focusing on other relevant articles of the Treaty, which envisage cooperation rather than conflict, as a way forward for mutual benefit of both the countries.



Mr. A N G Abbasi

Mr A N G Abbasi, Former Minister and Former Chairman, Technical Committee on Water Resources and an eminent water and irrigation expert, in his remarks said that, Indus Basin was not confined to Pakistan alone as it was shared among various countries. He further said that, the IWT had been tested for last 50 years and it was like eating bitter fruit, because there was no other

option. He described that giving away three rivers was a big catastrophe for Pakistan. He expressed that, surplus period was very small, whereas shortage period was quite high. Continuing to speak on the IWT, he called upon World Bank, to apologize and revisit the Treaty and document the damage done to Pakistan, by World Bank supporting and implementing the Treaty.

He also touched upon distribution of water within Pakistan and added that the Kabul River was also a major source for Indus Basin but no water treaty existed with Afghanistan. Afghanistan was planning many more projects, which would have serious implications on Indus water.

Speaking on the Indus Water Accord 1991, Mr Abbasi said that, though done hurriedly, it was a legally valid document. He stressed that, now nobody had the right to change or amend existing allocation given in the Accord and that the most important part of the accord was paragraph two on seasonal distribution. He said that, IRSA

which was responsible for implementing the Accord had changed the allocation formula three times, even though it had no mandate to amend it. Water shortages and surpluses must be shared by all provinces and violations in the IWT were less in comparison to violations in the Indus Water Accord.

Ms Fazilda Nabeel, Senior Research Fellow, Mahbub-ul-Haq Human Development Centre (MHHDC), LUMS, Lahore, in her paper on 'Transboundary Water Resource Management – Indus Basin and Beyond Transboundary', explained that, water management had profound impacts on human development and the way one country used water,



Ms Fazilda Nabeel

transmitted effects to other countries. While quoting examples, she mentioned that, retention of water upstream in India for energy generation restricted flows downstream for Pakistani farmers. Apart from affecting the quantity of water that downstream countries received, upstream countries could also affect its quality. Industrial and human pollution was transmitted through rivers to other countries, as seen in the case of the Ganges River that flows from India to Bangladesh. The timing of water flows was another transboundary issue for human development since secure livelihoods depended on a predictable supply of water. The use of water in one country could affect the timing of delivery for downstream users, even if the volume of water was unchanged.

Ms Nabeel highlighted that, most countries in South Asia were at the crossroads of a water resources issue and management of shared river systems needed to go beyond the sphere of national sovereignty as well as bilateralism. Addressing the water issue therefore, required a regional/multilateral perspective.

Dr M S Shafiq, Engineer and Private Sector Water Systems, made his presentation titled 'The Indus Water Treaty: Building Peace between India and Pakistan through Water Cooperation'. He presented both the Indian and



Pakistani perception on the issue. The Indian perception was that Pakistan used “water issue”, as a tool to keep anti-India propaganda going and that India had never violated the IWT, even during wars. He was of the view that, building of run of river dams was allowed as per the Treaty but regretted that building of dams was useless, if silt-removal mechanisms were not provided.

Highlighting the Pakistani perception, he said that, IWT was the most unfair deal in view of the prevailing International Water Laws with India stealing water from its three western rivers. Neutral expert’s verdict on the issue of Baglihar Dam was not as per the IWT, Haryana and Rajasthan were not part of the Indus Basin and India intentionally informed late about new projects when most of the things on ground became a fait accompli (Kishanganga Hydro-power Project). He went on to say that, the terms “run-of-the-river” and limited storage imply, natural flow rates and not total quantity for a period. India was developing capacity to flood Pakistan when water demand was minimum and create drought conditions when demand was very high, etc.

Ground realities need to be taken into account, for instance in the context of countries, friends can be changed but not neighbours. While the IWT was not as per the established international water rights/ laws, the partition in 1947 was also in reality an act of partitioning of the Indus Basin. He added that, the IWT was perceived to be against the International Water Laws in 1960, but after 43 years the same Treaty, if implemented in its true letter and spirit seemed to be a win-win deal. What was generally projected to become a source for a mutually self-destructive water war, in reality had real potential to bring peace and prosperity in the region, through cooperation in the water and hydro-power sectors.

He called for change of fixed mindsets on water across boundaries, bridging the gulf of trust deficit by introducing “trust and verifiable” Confidence Building Measures (CBMs) across boundaries and collaboration for ensuring effective water governance and management of watersheds.

His specific recommendations were as follows:

- ◆ Water should be considered as a source of cooperation and not conflict
- ◆ India and Pakistan should develop a joint plan for making the drainage effluent (drains entering from India to Pakistan) safe before discharging into River Ravi (and Sutlej)



Mr M.S. Shafiq

- ◆ India and Pakistan should essentially resort to rapid watershed management measures on both sides of the international border/LOC to prevent further land and river morphology degradation
- ◆ Studies should be conducted to evaluate the impact of IWT on environment, agriculture, etc under evolving international transboundary water and environmental laws.

Conclusions

The Co-Chair, Dr Nilufa Islam, Ministry of Water Resources Bangladesh, in her closing remarks said that, water was life. Referring to Bangladesh, she said that, it had 57 rivers and so far only one treaty with India for sharing water of Ganges existed. Peace could be ensured through cooperation. Since Bangladesh was suffering from floods, droughts and climate change, she stressed upon researchers, scientists and community to work together to resolve the water issues in the region. She suggested the urgent need for identification of common challenges and issues, devising of a joint management plan and resource mapping.



Participants at the Session



Display and Distribution Material

- ◆ Executive Summary of Report 'Developing an Integrated River Basin Management (IRBM) for Indus River', World Wide Fund for Nature – Pakistan (WWF-P), 2012
- ◆ 'Suggestions on Water Policy', based on the study 'Developing an Integrated River Basin Management (IRBM) for Indus River-Challenges and Opportunities', WWF 2012
- ◆ Paper on 'Water Management Issues Created by IWT - Pakistan Perspective', Mr Sardar Muhammad Tariq
- ◆ Presentation and Chapter on 'Transboundary Water Resource Management in South Asia', Annual Report 2013, Mahbub-ul-Haq Human Development Centre (MHHDC), LUMS, Lahore
- ◆ Presentation on 'The Indus Water Treaty: Building Peace between India and Pakistan through Water Cooperation', Dr M S Shafiq.



Participants at the Session



3.4 Water Cooperation for Tangible Economic Benefits (Session 2C – Papers and Consultation)

- Chair:** Mr Khalid Mohtadullah, Senior Adviser, UNDP, IWMI & GWP and Council Member, Hisaar Foundation
- Co-Chair:** Dr Pervaiz Amir, Director, Pakistan Water Partnership (PWP) and Council Member, Hisaar Foundation
- Facilitator:** Dr Daanish Mustafa, Assistant Professor, Kings College London
- Speakers:** Dr Pervaiz Amir, Director PWP and Council Member of Hisaar Foundation
Dr Zaigham Habib, Water Sector Specialist
Mr Ali Junejo, Manager, Community Physical Infrastructure, Thardeep Rural Development Programme (TRDP)

Sharing benefits of water was the mantra of the session. What this session aimed to do was to develop an understanding of water cooperation and water sharing in a light different than sharing the physical resource. The speakers pointed out that sharing benefits would be much more beneficial for all stakeholders. The session was sponsored by PPAF and Hisaar Foundation.

Papers and Presentations



Dr Pervaiz Amir, Session Co-Chair

Dr Pervaiz Amir, Director, PWP and Council Member, Hisaar Foundation, said that, his paper titled 'Studies and Policies for Benefits Sharing on Hydropower Projects Among Stakeholders' was based on a study by AAB (Pvt) Ltd. While this concept had been used in the oil and gas industry, its use in Hydropower projects in Pakistan was highlighted. Benefits sharing could play a key role in creating a win-win situation

between all stakeholders, upstream and downstream, even those that have traditionally been ignored in such projects. Benefits sharing with stakeholders was one way to reduce project resistance and gain acceptability and promote cooperation.

This concept was in use in the Scandinavian countries, India, Brazil and China. The scope of the study, he elaborated, revolved around reviewing existing legislations, policies, international legislations and guidelines, domestic practices, international practices, conducting of stakeholder analysis, outline policy guidelines for monetary and non-monetary benefits sharing mechanism and provided an

institutional and legislative framework for implementing benefits sharing policies.

The most important factors, he added, in developing a framework for benefits sharing were the stakeholders. Stakeholder analysis revealed that the federal and provincial governments were conducive to this concept, provided more was learnt about its long-term impacts on revenue generation and private stakeholders showed CSR initiatives. Using the concept of benefits sharing could even clear the way for many blacklisted projects. Private sector, the affected and upstream communities were also on board with the implementation of this concept. The meaning of benefits sharing itself needed to be clarified since there was a common myth among the government and stakeholders that it only entailed compensations and royalty. Royalty, however, was the least effective benefits sharing mechanism for the affected. It was recommended that for hydropower projects, this mechanism be revisited and transparency and clear guidelines on targeted development expenditures on those populations and areas be developed, where direct/indirect impacts were most visible. Likewise, continued support for the resettled populations was ensured as a part of long-term benefits sharing strategy.

To create a benefits sharing mechanism, he elaborated, we needed to create a Local Endowment/Development Fund for the impact areas of ROR projects and a Beneficiary Endowment Fund (direct, upstream and downstream affectees) for large storage projects. This fund should coordinate on all development efforts and be established on lines of a Development Support Programme. It was also important to learn from current best practices in this area, through similar projects in China, Thailand and Vietnam. The first blocking point to hydropower and water development in the country, he continued, was Article 161, which stated that "the net profits earned by the Federal Government, or any undertaking established or administered



by the Federal Government from the bulk generation of power at a hydro-electric station shall be paid to the Province in which the hydro-electric station is situated". This needed to be revisited. The study, he added, had mapped out the benefits and stakeholder of multipurpose dams.

There were successful mechanisms identified for sharing benefits with impacted stakeholders where cash payments (in form of vouchers, certificates, bonds, checks) had been used. The general benefits sharing mechanism, monetary or non-monetary, included revenue sharing, development funds, equity sharing, taxes paid to regional local authorities and preferential rates for electricity or water charges (abiana).

The benefits, categorized into monetary and non-monetary benefits, included reduction in the power mix cost, power generation, storage for water re-regulation, irrigation and agriculture, flood control, water for drinking and industrial use, mini tailing, debris control, recreation and navigation.

Other conclusions of the study were:

- ◆ Stakeholders consider incorporation of their viewpoint in benefits sharing absolutely important
- ◆ In Run of River projects, affectees were usually within the impact areas and therefore these areas should be targeted to implement benefit sharing concepts
- ◆ Different stakeholders have varying levels of influence on decision making in projects. These needed to be considered

On the basis of the findings, certain recommendations were put forward to institutionalize benefits sharing in Pakistan, at policy and project level. Some of these were:

- ◆ Benefits from hydropower projects should be comprehensive in nature
- ◆ Transboundary benefit sharing and cooperation mechanisms should be analyzed and solutions to conflicts be proposed
- ◆ For large dam projects, the World Bank guidelines for direct and indirect beneficiaries, upstream and downstream, should be taken into account
- ◆ All stakeholders, including genuine affectees, should be involved in valuation and identifying sharing mechanisms.
- ◆ Benefits sharing mechanisms differ for public and private projects
- ◆ Benefits sharing should first be introduced on pilot basis on a few projects (RoR and Dam) and based

on this experience the concept should be extended on a larger scale

- ◆ Pakistan should learn from the benefit sharing experiences of China, Vietnam and Thailand
- ◆ Article 161 needed to be revamped to ensure that benefits are shared with all provinces impacted by large dams
- ◆ The Benefits Sharing Council should be an independent and autonomous body
- ◆ Benefits sharing concept and mechanisms should be identified in project appraisal documents, by stating how the aggregate benefits would be shared in the local context
- ◆ Donors and investors were imperative in encouraging the use of benefit sharing
- ◆ Irrigation or abiana charges were dismally low and had little connection with the actual value or cost of water. To expect any benefits sharing in monetary terms, water rates needed to be brought in line with the true cost of water

Dr Zaigham Habib, Water Specialist, presented a paper on, 'Economic Benefits of Water Cooperation in Indus Basin', which stated that the Indus Basin was a highly shared (shared by 4 countries) and intensively used water source. Three aspects of cooperation have been contested among its beneficiaries; transboundary approach, provincial water division approach and grassroots approach. The Indus Water Treaty was an example of transboundary cooperation. Unfortunately, partition into India and Pakistan in 1947, divided the Basin and management has been separate since. Post 1947, a period of unease over water resulted in a mediated settlement with the IWT. It has held up through one war and years of tension and stands as one example of an effective, if not an ideal Treaty. While India faces physical water scarcity, Pakistan faces greater economic water scarcity. The way to enhance water based economic development was to enhance the economic value of water by increasing crop yields, address food security and addressing climate change threats and vulnerabilities and protection of water bodies. Water



Mr Khalid Mohtadullah, Session Chair with Speakers, Dr Pervaiz Amir and Dr Zaigham Habib (R to L)



cooperation was important for various reasons, like increase in farm to national level productivity, long term security of water resources, protection of ecosystems and transboundary water resource management.

At the National level, there was a need to synergize provincial and national water frameworks. While on a transboundary cooperation framework the following issues arose:

- ◆ The need to minimize hydrological and operational losses
- ◆ Finding the political will and mechanism to share benefits
- ◆ Establishing entry points in the areas of mutual interest like catchment management and flood control
- ◆ Addressing new challenges: climate change, groundwater aquifer, environmental flows

From here on the paper turned towards benefits sharing as a key transboundary cooperation approach. Citing successful examples from Mekong, Nile Basin and South Africa, the key lessons from these experiences were:

- ◆ No full water or benefits sharing transboundary mechanism was in place
- ◆ Benefits and cost sharing was as competitive as water sharing
- ◆ Generally, benefits sharing addressed new development
- ◆ Equitable distribution remained a challenge
- ◆ Ownership of water was still a key component
- ◆ Challenges were also related to design of benefit sharing mechanisms, stakeholder involvement and transparency

For Pakistan, the scope of joint collaboration in the Indus Basin encompassed collaboration and capacity building on hydrological assessment, climate change trends, cropping systems and water and climate footprints. She concluded by identifying the need for Pakistan to sign international water treaties.

The next presentation was an interesting walkthrough of the work of Thardeep Rural Development Programme (TRDP) in rural Sindh, on improving drinking water supply. Presented by Mr Ali Mohammad Junejo, Manager, Physical Infrastructure, this was an interesting insight into the water and women issues in the 4 districts that TRDP operated in and how the organization had contributed to providing drinking water to communities, through community participation. 20% of each project's cost was borne by the beneficiary community. Some of the key projects were, rain water harvesting models, technological projects like solar

pumps, safe drinking water and ground water projects.

Questions and Answers

An interactive question and answer session followed. In response to the question of the stance of legislators on Article 161, the Co-Chair Dr Pervaiz Amir said that, the whole issue was a sensitive one and there was resistance from provinces but if the benefits were monetized, they would be more receptive to the idea of sharing those benefits. The issue of conservation of water in Pakistan was also raised and the need to have water security was stressed upon. What we needed was to have a clear position on a treaty under climate change.

The Indus Water Treaty (IWT) was discussed and debated upon. An important question was raised by a senior journalist as to why we still hadn't done our homework on revisiting and renegotiating the IWT. The point of view of Dr Habib was that, despite the fact that the IWT was one of the simplest treaties in the world, there was a problem with its interpretation. It didn't protect livelihoods and the ecosystems, rather it just divided the river across boundaries. So the need of the hour was to go for new treaties on ground water aquifers, climate change and catchment management.

Conclusions

It was concluded that though not perfect, the IWT had been able to avoid conflict between the signatories. What we really needed was to conduct more studies in order to be better prepared on this front and then revisit the Treaty. Cooperation was imperative for effective water resource planning and implementation, but this needed to be propagated through effective political leadership, political will and involvement of other entities, like think tanks. New treaties were required on ground water, climate change and catchments.

Display and Distribution Material

- ◆ Executive Summary of the Report on 'Studies and Policies for Benefits Sharing on Hydropower Projects Among Stakeholders', AAB (Pvt) Ltd Islamabad, 2011
- ◆ Presentation on 'Benefits Sharing on Hydropower Projects Among Stakeholders', Dr Pervaiz Amir
- ◆ Presentation on 'Economic Benefits of Water Cooperation in Indus Basin', Dr Zaigham Habib
- ◆ Presentation on the work of 'Thardeep Rural Development Programme (TRDP) in rural Sindh, Mr Ali Mohammad Junejo



3.5 Water and Health: Challenges and Experiences (Session 2D – Papers and Consultation)

Chair: Dr Tanvir Ahmed Sheikh, Chief Executive, Health and Nutrition Development Society (HANDS)

Co-Chair: Dr Sabitiri Kumari Tripathi, Associate Professor, Nepal Engineering College, Nepal

Facilitator: Dr Sono Khangharani, CEO, Hisaar Foundation

Speakers: Dr Zafar Fatmi, Head, Environmental Health Sciences, Aga Khan University (AKU)
Ms Rubina Jafferey, General Manager, Monitoring and Evaluation, HANDS
Mr Ghulam Nabi, Programme Manager, Education Literacy Program, Government of Sindh
Ms Bilquis Rehman, General Manager, Information, Communication and Advocacy, HANDS

The session on 'Water and Health: Challenges and Experiences' built on from the vibrant and defining opening session of the Conference, to explore the linkages between the provision of clean water and a healthy society. It also explored advancing concepts of hygiene at all aspects of the society.

Dr Sono Khangharani, CEO, Hisaar Foundation, thanked HANDS, the session sponsors. He said since 50% of diseases in Pakistan were waterborne, the linkages between health and water could not be ignored, especially the linkages to illnesses such as, malaria and diarrhea. Water scarcity had led to diseases of different varieties, such as skin complaints and kidney failure.

Papers and Presentations

Dr Zafar Fatmi, Head, Environmental Health Sciences, Aga Khan University, in his presentation on 'Water and Health: Role of Academia for Research and Intervention in Pakistan', focused on the often-overlooked role of academia in the water and health scenario and why it should be part of the debate.

His presentation first looked at statistics, nationally and internationally:

- ◆ 1.8m deaths globally were due to water-related diseases
- ◆ Though 85% water was safe in South-East Asia, it was still contaminated by fecal matter

Commenting on the situation in Pakistan, Dr Fatmi said that, the situation must not be looked at in isolation.

By concentrating on the impending water crisis, water-related diseases were being overlooked. 20% - 40% hospital beds in Pakistan were occupied by patients suffering from water related diseases and ailments, with diarrhea emerging as a major killer of under- 5's. Arsenic contamination was causing a multitude of illnesses, including heart and lung disease. Wells and underwater sources were also heavily infected and in some districts 25% of the water supply was contaminated with arsenic. Though there had been decline over the past decade, the numbers were still high.

Dr Fatmi suggested a three-pronged participation solution to the country's water dilemma – Service Provision, Legislation and Education and elaborated that AKU was taking a pro-active role through conferences and courses to highlight the issues at hand.

Ms Rubina Jafferey, General Manager, Monitoring and Evaluation, HANDS, focused on the WASH initiative her organization and WaterAid had launched in Gadap, one of the world's biggest urban slums with low sanitation facilities. The initiative aimed at providing students with sustainable access to clean water and sanitation. A process of creating awareness amongst the 50,000 target students was carried out. The initiative also focused on the water stress issue caused because of urbanization and other factors such as, environmental degradation which were also contributing to the crisis.

