

Demonstrating Inclusion, Integration and Innovation Hisaar Foundation in 2014 and 2015

Report launched at the International Water Conference on

Securing Sustainable Water for All: Inclusion, Integration and Innovation

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Abbreviations and Acronyms

AAPK Action Aid Pakistan Karachi Chapter

ADP Association for the Development of Pakistan

AWARE Association for Water Applied Education and Renewable Energy

AWP Area Water Partnership

CapNet International Network for Capacity Building

CAWST Center for Affordable Water and Sanitation Technologies

CBO Community Based Organization

CEESP Commission on Environmental, Economic and Social Policy

CEO Chief Executive Officer

CPGD Climate Proofing Growth and Development

CSR Corporate Social Responsibility

DFID Department for International Development

FAO Food and Agriculture Organization

FMCG Fast Moving Consumer Good

FPCCI Federation of Pakistan Chambers of Commerce and Industry

GWP Global Water Partnership

GWU George Washington University

HF Hisaar Foundation

HMO Health Management Organization

HOPE Health-Oriented Preventive Education

IUCN International Union for the Conservation of Nature

IWRM Integrated Water Resources Management

IWT Indus Water Treaty

KASB Khadim Ali Shah Bukhari

KWP Karachi Water Partnership

LSO Local Support Organization

MUET Mehran University of Engineering and Technology

Hisaar Foundation 2 Year Report

NEDUET NED University of Engineering and Technology

NGO Non-Government Organization

OAKS Old Associates of Kinnaird Society

PDMA Provincial Disaster Management Authority

PNC Pakistan National Committee

PPAF Pakistan Poverty Alleviation Fund

SaciWaters South Asia Consortium for Interdisciplinary Water Resources Studies

TCCR Technical Advisor to the Trust for Conservation of Coastal Resources

TT Think Tank

UAF University of Agriculture, Faisalabad

UBL United Bank Limited

UN United Nations

UNDP United Nations Development Programme

UNESCO United Nations Educational, Scientific and Cultural Organization

UWN Universities for Water Network

UWP Urban Water Partnership

WAPDA Water and Power Development Authority

WWCASA Women and Water in Central and South Asia

WWF World Wildlife Fund

WWN Women and Water Network

Note from the Chair of Hisaar Foundation

This report covers the period of activities undertaken by Hisaar Foundation in the previous two years. This is a follow-up to our report for the 2013 International Water Conference which covered the first ten years of Hisaar Foundation's work and history.

We are happy to report that these two years have been a period of hectic activity and progress. Given the challenges of operating in the difficult environment, especially for an organization which is citizen driven and relies on the trust and goodwill of selected donors for its resources, the headway made is indeed impressive.



During this period, the Foundation continued to build on its image as a solution provider with penchant for innovation and passion. It is a reflection of these attributes that during this period, we saw the launch of two major initiatives by Hisaar Foundation. The Declaration of the 2013 conference on "Water Cooperation in Action – From the Global to the Grassroots" among other things especially called for the establishment of a national level Think Tank and promotion of the water issues as an area of interest for the academia. In June of 2014, Hisaar Foundation launched the Think Tank on Rational Use of Water and Universities for Water Network. Both these initiatives have made significant advancements since then and each one of them are firmly on their way to strengthening the foundations that were laid for the important mission assigned to them. This report covers in detail the progress made under each.

In addition, Hisaar Foundation under its Programme and Projects work carried out significant activities throughout the two year period. While the report provides ample overview of these activities, the Jurio Project stands out. This is a project that Hisaar Foundation undertook in the 2014-2015 period in the drought-stricken district of Tharparkar. Under the Jurio Project, the Foundation was able to demonstrate its innovative solution based on low cost and sustainable model by constructing long-term facilities for water storage for a village at the household, *mohalla* and Union Council level. This was one of the highlights of the Foundation's work in this period.

These developments coupled with the advent of the Hisaar Institute for Interdisciplinary Studies on Water in the coming years, Hisaar Foundation is geared for exciting times ahead. With the continued guidance and able leadership provided by the Board, Hisaar Foundation looks forward to positively transformational and productive years ahead. Insha Allah.

Zohair Ashir

Chairperson, Hisaar Foundation

Jackson Jahren

Note from the Founder

Hisaar Foundation remains steadfast on the three themes of its work: building partnerships for implementation of Hisaar Foundation's concepts and models, developing solutions and continuing with emergency support when needed.