In conclusion, she added, with access to clean water still politically and socially a neglected agenda, the Hands/Water Aid model reflected a sustainable model. Additionally, an important part of the project, already underway, was a benchmark baseline study, to create a Karachi-specific profile.



Ms Bilquis Rehman, General Manager, Information, Communication and Advocacy, HANDS, also focused her presentation on the prevalent poor hygiene culture and lack of awareness amongst communities. The “Gadap Town Initiative”, she said, was expected to help 20,000 households meet their inadequate water supply, filtration needs and also raise awareness amongst the community. As declared by the UN in 2002, water was a right, for drinking and for other uses and thus the project was engaging stakeholders to make water more accessible to those who needed it most.

In conclusion, Ms Rehman said that, the Gadap WASH initiative’s main aim was to put in place a sustainable strategy, a micro/macro/meso approach, so to speak, to help raise awareness through initiatives such as community mobilization and school management committees, and through posters and leaflet campaigns.

Mr Ghulam Nabi, Programme Manager, Education Literacy Program of Government of Sindh, represented the Sindh Education Reform Programme, at the session. He spoke on the Government of Sindh’s ‘Sindh Education Reform Plan (SERP)’, developed with support from the World Bank. As water, health and education were inter-related, he continued, SERP was holistic in its evolution and aimed at providing a healthy environment for children to study in, with an across the board improvement in schools – new toilets, drinking water, electricity. The project would also address the arsenic poisoning issue and SERP II would tackle waste contamination, construction and lack of education, flooding etc.

In conclusion, Dr Nabi said that, new policies had to be developed which would involve a change in curriculum, better-training and building more awareness in teachers and a better mapping and design of schools.

Questions and Answers

The question and answer session which followed the presentations focused on the political will to push such initiatives forward and whether it was too late to fix the issues outlined. To a question about a growing population taking centre stage for policy makers, Dr Fatmi replied that, it was high time that water crisis was linked to these factors and that is why the change had to come at the grass-root level. The health sector, had to be made more robust and remedial steps, such as chlorification, had to be made an integral part of any water strategy. Replying to a question about the Government of Sindh’s commitment to improve the water situation in the province,

Mr Ghulam Nabi said, in spite of the logistical issues posed by devolution, the political will was there. With full support from this government and a committed donor, SERP was the way forward since it built capacity at the community level.

Conclusions

The Chair, Dr Tanvir Sheikh, Chief Executive, Health and Nutrition Development Society (HANDS), said the way forward must be through better planning, training and most importantly, education at all levels – from parents to teachers to children! Chlorification processes must be stepped up to inhibit the affects from arsenic and lead poisoning. The HANDS baseline survey was a good starting point, he continued, with the end line survey determining whether these initiatives had been a success or not.

The Sindh government could play a major role in increasing awareness and he hoped that the department’s next presentation would show the success of its initiatives. However, in his closing remarks Dr. Sheikh emphasized that, all sectors of society needed to play their part in raising awareness on the critical situation facing Pakistan with regard to its dwindling water resources, pollution of existing supplies and the issues of hygiene.

Display and Distribution Material

- ◆ Presentation on ‘Water and Health: Role of Academia for Research and Intervention in Pakistan’, Dr Zafar Fatmi
- ◆ Presentation on ‘Sustainable Access to Water and Sanitation Services: A study of Government and Non-Government Schools in Gadap Town Karachi, Sindh, Pakistan’, Ms Rubina Jafferey
- ◆ Poster presentation on ‘WASH-Gadap Initiative’ Ms Bilquis Rehman
- ◆ Presentation on ‘Sindh Education Reform Programme’, Mr Ghulam Nabi



Dr Tanvir A Sheikh, Session Chair with Panelists



3.6 Exhibition, Book Launch and Speaker's Corner (Session 3)

Moderator: Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation

Guest: Ms Nadira Panjwani, Governor, Hisaar Foundation

The Exhibition, book launch and speakers corner session was sponsored by the Pakistan Poverty Alleviation Fund (PPAF) and Hisaar Foundation. A total of eight stalls and four books highlighting all aspects of the water crisis facing Pakistan were on display.

Exhibition Opening



Ms Nadira Panjwani

Ms Nadira Panjwani, Governor, Hisaar Foundation and Educationalist/Academician inaugurated the exhibition by the cutting of the ribbon and declaring the session open. The displays attracted great attention and the delegates showed great interest in the items on display.

There were eight exhibitors who participated in the Conference exhibition:

- ◆ Hisaar Foundation
- ◆ Pakistan Poverty Alleviation Fund (PPAF)
- ◆ Health and Nutrition Development Society (HANDS)
- ◆ Thardeep Rural Development Programme (TRDP)
- ◆ Micro Drip (Pvt) Limited
- ◆ Sukaar Foundation
- ◆ Pure Water Technology
- ◆ Water and Sanitation Programme (WSP) World Bank
- ◆ Unilever-Pakistan

This session provided great opportunity for the participants to see the exhibition of different technologies related to water. This session offered innovative ideas and research materials and provided a platform to the companies and NGOs to showcase their products and services in the water sector.

Book Launch

Four books were introduced on the water sector. The session was moderated by Ms Simi Kamal, Chair, Academic Committee and the authors spoke about their books. The following books were launched:

- ◆ Report on Human Development in South Asia-Water for Human Development 2013, published by Mahbub ul Haq Human Development Centre (MHHDC), LUMS
- ◆ Water Resource Management In a Vulnerable World – The Hydro Hazardscape of Climate Change, by Dr Daanish Mustafa
- ◆ Women Water Professionals – Inspiring Stories from South Asia, by SaciWATERS
- ◆ Sindh at the Crossroads of Disasters: Relief, Recovery, Rehabilitation and Preparedness, compiled and edited by Mr Nasir Ali Panhwar

Water Resource Management in a Vulnerable World, The Hydro-Hazardscapes of Climate Change, by Dr Daanish Mustafa. A Reader in Human Geography at King's College, London. Dr Mustafa was previously a Visiting Assistant Professor of Geography at George Mason University and Assistant Professor of Geography at the University of South Florida, St Petersburg. He has worked in Pakistan for the non-profit sector on donor-funded social development and environmental preservation projects. His research interests include critical water resources geography, environmental management and approaches to terrorism. Dr Mustafa said that climate change was beginning to manifest itself in many ways, with changing weather patterns affecting traditional water resources and in Pakistan's case,



HANDS Stall



Women Showcased in the Saci Waters Book

the glaciers were melting at an alarming rate, and would soon start affecting the whole country's whole eco-pattern.

Sindh at the Crossroads of Disasters: Relief, Recovery, Rehabilitation and Preparedness:an Anthology of 50 published and unpublished articles on the 2011 Flood", compiled and edited by Mr Nasir Ali Panhwar. The book focuses on the lack of planning, which led to the disaster spiraling out of control, the lessons learnt and how such disasters can be prevented in the future. He is a prolific writer and has authored a range of articles on various developmental and environmental issues. Mr Panhwar has served as Executive Editor of monthly Paras Sindhi magazine and was also a member of the editorial team of quarterly Jareeda, an IUCN publication on environment and development. Mr Panhwar has written extensively on social, developmental and environmental issues and has compiled two books in his 15 years career.

Women Water Professional: Inspiring stories from South Asia, published in India by South Asia Consortium for Interdisciplinary Water Resources Studies (SaciWATERS). The book was written on 30 South Asian Women Water professionals - about half the women work predominantly at the grassroots, among communities and with NGOs, as activists and journalists. The other half are administrators, scientists, academics and action-researchers. Many of the women, however, have varied interests and concerns, cutting across different areas. Dr. Jasveen Jairath, Founding



PPAF stall

Convener, of a citizen's platform "Save Our Urban Lakes" (SOUL), in Hyderabad, India, was invited to introduce "Women Water Professionals – Inspiring Stories from South Asia" by Sumi Krishna and Arpita De.

The stories in the book highlight the work of women water professionals in South Asia through gender sensitive water resources management. The highlight of the launch was that eight of the women featured in this book were present at the Conference. The professionals were then honoured in a group photograph.

Human Development in South Asia 2013: Water for Human Development published by Mahbub ul Haq Human Development Centre (MHHDC), Lahore, was launched by Ms Fazilda Nabeel. The MHHDC's research work is presented annually through a Report titled, 'Human Development in South Asia'. The themes of these reports focus on issues crucial to the South Asian region, ranging from specific issues like education, health, poverty and gender to broader problems of governance that plague the entire region. This year's Report on 'Water for Human Development in South Asia' addresses the current and future water challenges faced by the region and how they impact people's lives and livelihoods.

The delegates were encouraged to access the publications on-line to get a greater understanding of how the water crisis affects us all.



MicroDrip Pvt Limited Stall



TRDP Stall



Unilever - Pakistan Stall



3.7 Success Stories of Women Water Professionals in Water Cooperation (Session 4A – Presentation and Consultation)

Chair: Ms Mahnaz Rahman, Resident Director, Aurat Foundation, Karachi

Co-Chair: Ms Priyangani Gunatilaka, Deputy Director, Central Environmental Authority, Sri Lanka

Facilitator: Dr Sono Khangharani, CEO, Hisaar Foundation

Speakers: Dr Nilufa Islam, Director, Water Resources Planning Organization, Bangladesh
 Ms Sabitri Kumari Tripathi, Associate Professor, Nepal Engineering College, Nepal
 Ms Farzana Ahmed Saleem, Country Coordinator, Cap-Net Pakistan
 Ms Jasveen Jairath, Founding Convener, Save Our Urban Lakes (SOUL), India
 Ms Sameena Nazir, Executive Director, Potohar Organization for Development Advocacy (PODA)

“The Success Stories of Women Water Professionals in Water Cooperation” session focused on highlighting the work of water sector women professionals in South Asia and recognizing the role of Ms Parween Rehman in fighting for the truth. This session was sponsored by International Development Research Center (IDRC)-CRDI Canada.

The Chair, Ms Mahnaz Rahman, Resident Director, Aurat Foundation, welcomed the speakers and participants and said that, it was indeed a great pleasure for her to have been invited to chair the session. It was an honour that eight women water sector professionals of South Asia were amongst us today and that some of them would be sharing tales of their work, struggle and experiences at the occasion. The eight women and water professionals present at the occasion were presented a copy of the book “Women Managing Water: Inspiring Stories from South Asia” published about them.

The role of a woman in South Asia was full of contradiction, because on the one hand, while she had to fight for her basic rights, on the other hand, she had over the last couple of decades achieved what no woman had achieved

in the west. The South Asian countries, she added, had a colonial past and our women had not only played an important part in the freedom struggle against the colonialists but also had a long history of struggle of fighting against traditions, customs, harassments and gender specific roles that had been assigned to them, especially with regards to water. She said, it was heartening to see that through the tireless efforts, determination and conviction of women across this region, they had evolved as a powerful voice. An important example of this was the presence of the women water professional amongst us today.

Tribute to Ms Parween Rehman

Ms Rehman informed the participants that this session was dedicated to the struggle of Ms Parween Rehman, a relentless warrior, who had worked for truth and the rights of poor and marginalized women of Pakistan, and who had been brutally murdered. A one minute silence was observed in the memory of late Ms Rehman. After a round of introductions of the speakers, the Chair invited them to share their knowledge, work and experiences with the audience.



Ms Priyangani Gunatilaka, Co-Chair receiving a memento



Signing of Petition to honour Ms Parween Rehman



Introduction of Women and Water Professional and their Work Experiences

Dr Nilufa Islam, informed the participants that as Director, Water Resources Planning Organization, working under the Water Resource Ministry in Bangladesh, she was not only actively engaged in the micro level of planning of water but had also developed the Coastal Zone Policy and Water Regulation Act in Bangladesh.

Over the last 30 years the coastal areas in Bangladesh, she explained, had seen extreme degradation in the water resources. Due to dumping of industrial waste and other polluting agents, water in 90 Districts was now highly contaminated, with over 40% water laced with arsenic. This highly polluted water had forced the coastal women to travel 3-4 hours by boat to other areas in search of sweet and safe drinking and had also resulted in the spread of cholera and diarrhea, especially amongst children.

Since managing water was still traditionally considered a woman's responsibility and job in Bangladeshi coastal areas and since men as such were not affected by the difficulties faced in acquiring this resource, no serious measures or acts had been enforced to regulate the quality of water that was being provided. While the government departments had visited the area, checked the quality of water available and as a result of the high level of contamination found, marked it as undrinkable, they had not provided any alternate solution nor had they taken any serious measures to stop industrial waste pollution.

As a woman, who felt that water was a burning issue and understood the apathy of women in and around the coasts, Ms Islam elaborated, that she actively pursued the development of the Water Regulation Act and Coastal Policy. While the regulatory act and policy were good and incorporated the principles of IWRM, their implementation in its true spirit, like all other Acts would be very difficult. Keeping in mind that the implementation of the Act and Policy may be a long drawn process, her organization had taken upon itself to educate the women and children of the area on the importance of managing and handling their own affairs.

Ms Sameena Nazir, Executive Director, PODA, began by saying that she would like to congratulate Hisaar Foundation for making a tremendous effort in bringing together all water stakeholders at this Forum. As a human rights educator working primarily with rural women and communities in

the uneven and rain fed Potohar plateau region, for progressive social change, gender equality and minority rights promotion, the issue of women and water was very close to her heart.

The government, she emphasized, to date had not provided or developed an irrigation system and the small natural reservoirs and tube wells were the only other source of water supply. However, climate change shifts and the rapid increase in population had placed a burden on the natural reservoir and water supply was depleting.

She elaborated that since the men in the region, aged between 16-35 years, were mostly employed in low grade jobs in the army and were away from home, the relationship between land and water was primarily that of women. Ironically enough, she added, while women in the plateau spent more than 16-18 hours working in the fields or traveling long distances looking for water and contributed to 79 % of agricultural work done in the area, they did not consider themselves as doing work. This was because conventionally work or labour was defined to them as office work.

One of the biggest issues in this area was access to water and with the lack of concern, political will and interest of the government, to take measures and develop proper water systems, the situation was getting worse. The communities in the area, she added, were busy in surviving and thus the burden of responsibility fell upon the private sector and the civil society to alleviate the plight of the people. Rain water harvesting had great potential and it was time efforts were made to look into the possibility of storing rain water and not let it be wasted. She also shared an interesting revelation that the women of the area followed the goats, because the goats somehow wandered to places that water was available in. She suggested that it would be interesting to conduct a research study on how the goats knew where the water was.

Ms Sabitri Kumari Tripathi, Associate Professor, Nepal Engineering College, said it was as team leader on a research conducted on the "Development of Appropriate Safe Drinking Water Supply and Sanitation Technology for Slums and Squatters in Nepal", that she had come to understand the actual position of women at the community, local, institutional and regional levels and it was through this interaction that it had become clearer that, women were the main sufferers and most affected by water issues.



Since research revealed food to be the most important need of the women, through a series of dialogue and awareness raising campaigns with the women, efforts were made to make them realize that availability of food was directly linked with water and inculcate in them the imperative to conserve and better manage water for all essential uses.

We realized, she added, that in order to bring about a behavioural change amongst the women on how they best use and conserve the water available, it was necessary to educate the youth, especially the girl students. These girl students who would then become the agents of change, were provided trainings on health and sanitation, with particular emphasis on water conservation and management and encouraged to go into communities and spread awareness on the importance of water conservation and its efficient use. Through interaction the community women were successfully educated on the importance of safe water and hygiene and the need for them to look at the water resource in an all-encompassing manner. Though the signs of behavioural change as a result of these interactions have begun to emerge, it would still take some time for the behavioural change to completely set in.

Since Nepal, Ms Tripathi added, produces very few water engineers, gaps within the educational curriculum were also analyzed and efforts were and are being made to bridge the gap.

Ms Priyangani Gunathilaka, Deputy Director, Central Environmental Authority, Sri Lanka, informed the participants that Sri Lanka had an abundance of water and since it was also one of the best resources of the country, it was not considered an important issue. Sri Lanka did not have a Water Policy or a Ground Water Policy but regulations were now being drafted. She also elaborated that, while plans and regulations in Sri Lanka were developed by the high end people, there was need for involvement of the people at the grassroots level. It was her organizations stand that plans should be made in consultation with the people who are most affected by it and that they should also be encouraged to be part of the implementation process.

Ms Guathilaka elaborated that, while there was a lot of talk about water, we do not think about water catchments. A Catchment Protection and Management Plan was required and efforts were being made to draw up such a plan with the involvement of the people, especially women. Though water was not an important issue in the country, the Sri Lanka Water Partnership, she said, was playing an important role in working towards creating a society that valued the sustainable use of water to achieve the goal of an environment conducive to balanced social and economic



Ms Mahnaz Rahman, Session Chair with Ms Shahida Sajid Ali, Coordinator WWN Pakistan

development. Towards this end, the Partnership held a “Young Water Professionals Symposium” for the first time to provide a platform for the young water professionals and academics to express their views, highlight research findings and experiences and also the opportunity for intra and inter sector networking and collegial interaction among professionals.

At the end of her talk, she used the Forum to deliver this message, “It is our responsibility as senior women water professionals to form very active young women water professional to hand over our duties and share our experiences and take them forward to make a voice to save, conserve and effectively use the water resource for our future generations”.

Ms Farzana Ahmed Saleem, Country, Coordinator Cap-Net Pakistan, began her talk by saying that, she had never been a water person but that her years of service at the Sindh Women Development Department and her subsequent visits to Manchar Lake and her experience of the plight of the Mohana’s due to water pollution, had been the turning point in her life and since then water had become her passion. Her Manchar Lake case Study at Kyoto, was the entry point into the water world and her focus was now gender and water and involvement in the water sector had led her to becoming an integral part of the Global Water Partnership’s Women and Water initiative and a member of the South Asia Women and Water Network (WWN). Ms Saleem gave a presentation on ‘Gender and IWRM: A Frame Work for Gender Mainstreaming: Women and Water Network, A Strategic Initiative in Gender and IWRM’. She stated that, the recognition that women play a central role in the provision, management and safe guarding of water was one of the key points of the IRWM concept and that WWNs had been established across India, Pakistan, Bangladesh, Sri Lanka and Nepal. These strategic WWNs served as a platform for women who are the main users and managers of water, to voice their concerns and bring in women from all sectors of society on a united front to effectively channel their voices in mainstream policies, discussion and action that affect them.



As an important part of WWN Pakistan, she along with Hisaar Foundation, which is its host organization, had established WWNs all across Pakistan. As Country Coordinator Cap-Net, a network for capacity building, she had also taken the lead and established WWNs across several Towns in Karachi, in collaboration with Hisaar Foundation.

Ms Saleem apprised that, while WWN Pakistan was still an active initiative and was working for the women across the country, WWN South Asia had taken a back seat. She announced with great pleasure that since many of the original members of WWN South Asia were attending the Conference, it had been decided that this opportunity would be used to declare the revival and reconstitution of WWN South Asia. Ms Saleem extended an open invitation to all the women present and the members of WWNs across Pakistan, to become members of WWN South Asia.

Ms Jasveen Jairath, Founding Convener, Save Our Urban Lakes (SOUL), India, began by congratulating the women water professionals on receiving recognition for their years of work in the water sector. She said that, women's contribution and struggle had never been given the recognition it deserved and this book published by SaciWaters was evidence that women's work was now being recognized. This seminal volume was an important and big statement and an important contribution to the water world.

She added that, the WWNs could not only play an important role in providing women the opportunity to be part of policy, decision making and in getting women's voices embedded in the government's decisions and plans but also bringing diversity of issues on a united platform. "If women are involved both in the planning and implementation process of projects and programmes, success is inevitable. It was important that communities, especially women that were being helped should be consulted first so that all plans, programmes and projects could then be developed according to their needs and priorities, said Ms Jairath.

Collaboration at all levels within the South Asia region was important, she emphasized, to draw support from each other and our experiences. The revival of the South Asia WWN would be an important platform to foster this collaboration.

Discussion

Ms Shahida Sajid Ali, Coordinator, WWN Pakistan, said the revival of WWN South Asia had been her dream and the announcement of its revival was welcome news.

Ms Sabiha Shah, President, WWN Karachi, also welcomed the news of the revival of WWN South Asia and thanked Ms Saleem for the invitation extended to become its member. She said that, WWN Karachi had spearheaded the establishment of 8 Town level WWNs across Karachi city and its members had actively engaged in efforts to bring across women's voices on important issues impacting their lives with regard to water and also carried out successful water conservation and management awareness and advocacy campaigns. The revival of WWN South Asia would ensure that all women across South Asia become one voice and an important pressure group.

Ms Talat Pasha, President, Connect, said that, since the procurement of water unites women across South Asia, efforts should be made to develop plans to mobilize students as the champions of change. The WWNs should act as a pressure group and push for water and environment to be included in the curriculum, not only in Pakistan but across the South Asian countries.

Ms Nahid Abro, President, Women Development Association, said the WWNs had played an important part in empowering women in District Badin. Through the awareness programmes on water conservation and management of water, distribution of water saving guidelines and kitchen gardening trainings, the women of the District had been provided the opportunity to impart this knowledge to other women in their communities.

Conclusions

The Chair thanked the speakers for sharing their knowledge and experiences with the participants and said that, the contributions, dedication and passion of the women water professionals should be lauded and recognized across the board.

The session concluded with:

- ◆ The announcement of the renewal and reconstitution of WWN South Asia to ensure that all women across South Asia become one voice and an important pressure group
- ◆ An Open invitation to women to become members of WWN South Asia
- ◆ Signature of participants on a petition "Justice for Parween Rehman" to be placed before the Chief Minister of Sindh

Distribution Material

- ◆ Book on 'Women Water Professionals-Inspiring Stories from South Asia', SaciWATERS, 2012
- ◆ Presentation on 'Gender and IWRM, A Framework for Gender Mainstreaming-Women and Water Network: A Strategic Initiative in Gender and IWRM', Ms Farzana Ahmed Saleem



3.8 The Role of Academia: Framing Water Cooperation Initiative (Session 4B-Moderated Discussion)

Chair: Dr Daanish Mustafa, Assistant Professor, Kings College, UK

Co-Chair: Dr Sabitiri Kumari Tripathi, Associate Professor, Nepal Engineering College

The foundation of water cooperation and development of water resources is laid in the academic institutions. This was the purpose behind this 2-part session that recognized the importance of academia in the water sector and aimed to ascertain their roles, responsibilities and available resources in this regard. The objective was also to determine the current and future initiatives of universities in the water sector and identify areas where support is required. This session was sponsored by Hisaar Foundation.

Discussion

Chaired and moderated by Dr Daanish Mustafa, Assistant Professor, Kings College, UK, this was an interactive and dynamic dialogue with the academia, faculty members and students from various universities. The session opened with a discussion on higher order truths and lower order truths. It was said that, the value of water was evident through its multiple uses like economic, health, cultural, aesthetic etc. Water encompassed multiple disciplinary dimensions in social sciences, natural sciences and engineering. While the training curriculum of civil engineers in the country was laudable, gaps still existed between what skill set was developed by the academic institutions and what the value of water really required.

The participants were then engaged in a discussion where they came up with a set of questions that needed to be answered and this format guided the rest of the session. Participants were divided into groups and each group was to answer a certain number of questions. This resulted in an interactive discussion among the participants.

Points to ponder by the groups in the session were:

- ◆ What were the strengths and weaknesses of water education in Pakistan?
- ◆ What were the key areas for future investment
- ◆ At what level water education should be introduced in our curriculum?
- ◆ Who was responsible for course content? Government?
- ◆ How do we encourage pure scientific research?
- ◆ How can we promote social science perspectives in water?
- ◆ How religion advises us on the distribution and use of water? (Spiritual and cultural aspects)
- ◆ Can water be apolitical?
- ◆ Was it purely a technical issue? Should it be?
- ◆ Who would do it? Public/Private/non-profit?
- ◆ How did academia engage with the issue of social and economic justice and water?
- ◆ Why had successive governments in Pakistan failed to recognize the strategic importance of water?



Ms Nadira Panjwani with Working Group Members

In identifying the key strengths and weaknesses of water education in Pakistan, it was said that, hardware engineering was the only aspect of water education which was taught at master's level and that their graduates were second to none. However, multiple weaknesses existed in other areas. Water education did not exist as a discipline at any level of our academic courses and there was no mention of water as a science topic, even at the secondary and higher secondary level. As a result of these academic gaps there was a dearth of good water scientists and teachers, as well as research institutions to link the academia with the market. Professions in the water sector were not marketed well to attract more minds.



This led to identification of the areas that require future investment. For instance, research laboratories were needed and universities needed to incorporate best practices to introduce the following disciplines:

- ◆ Water specializations like hydrology, geomorphology etc.
- ◆ Water resource management
- ◆ Water security
- ◆ Water policy and advocacy
- ◆ International and regional linkages
- ◆ River engineering
- ◆ Sedimentology
- ◆ Water bodies management
- ◆ Water law

It was also suggested that education of water as a science should start at the primary level to develop interest in the children and it should primarily be the government's responsibility to develop the curriculum, in collaboration with think tanks, civil society and academic institutions. Creative measures were required in educating children on water related disciplines.

At higher levels, social aspects of water should be part of the curriculum because water was not just a technical issue, rather it was much more holistic in nature. Case studies of social impacts of mega projects and treaties should be included in social sciences departments, funded by HECs.

Social sciences and technical aspects aside, water should also be linked with social and economic justice. For this we needed to teach younger children about the importance of conservation of water and raise public awareness through different media. So the most important question was why had successive governments failed to recognize the strategic importance of water education. The participants were of the opinion that it was plainly due to lack of vision and interest and political economy.

Conclusions

To sum it all up, this session proved to be very productive in identifying entry points in the form of disciplines which the academia and government could invest in to contribute to the water sector, within natural sciences, social sciences or in the engineering discipline. It was agreed that focus on research was the need of the hour.

Display and Distribution Material

- ◆ 'A Few Propositions to Consider', Dr Daanish Mustafa
- ◆ 'Pakistan: Water in a Vulnerable and Stressed Environment - Priorities for Higher Education, Research and Cooperation' talking points, Ms Simi Kamal
- ◆ A list of universities that have water related departments



Academic Session Chair Dr Daanish Mustafa addressing the delegates



3.9 Water Related Disasters: Conquering through Cooperation (Session 4C– Papers and Consultation)

Chair: Mr Zaffar Pervez Sabri, Acting CEO, PPAF

Co-Chair: Mr Nasir Ali Panhwar, Council Member, Hisaar Foundation

Speakers: Mr Mohammad Abid, Head, Disaster Preparedness and Management Unit, PPAF
Dr Pervaiz Amir, Director, Pakistan Water Partnership (PWP) and Council Member, Hisaar Foundation
Dr Zaigham Habib, Water Sector Specialist

The session on 'Water related Disasters: Conquering through Cooperation', concentrated on presenting the picture of water related disasters, the work being done and exploring the possibilities for cooperation. The session was sponsored by Pakistan Poverty Alleviation Fund (PPAF).

Papers and Presentations



Dr Pervaiz Amir, Session Co-Chair

Dr Pervaiz Amir, Director, PWP and Council Member, Hisaar Foundation, made a presentation on 'Water Related Disaster-Conquering through Cooperation', which focused on the two aspects of disasters related to water; floods and droughts. Dr Amir spoke on the floods of 2010 and 2011. The flood of 2010 was termed as 'Super Flood', since population coverage

life loss was 3000 plus and it affected one-fifth of the total area of the country, causing a financial loss of 10 billion US Dollars, which amounted to 5% of Pakistan's GDP. Floods in 2011 occurred only in Sindh and caused a financial loss of 4.5 billion US Dollars. He made a comparison of the 2011 flood with four other major disaster models in the world and classified this flood as "Mild", even though it had affected 32 districts and 15 million people. Both these floods also enabled the country to put up a case for loss and damages, through which some financial benefits were attained, besides it also opened up avenues for researches and studies on the issue of loss and damages at international level.

Since floods were occurring rapidly due to climate change, proper preparedness and institutional coordination was required. Citing examples from neighbouring countries, he mentioned that, while ten years back, 10,000 people were affected in India in recent disasters over 13 million people had been affected.

While there were 12 organizations handling disaster management, there was no specific and fixed responsibility. He appreciated the performance of MET department, as its forecasts were reliable and good as far as monsoon rains were concerned but its capacity on external water needed to be fixed. For example in 2011, clouds from Kashmir moved to Gilgit. Normally Pakistan had density of 5000 feet of clouds, which suddenly increased to 60,000 feet and that caused the recent floods. Even though the clouds caused disaster, there was a positive aspect of these clouds, in that they also harvested Gujranwala, Sialkot and some other regions. Dr Amir reiterated that, we needed to divert our attention to the recent world scenario like Dubai, Saudi Arabia, Oman other Gulf regions and Philippines, that were receiving unusual heavy rains and that Karachi needed to prepare some future plan of action in this perspective.

Discussing the droughts of 1998 and 2002, he said that, disaster caused by drought was more prone to damages, as compared to that caused by floods. Floods caused loss of human life, some infrastructure damage and thus called for immediate attention due to the apparent, visible misery, whereas the impact of drought was perpetual and resulted in multi-layered loss, which lasted for a long time. Scarcity and lack of water also impacted the life of human



beings, livestock and agricultural produce. According to him, drought created ripples in societal behavior and frustration caused by deprivation gave rise to many social problems. Citing the example of the disturbed situation of Balochistan, he said that, the present wave of extremism was an outcome of the drought situation. Gwadar was a natural deep seaport but despite that naval ships had to carry water to Gwadar, which reflected the gravity of issue. Another cause that the present law and order situation could be attributed to was the high rate of inflation in the country. Climate change was also responsible for such droughts and animals being the main source of life, were severely damaged and killed by droughts and thus deprived the population of livelihood.



Dr. Zaigham Habib

Dr Zaigham Habib, Water Sector Specialist, made a presentation titled 'Lessons Learnt by Floods of 2010 and 2011,'. She said that, the impact of these two floods was specifically in the lower Indus region.

She based her discussion on three components:

- ◆ Issues
- ◆ Impact
- ◆ Lessons Learnt

The 2010 flood, said Dr Habib, could be linked with climate change. There were three weather systems that caused floods. At the time of its occurrence, the MET department could not identify the magnitude of the incoming disaster, because it mainly made monsoon rain related predictions. These heavier rains, caused as a result of climate change could not be correctly predicted as prediction time was 3 to 4 times earlier, whereas flow time was incorrect. Due to

this, water accumulated within river reaches and barrages did not also operate properly and on time. Therefore, there was breach to save infrastructure, which caused floods in places, unusual like Jacobabad, which had never had such floods before. In 2011, heavy rainfall was the cause of floods but it could not be predicted because it was 248% more than the average rain in Sindh. Another important factor was the city settlements being in lowland places, unsatisfactory drainage system and cities at the lower end of slobes and prone to flood more easily than normal places.

There were no gauges to measure the level of cloud and rain fall. Prolonged rains created floods because the land was already saturated. Crop cycle can prevent the saturation of soil and also prevent contamination and pollution of underground water, which can otherwise be used for drinking purposes. Entire coastal zone was also under threat. We are technically weak, she added, and require flood hazard mapping system in flood zoning on the pattern of agriculture zoning. The disaster management plan based on response, rehabilitation, adaptation, mitigation and preparedness, for such future disasters needs to be in place to address the disaster management cycle. Preparedness needs to be long - term planning. There are multiple organizations for disaster management and competition amongst these institutions has reduced the level of efficiency but they are not coordinated and do not collaborate with each other in their institutional arrangements.

Flood management was just not natural hazard management, it is also the societal management of hazard which should be based on some visions dealt with some strategy and met with immediate and timely actions, said Dr Habib.

Mr Mohammad Abid, Head, Disaster Preparedness and Management Unit, PPAF, made a presentation, on 'Water Cooperation in Action from the Global to the Grass Root Level,' which mainly focused on the relief work provided by PPAF in the recent disasters. He gave details of the kind of relief and support provided to victims of disasters and stressed that their relief work and activities presented a model of coordination and cooperation.



The main points of his presentation were:

- ◆ Footage of Floods/Disasters
- ◆ Managing the Effects of Disasters
- ◆ What was Likely to Happen in Next Decades as Part of Climate Change Scenario
- ◆ What were some of the Models of Cooperation in Pakistan and Elsewhere
- ◆ Are we Prepared for Next Disaster



Mr Mohammad Abid

Disasters cannot be attributed to rains and droughts only because even oil spills in the sea, create disaster in the water and destroy marine life. He explained that delay action dams had recharged the ground aquifers and said that 10 million kgs of food was distributed to disaster victims and shelters were also provided. The social capital loss was difficult to measure and that all this had been caused due to the poor warning system and that 31 million acres of water was lost to Arabian Sea each year. He specifically discussed Rajan Pur, which was sandwiched between Indus and Suleman ranges and said that, PPAF provided livestock vaccination and water bladders to floods stricken areas of Ghotki, Rajan Pur etc.

Conclusions

The Chair, Mr Zaffar Pervez Sabri, Acting CEO, PPAF, in his concluding remarks said that, the Hindukush- Himalaya range was the feeding source for rivers and the 5000 glaciers and 15000 ice peaks in Pakistan were melting fast. Studies suggested that rivers in Pakistan would dry up in the next 80 years and it was essential that transboundary cooperation be practiced. He emphasized the need of public-private partnerships and said that water conservation strategy was missing and there was also no categorization of disasters. No disasters were natural disasters, they were all man-made and that even global warming was caused by human actions. He believed that disasters were caused due to non-preparedness.



Mr Zaffar Pervez Sabri

Mr Sabri emphasized that a mitigation and coping mechanism needed to be in place and that there was a strong relationship between land and water distribution. He also indicated that he had witnessed lack of cooperation in the floods of 2010-2011, as people at highlands and higher levels banged the edges of canals to save their own lands and crops, causing more disaster at lower slopes and levels.

Display and Distribution Material

- ◆ Presentation on 'Water Related Disaster-Conquering through Cooperation', Dr Pervaiz Amir
- ◆ Presentation on 'Lessons Learnt by Floods of 2010 and 2011', Dr Zaigham Habib
- ◆ Presentation on 'Water Cooperation in Action from the Global to the Grass Root Level', Mr Mohammad Abid



3.10 Media: Catalyst for Change and Cooperation or a Silent Spectator (Session 4D - Panel Discussion)

Chair: Mr Ghazi Salahuddin, Senior Journalist and Media Specialist

Co-Chair: Ms Seema Tahir, Co-Founder Interflow Communications and Head of Interflow Group's Electronic TV Channels (TV One, News One and WasebTV)

Facilitator: Mr Zohair Ashir, Chairperson, Hisaar Foundation

Panelists: Mr Kamal Siddiqui, Political Analyst and Editor, Express Tribune
Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation
Ms Sabeen Mahmud, President, The Indus Entrepreneurs (TIE) Karachi and Owner of T2F café
Mr Zulfiqar Halepoto, Advisor on Policy Advocacy and Civil Society Interface

The session on 'Media: A Catalyst for Change and Cooperation or a Silent Spectator' focused on motivating the panel participants to agree on a more focused strategy for highlighting water and climate changes issues in the mass media. This session was sponsored by AASA Consulting.

The session began with Mr Zohair Ashir, Chairperson, Hisaar Foundation introducing a hard-hitting documentary highlighting the crisis faced by Karachi, lack of water, contamination of drinking water etc. The crux of the documentary was that the problems facing Karachi, Pakistan's largest metropolis, were a microcosm of the crisis which Pakistan would face in the future.

A panel discussion chaired by Mr Ghazi Salahuddin and co-chaired by Ms Seema Tahir, discussed the media's role in the formation of a consolidated policy towards the water crisis and climate change.

Opening Remarks

Declaring the session open, Mr Ghazi Salahuddin, Senior Journalist and Media Specialist, said "We were in danger of looking at the water issue in isolation. The real issue was bigger and more troublesome; the inequities that bedevil Pakistan!" The media needed to be galvanized, he continued, and at the same time it was required that relevant information move forward. The media was under-qualified in many aspects and that was why it was unable to report responsibly on the issue.



Session Audience

Panel Discussion

Ms Seema Tahir, Co-Founder Interflow Communications, agreed with the Chair and said that, the reality was that though a powerful medium, with a 120m viewership (from 20m in 2002), the media's potency was not properly utilized. The media had failed to empower, had clouded issues through irresponsible reporting and was a silent partner in this coming catastrophe, because of water not being considered glamorous enough! Some of our media outlets, said Ms Tahir, were creating an unacceptable culture and she felt that, we should report Pakistan's water crisis - from conservation to wastage and all media across the board, must come together on this issue. She also suggested that a pressure group be formed, with a month-long water centric coverage as the way forward.

The other panelists also shared their views at length. In Mr Tofiq Pasha's opinion, the media's job was to report and inform; children dying of water borne diseases is NEWS! "Why don't we dedicate 2014 to saving water"?, he asked. The media could play a substantial role, if briefed responsibly and it was about time, Mr Pasha continued, that dramas took second place to social responsibility!



Mr Zulfiqar Halepoto, Advisor on Policy Advocacy and Civil Society Interface, focused his comments on the role of the print media and how it approached issues. The Urdu and local media knowledge base and outreach were split on ethnic and linguistic lines. The issue of Kalabagh Dam was a case in point, he said, with provinces all having their own viewpoints and the local media's news coverage reflected these passions. Therefore, the issue was clouded and a single viewpoint, therefore evaded the public at large. "We were at a transitory phase and like the public's response to terrorism, we need to speak with one voice, when it comes to the "Water Disconnect"!, said Mr Halepoto.

The 'Water Disconnect' was also spoken about by Ms Sabeen Mahmud, President, The Indus Entrepreneurs (TIE). She said, the media did not know how to present the current and future scenarios and to do this the media must advertise it as a ticking time-bomb, just as it was doing to some extent with Pakistan's ever-burgeoning population. However, all the blame could not be put at the door of the media because the nation itself did not consider it so serious an issue to want to get engaged.

Mr Kamal Siddiqui, Editor, Express Tribune countered Ms Mahmud's argument by saying that, people do get involved but their thinking can be a bit skewed. "If we look at the prevailing attitudes", he said, "we find that while drones are considered worthy of a reaction, yet there is virtual silence when it comes to condemning suicide bombers".

The media's role was to inform, entertain and educate. He agreed with the other panelists that, it should "inform" and "educate", so as to mold public opinion in the case of water. The journalists had to report responsibly and accurately. There was now a new player in the media scrum - social media, he added, which was taking the lead in information, more so than traditional media news reporting. Commercial interests, provincial, district or local interests and the economics of water so to speak, could not be ignored, he added.

Questions and Answers

The panel discussion was followed by a lively and interactive question and answer session.

Answering a question about the difficulties of setting up pressure groups to try to get the water debate into the mainstream media and how easy would it be, Ms Tahir

replied that, all the panelists should work together and the pressure group should work at sensitizing the ill-informed media about water, just as the population debate, which was now beginning to appear on the radar.

In response to a question regarding the present one-dimensional media coverage of the water issue, Mr Halepoto said that, the media should highlight global warming, deteriorating natural habitats, lack of planning at the national level and not just the threat posed by another nation's dams. It was also about what we as individuals could do to stop wastage and conserve water and as indicated by all the panelists, the media could help by raising awareness amongst the general public and amongst those who were most at risk.

Replying to a question about provincialism affecting the water debate, Mr Zulfiqar Halepoto reiterated his previous comments that, we had to speak with one voice though it would not be easy. We had to operate at all levels of society and that we all had a vested interest in the debate, since access to clean water, sanitation affected the way we live, our health and our livelihoods.

Conclusions

The Chair, Mr Ghazi Salahuddin thanked all the panelists for their valuable insights and the audience for their keen participation. Going forward, a genuine consensus had to be built and the media should be ready to play an active part in it. The Hisaar Foundation, he continued, with help from the media could influence Pakistan's water debate at all levels.

Display and Distribution Material

- ◆ Water Documentary - Time is Running Out, Hisaar Foundation
- ◆ Media Packs



Mr Ghazi Salahuddin and Ms Seema Tahir, Session Chair(s) with Panelists



3.11 Cap-Net Members' Networking Meeting (Session 4E – Presentation and Consultation)

Chair: Ms Farzana Ahmed Saleem, Country Coordinator, Cap-Net Pakistan

The aim of this session was to conduct a networking meeting with members of the Cap-Net Pakistan Network to re-orient them on Cap-Net's programme objectives and also to initiate development of proposals and activities for 2015.

The session focused on the following points:

- ◆ Orientation on Global Cap-Net and Cap-Net Pakistan
- ◆ Discussion on priority themes and activities for Cap-Net Pakistan
- ◆ Formulation of activities and work plan for 2015
- ◆ Scaling up of membership base of Cap-Net Pakistan
- ◆ Sharing of Peer Review report 2013 conducted by Cap-Net

The Cap-Net Members' Networking Meeting was chaired by Ms Farzana Ahmad Saleem, Country Coordinator Cap-Net Pakistan. This session was attended by Cap-Net Pakistan members and all those delegates whose participation at the Conference was funded by Cap-Net. This session was sponsored by Cap-Net Pakistan.

Presentations

There were two presentations in this session, titled 'Orientation on Cap-Net Capacity Building in IWRM' and 'Formulation of Work plan and Activities', both were presented by the Country Coordinator, Cap-Net Pakistan, Ms Farzana Ahmad Saleem. In the first presentation



Ms Farzana A Saleem, Country Coordinator Cap-Net Pakistan

Ms Saleem re-oriented the participants on the objectives, priority themes and areas of work of Cap-Net Global and Cap-Net Pakistan. The second presentation was primarily intended as a tool to guide Cap-Net Pakistan members and aid them in development of work plans, identification of priority themes and formulation of activities.

In addition to the presentations, a briefing on the Peer Review Report 2013 conducted by Cap-Net and the proposed work plan of Cap-Net Pakistan for the year 2014, was also given to the session participants and the proposal already submitted to Cap-Net Global was also shared. Ms Saleem then proceeded to divide the session participants into smaller working groups to identify priority themes based on local needs and future direction for Cap-Net Pakistan.

The working groups decided that Cap-Net Pakistan should prioritize working with marginalized and disadvantaged communities and expand its geographic scope. It was decided to focus efforts on flood-affected communities and impoverished areas and include communities from coastal areas and hilly and mountainous terrains to its areas of work. Subsequently, members were identified for the implementation of work plan 2014 based on their commitments and local needs of their area of concern.

Ms Saleem requested the members that the first draft for the work plan for 2015 should also be prepared in accordance with the format and process shared in the session. She reminded the participants that activities for work plan 2015 should be premised upon the priority themes decided in the session as well. July 2014 was declared as the deadline for submitting the first draft of proposals for work plan 2015, so that the Country Coordinator would have sufficient time to discuss and scrutinize the proposals developed by different members, before finally submitting them to Cap-Net Secretariat.

At the end, Ms Saleem invited comments and suggestions on the Peer Review Report 2013 from the participants.



Discussion

An interactive and highly engaging discussion session followed the presentations.

Dr Talat Pasha, President, CONNECT, (Cap-Net member organization) said that her organization was working for rehabilitation of flood affected communities in Sindh and would like to conduct capacity building trainings for health workers. At her request for support from Cap-Net Pakistan in this regard, the Country Coordinator advised her organization to submit a proposal.

Ms Sabiha Shah, President of WWN Karachi and Co-President, LCDP (Cap-Net member organization in Karachi), expressed her willingness and support to the Cap-Net network. She requested support for her organization to start a project in the disadvantaged coastal communities.

Mr Omar Saleem, President, Civic Action Forum (Cap-Net member organization in Islamabad), requested Cap-Net support for awareness raising and capacity building on climate change and environmental protection of mountainous areas.

Ms Naheed Abro, President, Women Development Association (Cap-Net member organization in Badin), requested support for her organization to start a project on safe drinking water and sanitation work with marginalized fisher folk communities in the Badin District.

Ms Sughra, member WWN Bin Qasim Town said that, she represented a Town that was a very neglected and impoverished area. She requested Cap-Net support for implementing a project on hygiene promotion and safe drinking water, both neglected issues in the Town.

At the end of the discussion, Ms Saleem announced that she would be visiting Cap-Net Pakistan's host organization, Hisaar Foundation, on January 28th and 29th and would be available to all interested Cap-Net Pakistan members for consultation and guidance on preparation of proposals and sharing of experiences.

Conclusions

At the end of the session following conclusions were drawn:

- ◆ Broadening of membership base
- ◆ Development of proposals for work plan 2015, based on local needs and priorities
- ◆ Widening of geographical scope of Cap-Net Pakistan
- ◆ Priority focus on marginalized and disadvantaged communities
- ◆ Inclusion of multiple themes of IWRM

Display and Distribution Material

- ◆ Presentation on 'Orientation on Cap-Net: Capacity Building in IWRM', Ms Farzana Ahmed Saleem
- ◆ Guidelines for Formulation of Work plan and Activities, were distributed to all the participants



Cap-Net Pakistan members at the session



3.12 Fighting Poverty: Water Cooperation for Social Development (Session 5A – Papers and Consultation)

Chair: Mr Zaffar Pervez Sabri, Acting CEO, PPAF

Facilitator: Mr Nasir Ali Panhwar, Council Member, Hisaar Foundation

Speakers: Mr Usman Mirza, Associate Coordinator, Water Programme – PDD, LEAD Pakistan,
Ms Uzma Nomani, Water, Energy and Climate Change Unit, PPAF
Mr G R Baloch, Development and Management Specialist and Executive Director, Pakistan Relief Foundation (PRF)

The 'Fighting Poverty: Water Cooperation for Social Development' session focused on demonstrating how water cooperation can lead to improved lives and development for communities and also showcased PPAF's model. This session was sponsored by Pakistan Poverty Alleviation Fund (PPAF).

Papers and Presentations

Mr Usman Mirza, Associate Coordinator, Water Programme, Programme Development Department (PDD), LEAD Pakistan, enlightened the participants with his presentation titled 'Access, Equity and Hazards: Highlighting a Socially Just and Ecologically Resilient Perspective on Water Resources'. He reflected on the historical aspects through which water had emerged as a basic human right, starting from the 70's and moving on to the 80's, where a general trend of investing in water related infrastructure began for provision of clean drinking water. He spoke about a discourse on equitable distribution of water resources and focused on equitable distribution and local level through empowerment of stakeholders and better governance. He also discussed gender as a key cross cutting area with women being at the forefront responsibility with domestic water. His discussion brought in the international and regional perspectives and the power polls of current trends determining basic equity and control of resources. The dispute of international sharing of water resource was due to the inability of nation states, he added, to come up with an internationally acceptable criterion for equitable distribution of transboundary waters.

Relating water to livelihood and health, he commented that, water was not a commercial product to be traded and used devoid of social values. There was lack of research on the linkages between multiple values that a society derives from water and access to water resources, as well as lack of policy due to lack of understanding by policy makers.

Water had cultural and spiritual significance for the indigenous population relying on water resources and played a significant role in the lives, religious beliefs and cultural practices. Water was part of an ecosystem that needs to be protected valued and used with due care. There was also a lack of link between water related hazards in water planning. Mr Mirza stated that, water related hazards were composed of a population's physical exposure to risk and its socio - economic vulnerability. Hazardous situations create reactionary responses to water related hazards and therefore, approach should be to make efforts to direct an understanding and link between human societies and critical resource such as water.

Ms Uzma Nomani, Water, Energy and Climate Change Unit, PPAF, presented her paper on 'Water Cooperation for Sustainable Development-A Case of DMPP Lawa'. She presented a case study on water cooperation for sustainable development, based on the Case of Drought Mitigation and Preparedness Programme (DMPP), Lawa. The case highlighted details of a water supply scheme constructed by the Asian Development Bank (ADB) with the cooperation of a local community at Lawa, a Union Council of Chakwal District. Ms Nomani explained that, in this scheme ownership was developed with a 2% financial contribution of the local community. Household connections were provided, distribution lines were laid out and through this peaceful management, the use of fresh-water was also established.

Linkages were established through the policy of integration inclusion and innovation, based on financial technological and institutional interventions. Mitigation methods were also used and social mobilization was used as a tool for mutual cooperation of communities. Different community organizations were developed, empowered and brought under a legal framework to provide them a legal entity for



Mr Nasir Ali Panhwar, Session Facilitator presenting Memento to Session Chair Mr Zaffar Pervez Sabri

an empowered implementation of scheme. She elaborated that, the people of the communities were aware of the entire cost and other financial matters and this helped in developing partnership among PPAF and other community organizations. For distribution of water tariff laws were implemented to which people adhered and poorer communities benefited with subsidized tariff rates. In this model, it was exhibited how one investment builds into another investment.

This water cooperation led to poverty reduction and sustainable development and also helped in dispute resolution, as tribal rifts were resolved because of the need of unity amongst community for facing water scarcity and addressing its peaceful solution. Livelihood opportunities also emerged as a result of this effort, which directly fed into the Millennium Development Goals (MDGs).

He emphasized that a Plan needs to be evolved through a bottom to top approach. The construction of Right Bank Outfall Drain had contaminated the water of the Lake and the development of the area was based on a non-participatory approach, which did not develop ownership amongst stakeholders. Contamination was also caused by the water of Nooriabad flowing into Keenjhar Lake and lack of interdepartmental coordination was also an issue. The PRF engaged in joint initiatives involving community and media to identify the sources of pollution that contributed to Keenjhar Lake. As a result of the joint venture, a clean water campaign was launched focusing on clean water and safe environment, to which social, print and electronic media also contributed.

The discussion focused on two other issues, Ramsar Convention Site, which requires that the wetland should also have action plans and the encroachment on Keenjhar Lake, a critical issue that requires immediate attention. It was also discussed that since lakes recharge ground water, if water in these lakes was kept fresh, the water would be drinkable. Mr Baloch informed the participants that, in Pakistan, there is a water policy for allocation to agriculture but there was no policy for allocation to lakes.

Conclusions

The Chair, Mr Zaffar Pervez Sabri, Acting CEO, PPAF, wrapped up the discussion by saying that equity cannot be

begged for, it has to be enshrined in rights and be put in an implementable framework.

Water was just not an economic entity, it was central to life and livelihood. All hazards that we faced are manmade and as such, only nature cannot be blamed for disasters. Preparedness can make us win our cases at international level. The cost of inaction was immense and being lower riparian, we need to fight our cases not in the battle field but at a legal level. We have already lost our case in Kishan Ganga and Baghlihar, he added.

Mr Sabri explained that, institutions were important but at times they were also a source of inequity, therefore, they needed to be pro-poor. Though the main stakeholder was the government, we need to go beyond, bring in national polity, take all stakeholders on board and reach a consensus. 3% of the total water on earth was fresh-water and pollution was diminishing it. Fresh-water was now also decreasing since most of it was in the north areas, in the form of glaciers, which were melting fast. Our terrain was oceanic terrain and therefore saline percolation through rivers has produced underground fresh sweet water. The Canal system that we have and are very proud of, was also a source of reducing percolation and thus fresh water as well.

The lessons we learn from our projects, he said, need to be replicated in our incoming projects. We need to work in collaboration with all the stakeholders, the government, local governments, PPAF and provincial line departments etc. This Conference he was optimistic, would become a source of setting up a stage for multi-dimensional actions.

Display and Distribution Material

- ◆ Presentation on 'Access, Equity and Hazards: Highlighting a Socially Just and Ecologically Resilient Perspective on Water Resources, Mr Usman Mirza
- ◆ Presentation on 'Water Cooperation for, Sustainable Development-A Case of DMPP Lawa, Ms Uzma Nomani
- ◆ Presentation on 'Depletion of Fresh Water Lakes in Pakistan', Mr G R Baloch



Session Chair with Speakers



3.13 Mega-City Water Partnership: Showcasing Karachi Water Partnership (Session 5B – Presentation and Panel Discussion)

Chair: Mr Tasneem Siddiqui, Chairman, SAIBAN

Facilitator: Mr Zohair Ashir, Chairperson, Hisaar Foundation

Panelists: Mr Suleiman Chandio, CEO, MSC Consulting Engineers & Former MD, KWSB
Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation
Ms Seema Zahid, Head Mistress, Education and Literacy Department, Government of Sindh

The session focused on sharing Hisaar Foundation's Karachi Water Partnership (KWP), as a model of Public - Private Partnership and recommend its duplication at urban and rural level in the form of Urban Water Partnership and Rural Water Partnership. The aim of the session was also to highlight the success of the experience and determine the way forward. The session was sponsored by Hisaar Foundation.

Presentation

Mr Zohair Ashir, Chairperson, Hisaar Foundation, welcomed the panelists and participants and shared the session objectives. Making a presentation on 'Karachi Water Partnership (KWP): Showcasing Hisaar Foundation's Experience of Public-Private Partnership', Mr Ashir explained that KWP, the first Urban Water Partnership of its kind in the World was an innovative, bold and extremely challenging initiative undertaken by Hisaar Foundation to preach to people that, "water is everybody's business." KWP, a citizen driven initiative aimed at partnering the city government and civil society in solving the water related problems and challenges faced by the city, was formally established in 2007 and played a pivotal role in initiating dialogue and acting as a bridge between citizen and government. He lauded Mr Suleiman Chandio for the critical role he had played in terms of providing direction and guidance to Hisaar Foundation in taking forward its partnership initiative.

The KWP experience had proven that water challenges cannot be overcome without the proactive support and collaboration of the government and citizen groups and other stakeholders and that solutions to these problems can only be found if they are built around participation by both government and citizen groups, so that both may take actions as part of their duties and responsibilities

Sharing the achievements of KWP, Mr Ashir stated that, during 2007-2013 the Partnership through a process of dialogues with the City District Government Karachi (CDGK), the Karachi Water and Sewerage Board (KWSB), the administrative Towns of Karachi, the private sector, civil

society groups, women, media, academia and citizens of Karachi, had successfully brought in a wide range of partners, developed and disseminated water facts and water conservation and management guidelines, initiated a school water and sanitation infrastructural rehabilitation programme, carried out training programmes on water conservation, better management with students, teachers and women and developed a Mutual Accountability Protocol.

At the end of his presentation, he said, it was important to use this Forum to deliberate upon how we respond to the inconsistent local government situation, what local government departments can do to support such partnerships and what the way forward was.

Panel Discussion

Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation, said that when the KWP concept came along, Hisaar Foundation already had a working relationship with Karachi Water & Sewerage Board (KWSB). Mr Chandio who was the Head of KWSB at the time, was approached to assist in initiating the Foundation's strategic stakeholder platforms Area Water Partnerships (AWPs) concept across the 18 Towns of Karachi. She pointed out that, KWSB under the guidance of Mr Chandio, had been very proactive and forthcoming in its support and it was at the recommendation of KWSB that the AWP concept was initiated as a model of public- private partnership in Gulshan -e- Iqbal Town (GIT). She appreciated the cooperation and guidance that Mr Chandio had provided to Hisaar Foundation in strengthening this concept and for his continued support.



Mr Tasneem Siddiqui, Session Chair with Panelists Ms Seema Zahid, Mr Suleiman Chandio and Ms Simi



The GIT AWP model not only served as a forum where all users and stakeholders of water collectively engaged in dialogue and decision-making with regards to the competing uses of water resources in a manner that was transparent, participatory and inclusive but also emerged as an innovative tool to foster the cohesive development, to improve water supply issues in timely and cost effective ways, by leveraging each partner's resources. The success of the GIT AWP led to the replication of water partnerships concept in 5 other Towns and formation of WWNs across 7 other Towns of Karachi.

The public- private partnership initiatives, Ms Kamal explained, however suffered a setback when the Local Government system was abrogated in 2011. This abrogation hampered the momentum and spirit of the partnership concept not only in the Towns where the AWP's were functioning, but also put a stop to the process of bringing other Towns into the AWP fold.

Talking about the future of public- private partnership, she said that, while the absence of the government as a champion was a setback, all was not lost because other stakeholder groups such as, civil society organizations like Lyari Community Development Programme, the academia, media and above all women had also emerged as important champions, which had and were still carrying on the partnership work in their respective Towns. The future strategy in the absence of a Local Government system should be to continue working with the already identified champions and through consultation and interaction shape up other champions, who could spearhead the partnership concept across other Towns in Karachi.

Ms Seema Zahid, Head Mistress, Education and Literacy Department, Government of Sindh, informed that, she became involved with Hisaar Foundation's WWN initiative soon after a water conservation campaign was held by the Foundation at the school she was teaching in. As General Secretary, WWN Gulshan-e-Iqbal Town (GIT), she along with other Executive Committee members of the Town WWN, expanded the network by making WWN chapters in all the thirteen Union Councils (UCs) of GIT.

Using the partnership platform, the WWN Executive Committee members, took voluntary charge of water conservation campaign in their localities and have continued to conduct awareness and advocacy meetings at parks, flats, schools and houses. The Committee members also surveyed different schools to pinpoint the condition of the drinking water and toilet facilities in government schools. It was on their recommendation that more than 20 schools

were rehabilitated (provision of drinking water and toilet facilities) by Hisaar Foundation, through KWP's School Water and Sanitation Rehabilitation Programme.

Mr Suleman Chandio, CEO, MSC Consulting Engineers and Former MD, KWSB, said Karachi Water and Sewerage Board supplies water to Karachi, the 7th largest city in the world. The only and cheapest source of water of the city was from the Indus River through Kalri. For sufficient water supply, he added, it was necessary that 30 days of storage supply in Kalri be maintained and given this fact the main aim and efforts for the next 100 years should be that this storage capacity be maintained, if we want water to be available to us in the future. Kalri was the only bulk scheme for water supply to the city and from 2004 till now, no efforts had been made by the government to develop any other bulk scheme. The government lacked political will in developing alternate bulk schemes and there was no chance of any new scheme coming up in the next 15 years. He said that, with only one bulk water supply source available to us, we should be thankful that we were getting water and that too door to door.

While the other option for water supply in Karachi was installation of desalination plants, the high investment cost made them less viable. The mismanagement in the distribution system was an additional contributor to the problem, which was further compounded by the obsolete infrastructure that led to leakages and wastage of water. The poor revenue recovery system by KWSB resulted in the inadequacy of funds available for repair and maintenance of the infrastructure. There was need for a proper revenue recovery and distribution plan to be developed and implemented in order to regulate water supply.

He was of the opinion that, public-private partnerships can be instrumental in convincing those in power to look into the water security issue of the city. There was also need for filtration and chlorination plants to be installed to deal with the turbid water that was being supplied. In addition, it was imperative that new distribution systems and plans be developed to deal with the increasing urbanization of the city and new settlements springing up.

While there has been lack of political will on the part of the government to improve the system, it was important to understand that the citizens have also played a very critical role in the deterioration of our water resource, he added. There is misuse and mismanagement of water at the domestic level, with 30% of the water being wasted because of old and damaged infrastructure. The people were not willing to replace the old and rusted pipes, since it would involve additional expense and damage to their flooring.



During his years at KWSB, he had seen that 90% of the complaints of contaminated water originated from the domestic user level, because of rusty and old pipes. Hisaar Foundation, Mr Chandio said, had emerged as a champion of the water issue and that is why when KWSB was approached, it provided the Foundation support and cooperation. The Board was very encouraged and motivated by the Foundation's will and determination in finding solutions to alleviate the City's water related problems and that is why wholehearted support was given to Hisaar Foundation's public-private partnership concept. It was through this partnership, that KWSB engaged in the Foundation's School Water and Sanitation Rehabilitation Programme and provided pipelines till the boundary walls of government schools across several towns. The commitment of Hisaar Foundation in fostering water partnerships should be lauded and other organizations should also come forward and take ownership of the resource and work towards its improvement. If the private sector works hand in hand with the agencies, there was no reason why the problems could not be resolved, he added.

The KWP, a first of its kind of partnership in Pakistan, was a great landmark because it had brought together the government, service delivery agencies and other key players in the water sector, on a single platform to work alongside each other to develop a consensual position on acute water issues and their solutions. The success of KWP had proven that cooperation and partnership were the key tools for resolving issues.

Adding on to what Mr Chandio had said about the role of the citizens with regards to water use and wastage, Ms Kamal said that, while the government was responsible for provision of the resource and its equitable management and distribution, the role and the responsibilities of the citizens in how they used water cannot be denied. While 40% of KWSBs water was stolen by various stakeholders and in particular, the tanker mafia, the problem had been paramounted by us - the citizens, because of the indiscriminate and callous way we waste water in our daily consumption. The citizens, Ms Kamal said, had to become responsible and do their share in the conservation and better management of water to ensure a water secure future.

She explained that, the experiences of the Town water partnerships in Karachi and in particular, the Gulshan-e-Iqbal Town AWP, had made Hisaar Foundation realize the need for promoting effective, transparent, accountable, equitable and citizen friendly governance in the water sector, as well as the converse – citizen sense of responsibility.

Hisaar Foundation felt that although citizens held government agencies accountable for delivery of services, they also needed to be held accountable for their own actions, because in many cases they contributed substantially to the deterioration and mismanagement of water sanitation and related sectors.

With the aim of making all stakeholders answerable for their actions with regards to water, Hisaar Foundation had set into motion the mutual accountability concept in Saddar Town, which aimed at building citizen ownership of water resources in order to ensure safe and sufficient water for all essential purposes for the different user groups of water residing in the city of Karachi. Mutual Accountability, she said, was a process through which various stakeholders work together on a common platform for collective action, to ensure conservation and better management of water, move forward together, rather than against each other and can hold each other accountable for their performance in fulfilling their obligations and responsibilities towards IWRM and thereby bring about behavioural change among the citizens in relation to water resources conservation and management.

Ms Kamal ended by saying that, we must be grateful for all that we have and that it was time that we as citizens cooperate with each other, to do our share and pay back society. The message that she wanted to give from this Forum was "Stop playing games with our City, constitute one Local Government System and adhere to it".

Questions and Answers

At the end of the panel discussion the floor was open to a question and answer session.

In response to a question that, why was it that even though water hydrants were there water was still not available in the pipelines, Mr Chandio said that, the tankers were filled from reservoirs at specified locations at the Malir River and KWSB hydrants and thus did not affect household supply. What affected domestic supply were the 1/2" pipe connections in households and the fact that in most cases they were very old and rusted pipes which the consumer in posh areas did not want to replace because it would ruin the expensive marble flooring. This refusal on the part of the household consumer resulted in little to no availability of water in the pipelines and therefore they resorted to taking water through tankers. In the case of industries, he added, they were dependent on tanker waters because they did not take regular water connections from KWSB.



He said that, while it was very difficult to completely put a stop to the tanker culture, the situation could improve if a strong regulatory body was constituted which would table tankers that supplied contaminated water, fix a price ceiling and introduce a receipt system. There had been some kind of system that the tankers followed when they were supervised by the Rangers but now after the Rangers withdrawal, the tanker owners had been unleashed because there was no one to keep check and balance.

In response to Mr Zohair Ashir's question, what the next steps should be and what future strategy could be adopted by the public-private partnership in the absence of a Local Government system, Mr Chandio replied that, elections to restore the Local Government system were expected early next year and that once the system was in place, the process of cooperation and partnership would have to be re-initiated.

Answering another question from Mr Ashir, that since the Local Government elections were still uncertain, would this uncertainty not greatly impact the partnership process, Ms Kamal said, since a whole range of other champions had already been identified, the absence of the local government in the last two and half years had hampered continuity but had not stopped the partnership process because we continued to make advances with other existing champions. The WWNs, she elaborated, already a base had continued to fulfill their commitment of cooperation by engaging in awareness raising activities and promoting home - based agriculture trainings throughout the city. Mr Chandio added that, all that had been achieved by the public- private partnership in the past was still functioning through the cooperation of other champions who had been brought on board.

Mr Moosvi commented that, the WWNs needed to be made more efficient, we should start looking for new champions and once the Local Government system was in place, we should take it up as a continuous process with the government again.

Mr Ashir said that, Hisaar Foundation had found in Mr Chandio, a great supporter from the government and that efforts should be made to find other champions from within the government system to take up the public- private partnership process even further.

Conclusions

In his closing remarks the Chair, Mr Tasneem Siddiqui, Chairman, SAIBAN, concluded that, drinking water and its supply and distribution were important issues that could

be resolved, if we as stake holders all rallied together and cooperated with each other to find solutions. After the information that had been shared during discussions, it was evident that the water supply coming into the city was sufficient but the problems that confronted us were being magnified by the old infrastructure, both at supply and consumer side, resulting in huge leakages. Other contributing factors were the mismanagement in the distribution system and the lack of conservation and better management on the part of the citizens.

Giving the example of the Orangi Pilot Project (OPP), he said that, through cooperation and community participation the project had emerged as a model and after 10 years of demonstration that low cost sanitation was possible, they had been able to convince the government to take similar actions in other areas. Based on this personal experience, he advised that, the public-private platform should continue its committed activities, cooperation and efforts at the grassroots level in the water sector, to bring about positive change and that once they have proved that change can be brought about if there is will and determination, they will be able to emerge as a pressure group to convince the government to cooperate and come forward to fulfill its responsibilities.

The session concluded with the following outcomes:

- ◆ If the Local Government system was not in place, work with already identified champions should be continued and through consultation and interaction other champions who could spearhead the partnership concept across other Towns in Karachi should be identified and shaped up,
- ◆ Other mavericks within the Government should be found to promote the public - private partnership concept
- ◆ Mr Suleman Chandio and Mr Tasneem Siddiqui declared their unconditional support to KWP and in particular Hisaar Foundation's public- private partnership concept and efforts in resolving water issues in Karachi
- ◆ Decision to revitalize and reconstitute the KWP Advisory Council

Display and Distribution Material

- ◆ Flyers 'First Urban Water Partnership in Pakistan,' printed in GWP in Action 2008 Annual Report, Global Water Partnership
- ◆ Hisaar Foundation's 'Water Conservation Guidelines', in English
- ◆ Presentation on 'Karachi Water Partnership – Showcasing Hisaar Foundation's Experience of Public-Private Partnership,' Mr Zohair Ashir



3.14 Youth Assembly (Part 1): Exploring Emerging Water Leadership (Session 5C – Interactive)

Moderator: Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation

Co-moderator: Ms Shireen Naqvi, Senior Consultant and Facilitator, Navitus

Guest Speaker: Mr Mohammad Omar Saleem, Civic Action Forum

The session ‘Youth Assembly (Part 1): Exploring Emerging Water Leadership’ focused on the importance of youth leadership, whilst informing them of the water challenges of Pakistan and gauging the interest and aptitudes of young people for water related professions. This session was sponsored by Cap-Net Pakistan.

The moderator, Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation, opened the session with the screening of Hisaar Foundation’s Documentary, ‘Time is Running Out’. He accompanied the footage with the story of a drop of water that reaches our showers and taps on a daily basis. This drop comes through the glaciers higher up in the country that have to be melted (naturally or otherwise) in order for us to be able to receive it through our taps. This entire process is continually created through the ‘Water Cycle’, whereby water from the glaciers and mountain tops is transported through precipitation, evaporation, transpiration and runoff into rivers and streams. He stressed that, the water that we receive whilst taking a shower, or use in the toilets and kitchens, must be appreciated and used economically.

Mr Mooraj went on to emphasize the youth’s negligence and lack of awareness on the ever-increasing global water shortage. The students and the youth complain of water scarcity only when there is no water in their showers, taps and/or at the most in the underground water tanks at their residences. This routine occurs when they wake in the mornings just before getting ready for school, college or university. Sadly, the youth, he said, are totally oblivious of the long-term repercussions of depleting fresh-water sources.

Guest Speaker

Mr Mohammad Omar Saleem, Civic Action Forum, opened his discussion by outlining his own understanding of the session topic – the youth assembly. He stated that the

session had not been focused specifically for the youth, but for those individuals who are “youthful” in age, mind and spirit, irrespective of their given ages. He called upon all the participants who did not look like college or university-going students but kept their minds and souls young and spirited, to become active members of such forums and activities.

Mr Saleem used the same water cycle that Mr Pasha had talked about earlier and discussed its importance in the lives of human beings on earth. He elaborated that, the ice stored in glaciers was like untouched gold mines and that there were reservoirs of fresh-water that can be used at times when there is an immense need for water. Having said this, the numbers of glaciers that have stored ice within the mountain ranges of Pakistan, contain much more water than the Indus River itself. Which was why, during possible droughts, the government of Pakistan had considered bombing the glaciers in order to meet the water demands in such situations.

He further elaborated upon the course that water takes from rivers and streams that run between mountains at extremely high velocity. The currents within the water are



Mr Omer Saleem, Guest Speaker



so powerful that they push and collect all that comes within its path – stones, boulders, rocks and even minerals. Gravity was another strong factor that helped push down the water and every other matter with it. So the people residing in the northern part of Pakistan do not benefit from natural minerals in the water, as they are swept into Punjab and Lower Punjab where the soil is fertile and agriculture is booming.

Moving on to a lighter note he explained the historic relationship of man and water. Man, he said, has been created to be the only energy-efficient mammal amongst all creations since it uses only two limbs. The remaining mammals utilize four limbs, thus making them limited in their traveling. Because of this Man on the other hand is known to have travelled much before he learnt how to farm.

Keeping this in mind, Mr Saleem apprised his audience that man knew how to use water more as a source of entertainment than survival. He urged the youth to start traveling and to use the northern areas of Pakistan as great sources for water entertainment, like canoeing and kayaking. Earning a source of living should be made into sustenance farming, where a person grows fruits and vegetables for himself and his family to survive. For the remainder of the time, he should keep himself busy in water-related sports and entertainment. He concluded his speech with some thought-provoking words, “If you do for a living what you live to do, you will be a very happy man”.

Questions and Answers

The question and answer session brought about interesting and lively queries from amongst the youth.

Mr Saleem was asked a question regarding the effects of mineral water. He replied that, mineral water is ground water that has been extracted through boring from several feet below. It is then distilled and purified removing all the minerals and salts that are found naturally in fresh water. Bottled water companies then add their own quantities of minerals and salts after the purification process has been completed and before distribution of the bottles. In third world countries, where clean water is a scarcity for the poor and underprivileged, most families are unable to afford bottled mineral water.

Replying to a question as to why was it so that we do not travel or move out of our surroundings, Omar Saleem responded that, man has been made to travel the earth in search of Allah's Signs as the Holy Qur'an states. So it is a shame that the youth are not encouraged to move out of their usual surroundings to enjoy the beautiful sights that nature has to offer. Water makes up 70% of the earth's surface and thus provides umpteen opportunities to engage

in water related activities and careers. The old and the young should make concerted efforts to engage in and create sports, entertainment activities, tourism and career options through water-related activities.

In response to a question as to why the situation of water was the way that it was today, Mr Mooraj retold the story of the one bucket of water that he used to consume for himself at home on a daily basis. When he got married, he had to share that bucket between himself and his wife and so his share was reduced to half. When he and his wife were blessed with their first child, the bucket of water had to be divided amongst three people. Over a period of the next couple of decades, the bucket of water was shared by five people in the same family. This story, he continued, resembles the story of Pakistan, where the growing population is consuming the limited resource of water in a very careless and harmful manner. The more powerful handful of the lot, tend to consume most from the bucket leaving only an almost negligible portion for the remaining majority. Public awareness must be made at every level to address the growing concern for the depleting fresh-water resources.

Conclusions

At the end of the session Mr Mooraj thanked Mr Saleem for being a guest speaker at the session and sharing his thoughts on the issue. He also thanked his young participants for keeping the session alive and actively bringing in thought-provoking discussions into light. He called upon the youth to become more active in conserving water and creating awareness amongst their peers, families, relatives and the public at large.

Display and Distribution Material

- ◆ Presentation on ‘Water Leadership Development’, Ms Farzana Ahmed Saleem
- ◆ Hisaar Foundation’s ‘Water Facts’, in English
- ◆ Hisaar Foundation’s ‘Water Conservation Guidelines’, in English



Youth attending the Session



3.15 Women Voices: Strategies for Unleashing the Most Potent Force for Change (Session 5D –Consultation)

Chair: Ms Khawar Mumtaz, Chairperson, National Commission on the Status of Women (NCSW)

Co-Chair: Ms Jasveen Jairath, Founding Convener, SOUL, India

Facilitator: Dr Sono Khangharani, CEO, Hisaar Foundation

A follow up to session 4A on 'Success Stories of Women Water Professionals', this session dealt with identifying issues, solutions and strategies to mainstreaming women in environmental and water management. Presently, there was very little focus on women and water, particularly the domestic use of water. The issue was how to define and differentiate between women's right to resources in general and water resources in particular. This session was sponsored by Raasta Development Consultants (RDC).

Discussion

In her keynote address, the Chair, Ms Khawar Mumtaz, Chairperson, National Commission on the Status of Women (NCSW), traced the role of women in natural resource management in Pakistan, which was acknowledged for the first time in the National Conservation Strategy in 1992. Even today the preoccupation of the government was mainly on agriculture with very little focus on women and water and primarily there was a policy gap on domestic use of water. The next issue was associated with the fact that, though the role of women was changing as a result of climate change and its implications, their social capital and societal

role however, remained the same and their capacity to cope with the changes has not been enhanced accordingly. What was needed was to develop their capacity (through education and skills) to handle the realities of environmental change. But the question was of how to integrate them in our national development process and there was also need to include their voice in governance. Devolution was taking place and now women have to become part of that system too.

Women could also be included in community management of resources. This joint management system, she added, was practiced in the northern areas. Women's access to resources can also be ensured through climate financing at the grassroots level. We needed to rethink our development paradigm, if we wanted to deal with climate change and resource management.

The Co-Chair, Ms Jasveen Jairath laid emphasis on grassroots development. While gender perspective on water was highlighted and lobbied at the donor and national level, very little trickled down to the grassroots.



Session Proceedings



The key issues that resist changes at the grassroots were identified as:

- ◆ Politics at the local level
- ◆ Resistance to women participating in decision making

As a solution, women's political leadership needs to be developed at the grassroots, on a collective scale. This session was very informative and extensively discussed the role of women in water. One setback in this regard, it was said, was the decrease in the representation of women in legislative bodies despite the democratic government. Unless the participation of women was increased at that level, change would not take place.

In response to a question whether there was a difference between urban and rural areas when it came to women and water, Ms Jairath said that, water burden and the gender issue should be seen in a class context because, while rich women can purchase their water security, the poor women have high vulnerabilities. Along with that public - private dynamics also needed to be considered.

Ms Sameena Nazir, Executive Director, PODA, gave an introduction of her organization and stressed upon the need to create space for rural women and recognize their presence as a constituency. Rural women working in agriculture should also be recognized as farmers and unused government land should be allocated to landless women. Citing an example of the work of Kisaan Aurat



Ms Khawar Mumtaz and Ms Jasveen Jairath, Session Chair(s)



Members of Karachi WWN with Ms Saleha Atif Program Officer Hisaar Foundation

Ittehad, she made her point on the need to raise awareness among the locals about the environment.

She said that, despite the fact that women were at the forefront, when it came to facing the brunt of climate change and environmental disaster they are not included in mainstream climate change policy making, at both local and international levels. Women and water projects need to take into account the fact that different agro-ecological zones have different issues across Pakistan and that we also need more women entrepreneurs in areas like, the seed business.

Conclusions

It was concluded that there was class bias and monopoly in water as well as inequality in its access. The problem lay in discriminatory access to water rather than scarcity of water. Countering the artificially created scarcity would be a political struggle and negotiations were needed at the highest level for cooperation. Alliances must be forged at a transboundary level as well as grassroots, where women need to be empowered to fight for their water rights.

Display and Distribution Material

- ◆ A report on 'Gender, Water & Climate Change: The Case of Pakistan', PWP and GWP, 2013



3.16 The Lead Stakeholder: The Government's Agenda and Commitment to Water and Sanitation Cooperation (Session 6A – Papers and Consultation)

Chair: Mr Arif Ahmed Khan, Additional Chief Secretary (ACS), Planning and Development, Government of Sindh

Facilitator: Dr Sono Khangharani, CEO, Hisaar Foundation

Speakers: Mr Farhan Sami, Country Team Leader, Water and Sanitation Programme (WSP), World Bank
Mr Masroor Ahmad, Senior Water & Sanitation Specialist, World Bank

The session 'The Lead Stakeholder: The Government's Agenda and Commitment to Water and Sanitation Cooperation' focused on finding out the government policy and agenda for the water and sanitation sectors and identifying strategies where civil society could partner in cooperating with the government. This session was sponsored by Water and Sanitation Programme (WSP), World Bank.

Papers and Presentations

Mr Farhan Sami, Country Team Leader, Water and Sanitation Programme (WSP), World Bank, made a presentation titled 'Setting the Context: Cooperation to Improve Sanitation'. The goal of WSP, he explained, was to support poverty reduction by supporting governments to provide improved water, sanitation, and hygiene services to poor people and also provide evidence based technical assistance, capacity building, and knowledge management to facilitate knowledge exchange and promote sector dialogue. WSP gives its clients the capacity and tools they need to plan, manage, scale up, and monitor water and sanitation services.

WSP, he elaborated, composed of a very lean staff in Washington DC, with almost 90% of the staff in 24 countries and 4 Regions around the world namely, Africa, South Asia, East Asia, and Latin America. The Programme, therefore had both a global knowledge sharing mandate as well as direct support to governments in 24 countries. Mr Sami shared encouraging news that, the MDG drinking water target which called for halving the proportion of the population without sustainable access to safe drinking water between 1990 and 2015, had been met in 2010, five years ahead of schedule. However, he added, this progress hides very deep disparities. While coverage of

improved water supply was 90% or more in LAC, Northern Africa and large parts of Asia, it was only 61% in Sub-Saharan Africa and though coverage in the developing world stood overall at 86%, it was only 63% in least developed countries.

Speaking on Pakistan's situation, he said that, since 1995, 28% of the population had gained access to water services in Pakistan, which was above the global average of 23%. Quantity was not the problem but quality, as 60,000 children died each year due to water related diseases. The Economics of Sanitation Initiative (ESI), a WSP knowledge series that determines the economic impact of inadequate sanitation, conducted in Pakistan determined that the majority of economic costs related to inadequate sanitation were health-related and that 71% of the health related costs were due to productivity lost because of diarrhea. He called for a people's movement on an emergency basis to tackle sanitation problems in the country.

Mr Masroor Ahmad, Senior Water and Sanitation Specialist, World Bank, made a presentation on the 'Government's



Mr Arif Ahmed Khan, ACS, Session Chair with Mr Farhan Sami and Mr Masroor Ahmad



Agenda and Commitment to Rural Water - (Rural) Water Cooperation in Action'. Through his presentation he highlighted models for rural water service delivery that currently exist as under:

- ◆ Provincial PHEDs in Khyber Pakhtunkhwa, Balochistan, and Sindh develop the schemes and subsequently operate them
- ◆ In Punjab, AJK, and FATA, PHEDs develop the schemes and they are subsequently operated and maintained by community-based organizations
- ◆ Communities in Punjab, AJK and GB have shown good financial sustainability with high levels of cost recovery (and in a number of cases revenues exceed operating costs).
- ◆ Domestic Private Entrepreneurs Models

He spoke on the reasons for non-functioning of schemes in Sindh and made the following recommendations:

- ◆ Diagnostic study on reasons of failure and success of the model
- ◆ Government of Sindh (GoS) vision on "Rural Water Sector" centered to community participation
- ◆ Clarification of role and responsibility
- ◆ Uniform policy
- ◆ Acknowledging women's role and institutionalizing at policy and operation level
- ◆ Strong monitoring (by citizens and government) through innovative tools

Mr Arif Ahmed Khan, Additional Chief Secretary (ACS), Planning and Development, Government of Sindh, said there was hardly any need for him to emphasize on the significance of water, since water was single most important factor for sustenance of life. He presented the Government of Sindh's perspective and highlighted the past, present and future plans in this regard. Sindh was a water deficient province and clean drinking water was not available. He mentioned the Rs 45 billion greater Karachi Water Supply Project, which would provide 630 million gallons of water per day to Karachi. The project would be undertaken in three phases and was expected that this would be finalized before the next financial year.

In rural areas the experience of Public Health Engineering Department was not pleasant. Most water supply and sanitation schemes were non-functional and in order to

tackle this problem, the Government of Sindh, he added, has envisaged moving away from traditional approach and now plans to create water hubs through installation of two types of filter plants i.e. RO and Ultrafiltration and more plants like these would be installed to provide safe drinking water.

Speaking on sanitation, he termed the situation far from satisfactory. The Government of Sindh was trying to address this situation and shared information about the S3 Project for Karachi. The current approach of PHED, he said, was to design and develop the scheme and then hand it over to local municipal authorities. The local government system was ill-equipped and inefficient, he added, and disclosed that the Government of Sindh planned to rehabilitate 168 non-functional schemes and if additional funding was received all non-functional schemes would be revived. Once revived, these schemes would not be handed over to local municipal authorities but O&M would be outsourced to private sector.

Three other speakers, representatives of an NGO, the media and a student also made presentations to identify the strategies where they could partner in cooperating with the Government.

Drinking water supply and sanitation in Pakistan was characterized by some achievements and many challenges, said Ms Sara Pervez, a student from Bahria University. Pakistan was one of the most populous countries in the world and increasing urbanization and political instability had resulted in millions of people lacking access to safe water or basic toilet facilities. Poor drinking water quality and sanitation had led to major outbreaks of waterborne diseases, with estimates indicating that each year, more than three million Pakistanis become infected with waterborne diseases. A National Sanitation Policy and a National Drinking Water Policy had been approved in 2006, with the objective to improve water and sanitation coverage and quality. However, the level of annual investment still remains much below what was necessary.

While quoting statistics, she shared that, over 15 million people had no choice but to collect dirty water from unsafe sources, over 93 million people did not have access to adequate sanitation and over 40,000 children died from diarrhea caused by unsafe and poor sanitation. This meant drinking water and sanitation was important and clean



water and sanitation could save someone's life. UNICEF, she elaborated, works closely with Government of Pakistan, Ministry of Environment, Pakistan Council for Research in Water Resources (PCRWR), NGO's and other local government bodies to increase access to safe water and sanitation.

Mr Zulfiqar Halepoto, Advisor on Policy Advocacy and Civil Society Interface and freelance journalist, spoke on the role of media in the water sector. Information about government plans and programmes, he said, was received through media to the public. He highlighted the ethnic and social dynamics with which media treated various water issues and lauded the role of the English and Sindhi media for amplifying water issues effectively.

While speaking on the role of media, he said that, the media had three primary functions, such as providing information, entertainment and education. Regrettably however, analysis of electric media content reflected that hardly any time was devoted to educating the people. Under PEMRA rules, media was expected to devote certain time for public service messages to educate people on various themes. This needed to be ensured and while the government should take initiatives for effective implementation of PEMRA rules, the media should also voluntarily dedicate adequate time for public service messages.

Mr Zaffar Pervez Sabri, Acting CEO, PPAF, pointed out that open defecation impacted the food chain. Water was life and safe water was better life, he said and that while water was for all it was not accessible to all. While citing the example of Karachi, he said that, it was deplorable that the better segment had access to piped water and the poor segment of society did not. As a result, a major chunk of poor households had to spend large sum on getting safe water and that left them with hardly any money to meet other needs.

Water and sanitation was central component of PPAF, he said, and in this regard PPAF has been closely working with Government of Sindh and mentioned pilot projects in Sindh and Punjab at the Union Council level. He emphasized the need to promote the Poverty- Profit - Planet (PPP) principle.

During the open discussion, Mr Aijaz Khawaja, a development professional highlighted the need of involving local communities and pointed out the failure of Town Municipal Administrations (TMAs) in water and sanitation sectors in Sindh.

Conclusions

The session concluded that:

- ◆ There was scarcity of drinking water and water supply coverage was poor
- ◆ Government spending in the water and drinking water sector had been poor
- ◆ These allocations were insufficient to meet the Millennium Development Goals
- ◆ In most urban areas and in all rural areas, the cost of drinking water was not properly priced and therefore O&M cost for drinking water had to be subsidized from other sources
- ◆ Government of Sindh has envisaged moving away from traditional approach and now plans to create water hubs through installation of two types of filter plants. This approach should be initiated at pilot level and then replicated. Moving away from previous system would also have implications
- ◆ Communities needed to be involved at all levels in water supply and sanitation scheme
- ◆ Media should dedicate time for public service messages to raise awareness about water conservation

Display and Distribution Material

- ◆ Presentation on 'Setting the Context Cooperation to Improve Sanitation', Mr Farhan Sami
- ◆ Presentation on 'Government's Agenda and Commitment to Rural Water - (Rural) Water Cooperation in Action', Mr Masroor Ahmad



Mr Zulfiqar Halepoto



3.17 The Role of Academia: Bringing together Water Cooperation Initiative (Session 6B – Moderated Discussion)

Chair: Dr Sarosh Lodhi, Dean, Civil Engineering and Architecture, NED University of Engineering and Technology, Karachi

Co-Chair: Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation

Facilitator: Dr Daanish Mustafa, Assistant Professor, Kings College, London

The objective of the session was to get commitments from the academia for enhancing the knowledge base and skill set for the water sector in the future. This session was sponsored by Panjwani Charitable Foundation.



Dr Sarosh Lodhi, Session Chair

After a brief review of the preceding session and revisiting its outcomes, the Chair, Dr Sarosh Lodhi, Dean, NED University, and Co-Chair, Ms Simi Kamal, introduced themselves. In addition to the participants from Part 1, faculty members of other universities like Aga Khan University (AKU), NED, Shah Abdul Latif

University, Institute of Business Administration (IBA) and Karachi University, were also in attendance and were actively involved in the discussions. Some representatives from the civil society were also present.

Discussion

It was unanimously agreed that higher educational institutions had largely failed in providing trained individuals for the water sector to meet current and future needs. There was great need to develop a range of water professionals and for that we needed to look at the role that academia had played so far and what more could they do. The next issue was how to link research with practical concerns. Further delving into it, raised the question as to why the universities had failed to make that key link.

To address this issue, four things were very important:

- ◆ Think of water outside the engineering paradigm
- ◆ One university could not work on this in isolation and a Cooperative Ethos among universities was needed
- ◆ Addressing the lack of research needed to be a national priority and then address specific research issues, like water
- ◆ Private capital also needed to enter the domain of research

These overarching solutions then gave way to a set of specific questions that were discussed in order to identify what exactly the academia can do and what it needed to do.

What type of changes would you like to see in Civil Engineering Departments to meet water challenges?

The following changes were recommended:

- ◆ Primarily course curriculum should be revised, across all universities, according to the prevailing water issues
- ◆ Course content on Engineering Management, Social Engineering and Water Conservation Systems should be a part of the curriculum
- ◆ Universities need to invest in latest technologies for both learning and research purpose
- ◆ Research needed in urban water supply & sanitation and pressures on our water infrastructures
- ◆ Most importantly research centres needed to be proactive in creating demand for research.

At this point, reference was also made to Mr Saiyid Ali Naqvi's book titled "Indus Waters and Social Change".



What were the priority Natural and Applied Science Disciplines?

The following disciplines were identified by the participants as being imperative for the water sector:

- ◆ Medical curriculum should include social and economic determinants including water
- ◆ Bio-medical engineering
- ◆ Policy relevant mathematical models of water flows (NUST could take a start in introducing this in its courses)
- ◆ These disciplines should also reflect a social sciences perspective
- ◆ Environmental sciences
- ◆ Hydrology and geophysics
- ◆ Geomorphology

What were the priority Social Science Disciplines?

For universities that taught Social Science Disciplines, the following areas were a good start:

- ◆ Water should be a component of education on Ethics
- ◆ Water Economics
- ◆ Water Conservation
- ◆ Water rights and rights of women in water sector (how patriarchy impacts water)?
- ◆ Women as water educators
- ◆ Relationship between water behavior and social structures
- ◆ Introduce Gender and Water in all gender studies and women studies departments
- ◆ Interdisciplinary interfaces on water
- ◆ Water Policy, Water Law and Water Regulation

What University Programmes could be Nodes for Research on Water?

- ◆ Masters in Water resource management (NED University)
- ◆ Water resource modeling & simulation (NED University)
- ◆ Masters in Urban and Regional Planning (NED University)
- ◆ Masters in Environmental Engineering (NED University)
- ◆ Water Policy and Economics (IBA)
- ◆ Environmental and Natural Resource Economics (IBA)
- ◆ Environmental Health Sciences (AKU) – will be a track within a larger discipline in 2014
- ◆ Agricultural Economics (AERC – Karachi University)
- ◆ Environmental Economics (AERC -Karachi University)
- ◆ Water Resource Engineering (University of Engineering and Technology)

What were the prospects for a Forum of Researchers on Water?

The most substantial initiative that came out of the 2 sessions was the decision to launch a forum for different universities to collaborate and work together on research, learning and development in the water sector. It would also offer students a chance to take short courses and hone their skill set. This forum would be initiated by NED University and other universities would then join in. Hisaar Foundation would act as the Secretariat and further rounds of meetings would be conducted shortly to take this to the implementation phase.

Conclusions

To conclude it can be said that this session was a great step forward in bringing the multi-disciplinary academia on one platform and identifying the gaps, opportunities and potential entry points that universities could exploit and produce water professionals for various aspects of water, with the requisite skill sets.



3.18 Youth Assembly (Part 2): Harnessing Youth Assembly for Concrete Action (Session 6C - Interactive)

Facilitator:

Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation

Guest Speaker:

Mr Khalid Mohtadullah, Senior Advisor, UNDP, GWP, IWMI and Council Member, Hisaar Foundation

The session 'Youth Assembly (Part 2): Harnessing Youth Energy for Concrete Action' focused on introducing water related career opportunities and establishing 'cooperation' inherent in cross fertilization of disciplines and subjects. This session was sponsored by Hisaar Foundation.

The Moderator, Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation, continued his discussion from the previous session by saying that, the ice age was sure to wipe mankind out from the planet even before we knew it. This is all due to human beings accelerating the occurrence rate of global warming and declining resources, as well as endangering animal species. We must make concerted efforts as much as we can to try and overcome this. The "survival of the fittest", he said, was a theory best describing animals and did not apply to human beings. Mankind should be looking towards cooperation with one another and not competition, as we see happening in some countries throughout the world. Sharing water sources like rivers, streams and seas between and amongst countries would bring about prosperity for all.

For Karachi, Keenjhar Lake and Hub River were the two sources of fresh water consumption that needed to be maintained for sustainability. Through cooperation and conscious utilization, the residents of Karachi could sustain these water reserves for longer than expected.



Mr Tofiq Pasha Mooraj, Session Moderator

Guest Speaker

The Guest Speaker, Mr Khalid Mohtadullah, Senior Advisor, UNDP, GWP, IWMI and Council Member, Hisaar Foundation, discussed facts and figures with his young audience regarding the growing concern for water consumption, usage and wastage. He stated that the quantum of renewable water stayed the same and that there was a total of 90% seawater on the planet, 2% ice on both poles and only 1% fresh-water for consumption, that was reusable. We must therefore be more vigilant and careful in using fresh and reusable water.

Mr Mohtadullah went on to give details about the number of countries in the world who shared several rivers. River Danube was a reservoir source for nineteen countries of Europe, which included Hungary, Romania, Bulgaria and Croatia as beneficiary countries. The Rhine was shared by six countries including France, Austria, Germany and Switzerland, which ran along its 11,230 Kms length. This had been made possible, he added, through mutual cooperation and understanding and not competition. Countries, such as India, Pakistan, China and Vietnam are still divided over the river which they share because of lack of cooperation between the countries. If competition persists the way it does, he added, man will be facing acute shortage in a very short span of time. For this reason, the United Nations had named this year, 2013, as the Year of Water Cooperation.

Mr Mohtadullah drew his discussion to a close with the following advice to the youngsters, "learn to live with less as this is the only way man will be able to sustain himself. Toilets now have two flush systems in place, one for flushing in more water and one for less. We should use both wisely and appropriately. Look for alternate ways to use and save water in the best possible manner. Be extremely efficient in the use of water. Do not pollute in any form".



Discussion

Water theft, Mr Mooraj elaborated, was a major issue that was being faced in a country like Pakistan, with more than half the population deprived of clean drinking water. The main cause for concern was the number of suction pumps that affluent families installed at their residences. These suction pumps, illegally pumped/stored water within the underground water tanks of these residences and thereby deprived access to several hundred to thousands of families. Sadly, the number of pumps being demanded was increasing annually, several hundreds of families were being forced to go on without ever getting to use or see clean drinking water.

Global warming, Mr Pasha stated, has been increasing at an accelerating rate as compared to several decades ago, when the previous generations such as us were growing up. Back in the 1960s and 1970s, global warming was a distant concern for several countries but in the past decade or so, the acceleration rate has increased manifold startling and alarming even the common man. In order to do so, steps need to be taken to ensure that our children, grandchildren and even our great grandchildren receive fresh water. Industrial waste and pesticides which had increased tremendously within and around the country also aided global warming and water shortages.

Conclusions

In conclusion Mr Mooraj discussed Hydroponics, an age-old style of farming where land or soil was not required. Cultivating vegetables and fruits in water was far more efficient and sustainable than in soil, since soil acted as an anchorage/weighting agent in which plants grew and was not always an essential component. He urged and encouraged the participants to grow vegetables and fruits using hydroponics and also asked them to pass on the message to those directly linked to the industry. This technology saves space and works well even in small individual scales.

If explored and pursued sensibly, there were mind boggling opportunities for careers in water. Colleges and universities, especially in Pakistan must look into creating graduate and undergraduate programmes to attract students towards this industry. Unfortunately, he added, there was a great dearth in career counseling for the youth, which was why students were very confused when they took admissions in colleges and universities and tended to regret their decisions into their first semester.

Mr Mooraj thanked Mr Khalid Mohtadullah for providing his valuable expertise and experiences regarding the water industry, possible career options and the bleak future of clean drinking water. He urged the young participants to seriously look into career options that they could pursue for water conservation, exploration and development. Even with a limited pool of universities offering specific courses, students should research possibilities where water was being analyzed and monitored in other sectors, such as engineering, oil and gas rigging and other exploration services.

Display and Distribution Material

- ◆ 'Pakistan: Water in a Vulnerable and Stressed Environment: Priorities for Higher Education, Research and Cooperation', talking points by Simi Kamal



Youth Participants



3.19 Changing Demands for Knowledge, Technology and Capacity Development for Water Cooperation (Session 6D – Papers and Consultation)

Chair: Dr Pervaiz Amir, Director, Pakistan Water Partnership (PWP) and Council Member, Hisaar Foundation

Co-Chair: Ms Farzana Ahmed Saleem, Country Coordinator, Cap-Net Pakistan

Facilitator: Mr Nasir Ali Panhwar, Council Member, Hisaar Foundation

Speakers: Mr Khadim Hussain, Manager Sales, Operation- South, Micro-Drip (Pvt) Ltd
Ms Hadiqa Maqsood, Research Assistant, NED University of Engineering and Technology, Karachi
Mr Nazir Ahmed, General Manager, Transition, Sindh Irrigation and Drainage Authority (SIDA)

The session focused on identifying knowledge needs for changing water scenario, identifying technologies and the identification of capacity development gaps and what to do. The session was sponsored by Cap-Net.

Opening Remarks

The session Chair, Dr Pervaiz Amir, Director, Pakistan Water Partnership (PWP) and Council Member, Hisaar Foundation, welcomed the speakers and participants and gave a brief on the session objectives. He then made a round of introductions of the speakers and invited them to share with the participants, their knowledge and work in identifying alternate water efficiency irrigation technologies.

Papers and Presentations

Mr Khadim Hussain, Manager Sales, Operation- South, Micro-Drip (Pvt) Ltd, in his presentation titled 'Need and Scope of Efficient Irrigation Systems', highlighted the scope of alternate efficient irrigation systems in Pakistan due to limited available water resources.



Mr Khadim Hussain

The United Nations, informed Mr Hussain, had placed Pakistan among the 'water hotspots' of the Asia-Pacific region, saying the country faced major threats of increasing water scarcity, high water utilization, degrading water quality and climate change risk. With increasing population, while the water requirement was rising, per-capita surface-water availability had reduced to a mere 800 cubic meters per year in 2013, putting Pakistan in the list of water scarce countries. Being an agro-based economy, water shortage thus posed a major threat to the country and directly affected its socio-economic condition.

While water resources on the supply side were depleting and demand for the resource was increasing, Pakistan being mostly irrigated-agriculture, he added, was utilizing more than 90% of the available water resource. Irrigation efficiency in Pakistan was only 40% and water productivity was just 0.13 kg/m³, which was very low as compared to other countries. Like other resources there was dire need to adopt water conservation in agriculture to increase effective and productive use of this scarce resource.

Research findings proved that modern efficient irrigation systems like Drip Irrigation Systems, reduce irrigation water requirement up to 70%, reduce energy usage up to 50 to 70%, reduce usage of fertilizer and other inputs up to 50% and increase crop yield up to 30%. The combined effect was up to 60% to 100% increase in income.

It was concluded that drip irrigation was amongst one of the most important and effective modern scientific irrigation techniques for water efficiency and crop productivity and employing this modern technology appropriately was key



to overcoming the critical challenge of fresh-water scarcity and increase in income. It was recommended that drip irrigation should be introduced in Pakistan using a sustainable approach.

Ms Farzana Ahmed Saleem, Country Coordinator, Cap-Net Pakistan made a presentation entitled 'Orientation on Cap-Net Capacity Building in IWRM'. She informed that Cap-Net, a programme of UNDP and partner of Global Water Partnership (GWP) was an international network of networks for capacity development in Integrated Water Resource Management (IWRM), formed in 2003. It was a partnership of institutions, knowledge centres and water managers around the world that sought effective capacity building for sustainable management of water. With 30 international partners, Cap-Net was made up of 23 geographic and 4 thematic capacity building networks that collaborated in the bringing together of knowledge and experiences from countries and regions and the compilation of knowledge and capacity development in new and challenging areas.

It was recommended that organizations should become members of Cap-Net to increase their knowledge and receive training on how to manage, develop and use water resources sustainably and to adapt to increasing climate variability within a context that addressed gender equity and sustainable livelihoods.

Ms Hadiqa Maqsood, Assistant Researcher and Hydrologic and Hydraulic Modeler, NED University, gave a presentation on 'Water Conservation using Alternate Irrigation Practices', and said that, water management was the key element in irrigation systems to attain maximum yield with controlled amount of water. With the growing population, the main global concern was to fulfill the food and fiber requirement for the present and future. This issue had subsequently created an imbalance between water supply and demand, since the major section of water was devoted for irrigation, especially in Pakistan. In order to increase productivity (yield per area) using less or available water, various alternative irrigation practices were now being applied.

The study, she explained, was based on the efficient water management techniques suitable to improve the irrigation system for Porali River Basin, Lasbela, Balochistan. The study crop was cotton, the most grown crop in this region. Presently, basin/border irrigation system was being implemented in this watershed which showed fallout with

approximately 30% losses. A computer simulation model, NCRS_SURFACE, was used to simulate alternative irrigation systems in order to decrease the losses and conserve water, consequently.

Research findings showed that using conventional system $3 \times 10^6 \text{ m}^3$ of water could be saved. Additionally, surge and alternate furrow systems showed exceptionally good results with satisfactory efficiencies (79 to 83%), minimal losses (15%) and water conservation up to $1.2 \times 10^7 \text{ m}^3$. Based on the conserved amount of water, increase in command area was calculated, showing $2.18 \times 10^6 \text{ m}^2$ for conventional and $9 \times 10^6 \text{ m}^2$ for surge and alternate furrow systems.

Based on the research it was concluded that:

- ◆ All 3 systems showed good efficiency
- ◆ The adoption of these technologies should be looked into as possible alternates
- ◆ The benefit of increase in command area is eventually an increase in crop yield and the economy
- ◆ These practices should be followed for other crops in this watershed to benefit the agriculture and local community

Mr Nazir Ahmed, General Manager, Transition, SIDA made a presentation on 'Empowering the Irrigation Reforming Institutions in Sindh', which was more of a qualitative research on the analysis of the reforms that the government had introduced 15 years ago and their experience of the reforms. He gave the participants an overview of the institutional reforms, its goals and expected results and the overall impact on the irrigation sector. Research, he said,



Dr Pervaiz Amir and Ms Farzana A Saleem, Session Chair(s)



had shown that while the government had through these reforms made new institutions, actual transformation had not taken place. The focus of the government had been on introducing the reform but not so much on empowerment.

Research findings showed that:

- ◆ The transitional timeframe as per SWMO had not been met since the government had not completed the appointment of the AWBs and or carried out the transfer of Barrages in Sindh
- ◆ Administrative Transfer of Irrigation Department Staff to SIDA and AWBs had not taken pace
- ◆ There had been no delegation of powers, administrative control of irrigation staff to SIDA and AWBs as per reform
- ◆ The full activation of SIDA Board had not taken place and no of the Board had taken place in the last 18 months
- ◆ Elections of SIDA Board and AWBs had not been held
- ◆ The Law Department had still not vetted or approved SIDA Rules of Business
- ◆ Difficulty had been encountered in enhancing water price for Agriculture and commercial users
- ◆ At source deduction of water dues from provincial, municipal bodies and federal agencies had not been carried out
- ◆ Farmers were still chronic defaulters and recovery of dues was still an issue

The research concluded that:

- ◆ All irrigation staff working in SIDA area should be administratively transferred to SIDA and AWBs-powers may be delegated
- ◆ AWBs (KB & Pinjari) initially falling in Kotri Barrage Command area may be notified by Government
- ◆ Activation of SIDA Board should be a priority
- ◆ Constitution of Regulatory Authority should be made as per SWMO-02 to oversee and manage decentralization and transition process
- ◆ Early elections of SIDA and AWBs should be held preferably through third party- Election Commission of Sindh
- ◆ Support should be provided by BoR to collect abiana through Land Revenue Act
- ◆ In all expected AWBs (10) command areas formation of Farmers Organizations may be initiated through ADP Schemes

- ◆ Water policy and water strategy at Sindh level should be developed
- ◆ There should be a complete ban on sanctioning of direct outlets in order to avoid serving elites at the cost of poor and small farmers

Questions and Answers

A very interactive question and answer session and discussion followed the presentations. The participants not only put forward questions to the presenters but some of them also shared their comments and observations.

In response to a question that, if dams were not the only solution, what another solutions were available, Mr Khadim Hussain replied that, in the last 20 years the construction of large dams had declined globally. In Pakistan because of climate change the Himalayas had seen a reduction of glaciers, resulting in loss of glacier melt and loss of water available for storage. With the reduction in water availability, Pakistan could not afford to build such expensive dams that could not be filled to capacity. Therefore, to increase the demand side, we must enhance and promote alternate irrigation systems and look towards drip irrigation and other technologies that were now available.

Asked if any practical strategy and awareness programmes had been developed or carried out to inform farmers about the benefits of drip irrigation and how they could adopt it, Mr Hussain replied that, while research and other institutions had been using drip technology for the last 10 years, efforts for its macro adoption as an alternate technology still needed a lot of work. No community level awareness programmes or campaigns had been carried out to promote it as at low cost alternate technology and while government involvement and support, he added, was essential in creating awareness, stakeholders also needed to rally together and work for its promotion at the farmer level. Since the government had begun to launch several drip irrigation projects, there was now an increasing awareness about drip irrigation in the agricultural sector. Giving the example of Israel, where 95% of agriculture was being done through drip irrigation, he felt that in Pakistan drip irrigation should be adopted as alternate technology wherever feasible.

Ms Maqsood added that, since different areas and regions required different systems, technologies like, sprinkler, surge and bubblers should also be looked into as efficient and effective alternatives.



In response to a question as to what was the cost benefit analysis between drip irrigating and pitcher irrigation, Mr Hussain said that, pitched irrigation could only be done locally and not on a large scale.

Other participants shared their views and emphasized that to bring about and observe behavioural change, standardized regulations for irrigation should be put into practice.

The Chair, Dr Pervaiz Amir as a wrap up to the session highlighted upon three important things that had emerged. Commenting on the discussion on no dam or yes dam, he informed that, dams were still being constructed the world over and nations like India and China were building dams because they wanted to be water secure. It was not essential for dams to be filled to capacity, what was important was to realize that we have to make efforts to store whatever nature gives us. Pakistan already a water insecure country, had lost 555m acres of water in the 2010 flood which could have been stored and given the scarcity of other resources in the country, especially electricity, water stored in the dams could be beneficial in producing hydro power as low as Rs 1 per watt.

Speaking on drip irrigation as an alternate to efficient and effective means of technology, Dr Amir commented that, it was an old technology that had been adopted by many countries like Israel, as far back as 1943. While it was a costly technology, it has been tried in Pakistan and its success had been farmer specific. He elaborated that, while there was outstanding knowledge on water resource, not even 15% of that knowledge was being used and that we only had the required facility to bring the knowledge into the cities but not to the villages and rural areas and especially to women.

Conclusions

The session concluded with the following recommendations:

- ◆ Modern media concepts should be utilized to promote water knowledge and water efficient technologies at village and rural levels

- ◆ There was need to work with the local artisans to see what technologies were available and feasible.
- ◆ 5-6 other suitable and appropriate technologies should be explored for specific areas and climatic environments to improve water efficiency in irrigation
- ◆ Alternate technologies such as raised bed furrow and minimum cultivation system were successful options that should be looked into as means of effective and efficient irrigation system

A positive and encouraging outcome of the session was that Mr Nazir Ahmed offered the services of SIDA to go to the grassroots and show farmers how drip irrigation and other technologies were viable alternatives to improve water efficiency in irrigation.

Display and Distribution Material

- ◆ Presentation on 'Need and Scope of Efficient Irrigation Systems', Mr Khadim Hussain
- ◆ Presentation on 'Orientation on Cap-Net Capacity Building in IWRM', Ms Farzana Ahmed Saleem
- ◆ Presentation on 'Water Conservation using Alternate Irrigation Practices', Ms Hadiqa Maqsood
- ◆ Presentation on 'Empowering the Irrigation Reforming Institutions in Sindh', Mr Nazir Ahmed



Ms Hadiqa Maqsood



3.20 Closing Plenary and Partners' Meeting– Declaration and Discussions for Future (Session 7 – Presentations, Discussions and Conference Declaration)

Chair: Mr Mirza Qamar Baig, Ex-Secretary of Commerce, Ambassador to Italy, Member of FAO, Board Member, State Bank of Pakistan

Co-Chair: Mr Zohair Ashir, Chairperson, Hisaar Foundation

Moderator: Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation

Speakers: Mr Zaffar Pervez Sabri, Acting CEO, Pakistan Poverty Alleviation Fund (PPAF)
 Mr Kazi Ayaz Mehassar, Provincial Coordinator - Sindh, UNESCO
 Mr Siddiq Sheikh, Advisor on Social Sector, FPCCI
 Ms Seema Tahir, CEO, Airwaves Media (Pvt) Ltd
 Dr Akash Ansari, CEO, Badin Rural Development Society (BRDS)
 Mr Sarwar Mushtaq, ECKOVA Production
 Ms Sabiha Shah, Lyari Community Development Project (LCDP), Member WWN
 Ms Shahnaz Jameel, Member WWN
 Dr Sono Khangharani, CEO, Hisaar Foundation
 Dr Daanish Mustafa, Assistant Professor, Kings College, London

The objectives of this session were:

- ◆ To present conclusions in the form of a Conference Declaration based on presentations, discussions and views shared by the participants and the representatives of the various organization regarding the future of course of action on the issues discussed during the Conference
- ◆ To provide a platform to Hisaar Foundation Partners to share their experiences and identify future opportunities of working together in the water and food sector
- ◆ To provide an opportunity for potential new partners of Hisaar Foundation for offering to cooperate and work in collaboration for a common agenda

The closing plenary commenced with a brief overview of the proceedings of the previous sessions by Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation. She highlighted the salient features of the Conference and key role played by the institutional and individual participants throughout the two days. She welcomed Hisaar Foundation partners to the Annual Partners' Meeting, being held as part of the closing plenary.

Mr Sono Khangharani, CEO, Hisaar Foundation, made a brief presentation on the overall objectives and programmes of Hisaar Foundation. The presentation focused on Hisaar Foundation's approach towards development and the balance it strikes between being a service provider as well as a 'Think Tank'. He highlighted the role of the Board of Governors, who serve in a voluntary capacity and provide a strong base of expertise driven advice and commitment. His presentation also covered the important role the institutional partners played in the continuation of the Foundation's programmes and their execution.



Mr Sono Khangharani, CEO, Hisaar Foundation



Mr Zaffar Pervez Sabri, Acting CEO, PPAF, shared his views on the two-day proceedings and complimented the organizers for holding such a successful high level Conference. He reiterated PPAF's commitment to the water sector and stated that PPAF looked forward to working closely with Hisaar Foundation and other partners in overcoming the challenges facing this sector. He pledged that PPAF would continue to give high priority to this pressing issue and announced that a similar series of conferences/seminars on water would be held by PPAF during the year, across various cities in Pakistan starting with Islamabad in the near future.

Mr Akash Ansari and Ms Sabiha Shah representing the partners of Hisaar Foundation spoke about the fruitful relationship they have enjoyed with the organization. They lauded the efforts of the Foundation in helping them during the various emergencies by providing supplies and services, for building capacity of the organization and including them in various programmes of Hisaar Foundation, like the home-based food production and installation of water filtration plants. They said organizations like Hisaar Foundation played a fundamental role in the growth and well-being of frontline organizations like their own, at the community level. In terms of future expectations they hoped that Hisaar Foundation would continue to play the dual role of being a service provider as well as a "think tank" on core issues related to water, food and livelihood security. Mr Siddiq Sheikh, Advisor on Social Sector, FPCCI, appreciated the efforts of Hisaar Foundation in holding such a content rich Conference, which brought together key players from the business community, government, NGOs, funding organizations and experts in the water sector on a singular platform to share ideas and solutions for future course of action. He acknowledged the valuable relationship FPCCI and Hisaar Foundation had and cited the recent instances of emergency relief, where both organizations had worked together for the benefit of the larger community. In keeping with water cooperation, the main theme of the Conference, he offered FPCCI's collaboration to work with all those organizations in the social welfare sector which aimed at alleviating the suffering of the poor in Pakistan. In this regard, he also mentioned FPCCI's commitment towards social development and offered the availability of its resources, especially in terms of the infrastructure to all and sundry working in the social sector. He reiterated the commitment of FPCCI to work closely with Hisaar Foundation in the water, food and livelihood security sector.

Ms Seema Tahir whose organization (Airwaves Media (Pvt) Ltd) had been instrumental in assisting Hisaar Foundation in putting together some of the media related activities for the Conference, spoke of her own interest in the water sector, the role of women and how they could emerge as catalysts of change. She stated that, her organization was willing to partner with Hisaar Foundation, not only in media activities but on a wider scale in alleviating the water related problems faced by the communities in Pakistan. She extended an offer of putting the resources available to her towards this cause and appealed to all present to join in this effort of cooperation and community development, as a key outcome of this Conference.

The representative from the UN, Mr Kazi Ayaz Mehassar, (Provincial Coordinator - Sindh, UNESCO) thanked Hisaar Foundation for holding this event and extended similar support to the Foundation in future. He reiterated that, the challenges facing us in the water and food sector were part of the global agenda towards which his organization continues to endeavor and shares with the local organizations, ideas and solutions which can help them in overcoming some of the challenges in this sector.

Mr Zohair Ashir, Chairperson, Hisaar Foundation, spoke about the support provided by the various key stakeholders in holding this Conference. One of the key outcomes in this regard was the commitment made by various key stakeholders in holding this Conference. He cited the commitment made by the Government of Sindh through its Planning & Development Department to establish a special water cell within the department, which would ensure that the activities planned for the province in the water sector in consultation with Hisaar Foundation, were carried out in a timely and focused manner. He welcomed the gesture of Faysal Bank, which had come forward during the Conference and agreed to sponsor installation of water filtration plants in various localities across Karachi. He said similar offers of cooperation had come through from the media, other businesses, academic institutions and many other funding agencies. He stated that, Hisaar Foundation was encouraged by this response and would ensure that the commitments made were realized at the earliest and the end beneficiaries receive the benefits of these commitments as soon as possible. Lastly, he announced that given the strong support and the interest expressed by the participants for this Conference, Hisaar Foundation would hold the next International Conference in Karachi, in 2015.



Thereafter, Dr Daanish Mustafa, Assistant Professor, Kings College, UK and Member, Academic Committee, Hisaar Foundation, tasked with the preparation of the Conference Declaration read out the 'Karachi Declaration on Water Initiatives 2013'. The Declaration called on the delegates "To recognize that there are multiple values that a society seeks to realize from water beyond its obvious economic and health benefits. Water's significance to culture, religion, identity, aesthetics and sense of community is often overlooked in water policy. The emerging water cooperation paradigm must reflect these multiple values".



Session Chair, Mr Mirza Qamar Baig

Mr Mirza Qamar Baig, Ex-Secretary of Commerce, Ambassador to Italy, Member of FAO, Board Member, State Bank of Pakistan, praised the organizers for arranging the Conference in such difficult times for Pakistan. He said that, some of the presentations he had attended had been highly informative and pragmatic

and made special mention of the presentation made by Mr Khalid Mohtadullah, which offered a course of direction for managing many key and difficult

issues related to water. He encouraged Hisaar Foundation to move towards contributing more as a 'Think Tank', something he thought the country direly needed to address issues in water and food, based on evidence based policies and research.

Ms Simi Kamal, cited the many contributions of the Foundation during the previous years. As part of the moderation of this session, she also frequently highlighted the contributions made by various stakeholders and acknowledged by name some of the individuals and organizations who had been instrumental in supporting Hisaar Foundation, since its inception. At the end, she thanked all the participants, sponsors, media, government and other organizations who made this Conference such a success.

The session closed with a vote of thanks by Ms Simi Kamal, a musical performance based on the Conference theme, a picture presentation encapsulating the highlights of the two-day proceedings and the appearance of Bubbles, the official Mascot of Hisaar Foundation, on stage.

Display and Distribution Material

- ◆ Presentation on 'Hisaar Foundation's Partners Framework' Dr Sono Khangharani



Ms Simi Kamal, Mr Zohair Ashir, Mr Zafar Pervez Sabri, Mr Mirza Qamar Baig, Mr Kazi Ayaz Mehassar (UNESCO) (L to R)



Bubbles – Factfile

Name:	Bubbles
Date of Birth:	November 16th, 2013
Created by:	Hisaar Foundation
Art Animation & Design by:	Mr Zain Ashir

Appearances:

Hisaar Foundation International Conference, Public Service Announcements, Hisaar Foundation Jingle, Schools, Exhibitions, etc.

Hobbies:

Water conservation, planting seeds for home grown food, water harvesting, fighting pollution and helping others.

This is the story about the birth of 'Bubbles', a lovable, bubbly and happy character. The Hisaar Foundation team announced the creation of Bubbles on the auspicious day of November 16th, 2013.

Bubbles is solely created by Hisaar Foundation for the purpose of communicating more effectively with the youth of Pakistan. Bringing a change in behaviours is one of the key components of Hisaar Foundation's strategy on conservation of water and protection of the environment. This change in making a difference in the water sector has to come from the young people and youth of Pakistan. Today, the youth of Pakistan comprise more than 61 million (those between the ages of 5 to 24 years), by far the largest segment of the population in terms of the age groups that will be responsible for the future. To communicate with them, we need a face, a character and a personality that connects with this particular group. This is where 'Bubbles' comes in; it will be the face of Hisaar Foundation in spreading the good messages relating to water and its efficient use.



Bubbles has already made an impact in many arenas. It starred as a major character in the Hisaar Foundation Conference on "Water Cooperation in Action – From the Global to the Grassroots" held in Karachi on December 4th and 5th, 2013. It has appeared in many Public Service Announcements especially prepared for the Conference and it is also featured in the Hisaar Foundation jingle citing the many beneficial uses of water. Since then, Bubbles has also appeared at many schools and is very popular amongst the young children in schools.

Bubbles is also lucky to have many parents, from its idea creators like Mr Salman Butt, Council Member, Hisaar Foundation and a Marketing expert who first impressed upon the Hisaar Foundation team, a need to create a youth-friendly character for delivery of messages and communications, to Mr Zohair Ashir, Dr Sono Khanharani, Ms Simi Kamal and Ms Saleha Atif, who all helped in the creation of the character.

Bubbles was designed by Mr Zain Ashir, a young freelance artist who used the Hisaar Foundation logo to give Bubbles a form. BBCL also did a very good job of giving it the life-size shape and model.



Abbreviations and Acronyms

ACS	Additional Chief Secretary	NCRS	The Nautique Configurable Running Surface
ADB	Asian Development Bank	NCSW	National Commission on Status of Women
ADP	Association for the Development of Pakistan	NED	Nadirshaw Eduljee Dinshaw
AERC	Applied Economics Research Centre	NGOs	Non-Government Organizations
AKU	Aga Khan University	NUST	National University of Science and Technology
ANSA	Affiliated Network for Social Accountability	O&M	Operation and Maintenance
AWBs	Area Water Boards	OPP	Orangi Pilot Project
AWPs	Area Water Partnerships	PCRWR	Pakistan Council for Research in Water Resources
BBCL	Big Bang Communications Ltd	PDD	Programme Development Department
Cap-Net	International Network for Capacity Building	PEMRA	Pakistan Electronic Media Regularity Authority
CAWST	Center for Affordable Water and Sanitation Technologies	PGS	Public Goods and Services
CBMs	Confidence Building Measures	PHEDs	Public Health Engineering Departments
CBOs	Community Base Organizations	PIM	Participatory Irrigation Management
CDGK	City District Government Karachi	PODA	Potohar Organization for Development Advocacy
CEO	Chief Executive Officer	PRF	Pakistan Relief Foundation
CMIS	Committee for Monitoring and Improvement of Schools	PPAF	Pakistan Poverty Alleviation Fund
CNBC	Consumer News and Business Channel	PPL	Pakistan Petroleum Ltd
CSR	Corporate Social Responsibility	PPP	Poverty, Profit, Planet
ESI	Economics of Sanitation Initiative	PTI	Pakistan Tehreek-e- Insaaf
FAO	Food and Agriculture Organization	PWP	Pakistan Water Partnership
FATA	Federally Administrated Tribal Areas	RDC	Raasta Development Consultants
FPCCI	Federation of Pakistan Chambers of Commerce & Industry	RO	Reverse Osmosis
GWP	Global Water Partnership	RoR	Run of River
GWP-SAS	Global Water Partnership –South Asia	SaciWaters	South Asian Consortium for Interdisciplinary Water Resources Studies
GDP	Gross Domestic Product	SERP	Sindh Education Reform Plan
GIT	Gulshan - e- Iqbal Town	SIDA	Sindh Irrigation and Drainage Authority
GoB	Government of Balochistan	SOUL	Save Our Urban Lakes
GoS	Government of Sindh	SWMO	Sindh Water Management Ordinance
HANDS	Health and Nutrition Development Society	TIE	The Indus Entrepreneurs
HECs	Higher Education Commissions	TMA	Town Municipal Administration
IBA	Institute of Business Administration	TRDP	Thardeep Rural Development Programme
IDRC	International Development Research Centre	UAE	United Arab Emirates
IPD	Irrigation and Power Department	UBL	United Bank Ltd
IRBM	Integrated River Basins Management	UCs	Union Council
IRSA	Indus River System Authority	UK	United Kingdom
IUCN	International Union for Conservation of Nature and Natural Resources	UN	United Nations
IWMI	Integrated Water Management Institute	UNDP	United Nations Development Programme
IWRM	Integrated Water Resource Management	UNESCO	United Nations Educational, Scientific and Cultural Organization
IWT	Indus Water Treaty	UNICEF	The United Nations Children's Fund
KWP	Karachi Water Partnership	USA	United States of America
KWSB	Karachi Water and Sewerage Board	WASH	Water, Sanitation and Hygiene
LAC	Latin American Countries	WSP	Water Sanitation Programme
LCDP	Lyari Community Development Project	WWNs	Women and Water Networks
LUMS	Lahore University of Management Science	WWF	World Water Forum
MAF	Million Acre Feet	WWF-P	World Wild Fund-Pakistan
MDGs	Millennium Development Goals		
MET	Metrological		
MHHDC	Mahbub ul Haq Human Development Centre		

Appendix A - Conference Schedule

Day 1 - Wednesday, December 4th, 2013

Time	Session & Topic	Session & Topic	Session & Topic
9.00 – 10.00	Registration		
10.00 – 11.30	Session 1: Opening Plenary: Setting the Scene and Identifying Challenges Opening addresses by Mr Zohair Ashir, Chairperson Hisaar Foundation; Mr Farhan Sami, Pakistan Country Coordinator, WSP, World Bank; Mr Khalid Mohtadullah, Senior Advisor, UNDP, IWMI and GWP and Council Member, Hisaar Foundation; Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation.		
11.30 – 12.00	Tea Break		
12.00 – 13.30	Session 2A - Panel Discussion Stakeholder's Talkback: The Public Private Partnership Dialogue on Building Ownership Chair: Mr Adnan Asdar, Chief Executive Officer and Executive Director, Multinet Pakistan (Pvt) Ltd and Chairperson, Karachi Relief Trust	Session 2B - Paper and Consultations Beyond Boundaries: Building Peace through Cooperation Chair: Mr Mohammad Sardar Tariq, Executive Director, Pakistan Water Partnership Co-Chair: Dr. Nilufa Islam, Ministry of Water Resources, Bangladesh	Session 2C - Papers and Consultation Water Cooperation for Tangible Economic Benefits Chair: Mr Khalid Mohtadullah, Senior Adviser, UNDP, IWMI, GWP and Council Member, Hisaar Foundation Co-Chair: Dr Pervaiz Amir, Director, PWP and Council Member, Hisaar Foundation
13.30 – 14.30	Lunch Break		
14.30 – 15.30	Session 3 – Exhibition Opening		
15.30 – 15.45	Tea Break		
15.45 – 17.15	Session 4A - Presentation and Consultation Success Stories of Women Water Professionals in Water Cooperation Chair: Ms Mahnaz Rehman, Resident Director, Aurat Foundation, Karachi Co-Chair: Ms Priyangani Gunathilaka Deputy Director, Central Environmental Authority, Sri Lanka	Session 4B - Moderated Discussion The Role of Academia: Framing Water Cooperation Initiative Chair: Dr Daanish Mustafa, Assistant Professor, Kings College, UK Co-Chair: Dr. Sabitri Kumari Tripathi, Associate Professor, Nepal Engineering College, Nepal	Session 4C - Paper and Consultations Water Related Disasters: Conquering through Cooperation Chair: Mr Zaffar Pervez Sabri, Acting CEO, PPAF Co-Chair: Mr Nasir Ali Panhwar, Council Member, Hisaar Foundation
17.30 – 18.30	Session 4E: Cap-Net Members' Networking Meeting, Chair: Ms Farzana Ahmed Saleem, Country Coordinator, Cap-Net - Pakistan		
19.30 – 23.00	Conference Dinner and Entertainment - For Paid up Delegates and Invited Guests		

Day 2 - Thursday, December 5th, 2013

Time	Session & Topic	Session & Topic	Session & Topic	Session & Topic
9.30 – 11.00	<p>Session 5A - Paper and Consultations Fighting Poverty: Water Cooperation for Social Development Chair: Mr Zaffar Pervez Sabri, Acting CEO, PPAF Co-Chair: Mr Nasir Ali Panhwar, Council Member, Hisaar Foundation</p>	<p>Session 5B- Paper and Consultations Discussion Mega-City Water Partnership: Showcasing Karachi Water Partnership Chair: Mr Tasneem Siddiqui, Chairman, Saiban</p>	<p>Session 5C – Interactive Youth Assembly (Part 1): Exploring Emerging Water Leadership Moderator: Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation Co- Moderator: Ms Shireen Naqvi, Senior Consultant & Facilitator, Navitus</p>	<p>Session 5D –Consultation Women Voices: Strategies for Unleashing the Most Potent Force for Change Chair: Ms Khawar Mumtaz, Chairperson, NCSW Co-Chair: Ms Jasveen Jairath, Founding Convenor SOUL, India</p>
11.00 – 11.30	Tea Break			
11.30 -13.30	<p>Session 6A – Panel Discussion The Lead Stakeholder: The Government's Agenda and Commitment to Water & Sanitation Cooperation Chair: Mr Arif Ahmed Khan, Additional Chief Secretary, Government of Sindh</p>	<p>Session 6B – Moderated Discussion The Role of Academia: Bringing together Water Cooperation Initiative Chair: Dr Sarosh Lodhi, Dean, NED University, Karachi Co-Chair: Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation</p>	<p>Session 6C – Interactive Youth Assembly (Part 2): Harnessing Youth Assembly for Concrete Action Facilitator: Mr Tofiq Pasha Mooraj, Governor, Hisaar Foundation</p>	<p>Changing Demands for Knowledge, Technology and Capacity Development for Water Cooperation Chair: Dr. Pervaiz Amir, Director, PWP and Council Member, Hisaar Foundation Co-Chair: Ms Farzana Ahmed Saleem, Country Coordinator, Pakistan CapNet</p>
13.30 -14.30	Lunch Break			
14.30 – 17.00	<p>Session 7 – Presentations, Discussions & Conference Declaration Closing Plenary and Partners' Meeting: Presentation by Hisaar Foundation and Partners: Presentation by Dr. Sono Khangharani, CEO, Hisaar Foundation; Presentations by HF Partners; Declaration of Cooperation for Water Sector, Mr Zaffar Pervez Sabri, Acting CEO, PPAF Statement of Cooperation by Key Stakeholders Conference Declaration - Outcomes and Way Forward by Dr. Daamish Mustafa, Assistant Professor Kings College & Member, Academic Committee, Hisaar Foundation Chair: Mr. Mirza Gamar Baig, Ex-Secretary of Commerce, Visiting Fellow at Cambridge University, UK Board Member State Bank of Pakistan Co- Chair: Mr Zahair Ashir, Chairperson, Hisaar Foundation Moderator: Ms Simi Kamal, Chair, Academic Committee, Hisaar Foundation</p>			
17.00– 18.00	High Tea and Networking			



Appendix B- List of Presentations and Distribution Material

Session 1: Opening Plenary: Setting the Scene and Identifying Challenges

1. Presentation on 'The Hisaar Foundation Story', Mr Zohair Ashir
2. Presentation on 'Water Cooperation on Indus-Some Perspectives', Mr Khalid Mohtadullah
3. Presentation on 'Water Cooperation in Action-from Global to the Grassroots 2013-Conference Walk through', Ms Simi Kamal
4. Hisaar Foundation's First 10 Years Report, 2003-2013

Session 2B- Papers & Consultation Beyond Boundaries: Building Peace through Cooperation

1. Paper on 'Water Management Issues Created by IWT - Pakistan Perspective', Mr Sardar Muhammad Tariq
2. Presentation and Chapter on 'Transboundary Water Resource Management in South Asia', Annual Report 2013, Mahbub-ul-Haq Human Development Centre (MHHDC), LUMS, Lahore
3. Presentation on 'The Indus Water Treaty: Building Peace between India and Pakistan through Water Cooperation', Dr M S Shafiq
4. Executive Summary of Report 'Developing an Integrated River Basin Management (IRBM) for Indus River', World Wide Fund for Nature – Pakistan (WWF-P), 2012
5. 'Suggestions on Water Policy', based on the study 'Developing an Integrated River Basin Management (IRBM) for Indus River-Challenges and Opportunities', WWF 2012

Session 2C – Papers & Consultation Water Cooperation for Tangible Economic Benefits

1. Presentation on 'Benefits Sharing on Hydropower Projects Among Stakeholders', Dr Pervaiz Amir
2. Presentation on 'Economic Benefits of Water Cooperation in Indus Basin', Dr Zaigham Habib
3. Presentation on the work of 'Thardeep Rural Development Programme (TRDP) in Rural Sindh', Mr Ali Mohammad Junejo

Session 2D – Papers & Consultation Water & Health: Challenges & Experiences

1. Presentation on 'Water and Health: Role of Academia for Research and Intervention in Pakistan', Dr Zafar Fatmi
2. Presentation on 'Sustainable Access to Water and Sanitation Services: A study of Government and Non-Government Schools in Gadap Town Karachi, Sindh, Pakistan', Ms Rubina Jafferey
3. Poster presentation on 'WASH-Gadap Initiative', Ms Bilquis Rehman
4. Presentation on 'Sindh Education Reform Programme', Mr Ghulam Nabi

Session 4A – Presentation & Consultation Success Stories of Women Water Professionals in Water Cooperation

1. Book on 'Women Water Professionals-Inspiring Stories from South Asia', SaciWATERS, 2012
2. Presentation on 'Gender and IWRM, A Framework for Gender Mainstreaming-Women and Water Network: A Strategic Initiative in Gender and IWRM', Ms Farzana Ahmed Saleem

Session 4B – Moderated Discussion The Role of Academia: Framing Water Cooperation Initiative

1. 'A Few Propositions to Consider', Dr Daanish Mustafa
2. 'Pakistan: Water in a Vulnerable and Stressed Environment - Priorities for Higher Education, Research and Cooperation' talking points, Ms Simi Kamal
3. A list of universities that have water related departments

Session 4C - Paper & Consultations Water Related Disasters: Conquering through Cooperation

1. Presentation on 'Water Related Disaster-Conquering through Cooperation', Dr Pervaiz Amir
2. Presentation on 'Lessons Learnt by Floods of 2010 and 2011', Dr Zaigham Habib
3. Presentation on 'Water Cooperation in Action from the Global to the Grass Root Level', Mr Mohammad Abid



Session 4D-Panel Discussion Media: Catalyst for Change & Cooperation or a Silent Spectator

1. Water Documentary - Time is Running Out, Hisaar Foundation
2. Media Packs
3. Bubbles Jingle and PSA's

Session 4E: Cap-Net Members' Networking Meeting

1. Presentation on 'Orientation on Cap-Net: Capacity Building in IWRM', Ms Farzana Ahmed Saleem
2. Guidelines for Formulation of Work plan and Activities, were distributed to all the participants

Session 5A – Papers & Consultation Fighting Poverty: Water Cooperation for Social Development

1. Presentation on 'Access, Equity and Hazards: Highlighting a Socially Just and Ecologically Resilient Perspective on Water Resources', Mr Usman Mirza
2. Presentation on 'Water Cooperation for Sustainable Development-A Case of DMPP Lawa', Ms Uzma Nomani
3. Presentation on 'Depletion of Fresh Water Lakes in Pakistan', Mr G R Baloch

Session 5B – Presentation & Panel Discussion Mega-City Water Partnership: Showcasing Karachi Water Partnership

1. Flyers 'First Urban Water Partnership in Pakistan', printed in GWP in Action 2008 Annual Report, Global Water Partnership
2. Presentation on 'Karachi Water Partnership – Showcasing Hisaar Foundation's Experience of Public-Private Partnership', Mr Zohair Ashir
3. Hisaar Foundation's 'Water Conservation Guidelines', in English

Session 5C – Interactive Youth Assembly (Part 1): Exploring Emerging Water Leadership

1. Presentation on 'Water Leadership Development', Ms Farzana Ahmed Saleem
2. Hisaar Foundation's 'Water Conservation Guidelines', in English

Session 6A – Panel Discussion The Lead Stakeholder: The Government's Agenda and Commitment to Water & Sanitation Cooperation

1. Presentation on 'Setting the Context Cooperation to Improve Sanitation', Mr Farhan Sami
2. Presentation on 'Government's Agenda and Commitment to Rural Water - (Rural) Water Cooperation in Action', Mr Masroor Ahmad

Session 6B – Moderated Discussion The Role of Academia: Bringing together Water Cooperation Initiative

1. Presentation on 'Water Cooperation in Action – Working Groups Notes

Session 6C – Interactive Youth Assembly (Part 2): Harnessing Youth Assembly for Concrete Action

1. Pakistan: Water in a Vulnerable and Stressed Environment: Priorities for Higher Education, Research and Cooperation', talking points by Simi Kamal

Session 6D – Papers & Consultation Changing Demands for Knowledge, Technology & Capacity Development for Water Cooperation

1. Presentation on 'Need and Scope of Efficient Irrigation Systems' Mr Khadim Hussain
2. Presentation on 'Orientation on Cap-Net Capacity Building in IWRM', Ms Farzana Ahmed Saleem
3. Presentation on 'Water Conservation using Alternate Irrigation Practices', Ms Hadiqa Maqsood
4. Presentation on 'Empowering the Irrigation Reforming Institutions in Sindh', Mr Nazir Ahmed

Session 7 – Closing Plenary, Partners' Meeting and Conference Declaration

1. Presentation on 'Hisaar Foundation's Partners Framework' Dr Sono Khangharani
2. Conference Declaration



Appendix C- Profiles

Profile Of Chairs, Speakers, Panelists And Other Distinguished Featured Participants

Listed in order of appearance; for full profile, please refer to the CD

Mr Zohair Ashir	Ms Farzana Ahmed Saleem
Mr Khalid Mohtadullah	Dr Daanish Mustafa
Ms Simi Kamal	Mr Zaffar Pervez Sabri
Mr Farhan Sami	Mr Nasir Ali Panhwar
Mr Adnan Asdar	Mr Mohammad Abid
Mr Siddiq Sheikh	Mr Ghazi Salahuddin
Mr Roland D'Souza	Ms Seema Tahir
Mr Abdur Rahim Moosvi	Ms Sabeen Mahmud
Mr Samar Ali Khan	Mr Kamal Siddiqi
Dr Noman Ahmed	Mr Tofiq Pasha Mooraj
Mr Akbar Leghari	Mr Zulfiqar Halepoto
Mr Sardar Mohammad Tariq	Mr Usman Mirza
Dr Nilufa Islam	Ms Uzma Nomani
Mr A N G Abassi	Mr G R Baloch
Ms Fazilda Nabeel	Mr Tasneem Siddiqui
Dr M S Shafiq	Mr Suleiman Chandio
Dr Pervaiz Amir	Ms Seema Zahid
Dr Zaigham Habib	Ms Shireen Naqvi
Mr Ali Mohammad Junejo	Ms Khawar Mumtaz
Dr Shaikh Tanveer Ahmed	Ms Jasveen Jairath
Ms Sabitri Kumari Tripathi	Mr Arif Ahmed Khan
Dr Zafar Fatmi	Mr Masroor Ahmed
Ms Bilquis Rehman	Dr Sarosh Lodhi
Ms Rubina Jaffery	Mr Khadim Hussain
Mr Ghulam Nabi	Ms Hadiqa Maqsood
Ms Mahnaz Rehman	Mr Nazir Ahmed Memon
Ms Priyangani Gunathilaka	Dr Sono Khangharani
Ms Sameena Nazir	Mr Kazi Ayaz Mehassar
	Mr Mirza Qamar Baig

Organizing Committees

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Credits

Editors

Ms Simi Kamal
Mr Zohair Ashir

Contributing Editors

Mr Nasir Ali Panhwar
Ms Amina Siddiqui
Ms Sanaa Baxamoosa

Reporters

Ms Amina Siddiqui
Ms Farkhanda Aurangzeb
Mr Nasir Ali Panhwar
Ms Rabiya Ijaz
Ms Sairah Khalid
Mr Wasif Rashid

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Ms Sanaa Baxamoosa (Member)
Mr Syed Ziauddin (Member)

Event Management



provided the event management services

Design and Layout

Ms Sabah Baxamoosa
I.D.E.A. Consulting



ideaconsultingpk@gmail.com

Hey, My name is Bubbles.
I want you to save water, protect nature
and support green initiatives!



Bubbles



Hisaar Foundation

a foundation for water, food and livelihood security

A: House # D-66/1, Block 4, Scheme 5, Clifton, 75600 | Karachi, Pakistan

T: +92-21-35874547 | +92-21-35879724

E: saleha.atif@hisaar.org

W: www.hisaar.org