Hisaar Foundation continues to anchor and work with the concepts and models of Area Water Partnerships, Urban Water Partnerships, Mutual Accountability and Total Water Solution. Its innovative programmes of water systems, school water programmes and food security in remote areas have taught others how to conceptualize and implement key interventions. Following Project Aab (water) and then project Aab-o-Daana (water



and food), Hisaar Foundation has now come up with Project Aab-e-Thar (water and Thar) with low-cost water solutions for drought-ridden areas in Sindh (Thar and Kohistan). Hisaar Foundation has continued to provide input to water policy work at various levels and has engaged extensively with government departments, particularly Water and Power Development Authority (WAPDA) and other stakeholders.

Hisaar Foundation continues to be supported overwhelmingly by local Pakistani philanthropists and Pakistani organizations that have joined in its causes and programmes. These include United Bank Limited (UBL), Old Associates of Kinnaird Society (OAKS), HOPE Trust, Association for the Development of Pakistan (ADP), Serena Hotels, KASB Bank, Faysal Bank and others who have helped us the in the past two years.

In 2013, Hisaar Foundation decided that the focus in the next five years will be more sharply on corporate responsibility, academia, media, youth and women as agents of change and the architects of a new water security paradigm in Pakistan. Keeping with this resolve, the Foundation has worked closely with Pakistani banks, businesses and chambers of commerce, a range of universities, women's organizations, philanthropists and young people. While engaging extensively with media, Hisaar Foundation is now poised to launch a major media campaign with multiple channels.

As a volunteer-led organization, Hisaar Foundation continues to be driven by passion, commitment and resolve. Whether it is the Governors, the Council Members or volunteers in their hundreds, the contribution is valued at each and every level. The contribution of the Sponsoring and Implementing Partners is much appreciated, as is the hard work of the small group of staff members who have worked diligently over the years.

Simi Kamal

Founder and First Chairperson, Hisaar Foundation

Chapter 1 - Introduction

1.1 Hisaar Foundation at a Glance

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 sustainable and Integrated Water Resources Management (IWRM) and water conservation in different contexts.

Currently, Hisaar Foundation works through a Think Tank on the Rational Use of Water and Universities for Water Network to consolidate the intellectual underpinnings for dealing with Pakistan's water challenges for the next hundred years. At the same time, it demonstrates solutions on the ground for many problems that have to be dealt with immediately. Hisaar Foundation has also developed the concepts of Cost Synergy and Mutual Accountability which help bring the government, non-government and private sectors together for acceptance of responsibility and wide-ranging impact.

Over the past 12 years Hisaar Foundation has worked extensively on building the cooperation to change the water paradigm in Pakistan through its Water Partnerships and Women and Water Network (WWN). To date it has formed 11 urban and rural Water Partnerships at different levels, and 12 WWNs across Pakistan. It has developed and delivered 13 emergency support campaigns responding to droughts, 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 25 implementing partner organizations and 34 sponsoring partner organizations. These include several Rural Support Programs, universities, Pakistani and international banks and companies, the Federation of Pakistan Chambers of Commerce and Industry (FPCCI), NGOS and CBOs. Hisaar Foundation also has extensive links with International organizations including Global Water Partnership (GWP), Stockholm, Cernter for Affordable Water and Sanitation Technologies (CAWST), Canada, International Network for Capacity Building in Integrated Water Resources Management (CapNet), Pretoria, South Africa, South Asian Consortium for Interdisciplinary Water Resources Studies (SaciWATERs), and George Washington University, Washington DC.

Hisaar Foundation primarily functions through its three main programmatic streams: Creating Partnerships, Developing Solutions and Emergency Support.

1.2 Creating Partnerships

Hisaar Foundation has played an integral role in anchoring and emulating the Area Water Partnership concept which emerged in South Asia out of the need to find tangible and feasible units for institutionalizing Integrated Water Resources Management in countries like Pakistan where the river basins are huge and unwieldy.

GWP South Asia pioneered Area Water Partnerships (AWPs) in 2001 as a mechanism to promote dialogue and local action among stakeholders on water resource management issues that affects their lives and livelihoods. The AWPs are innovative, local level informal institutions which view water as an 'entry point' for natural resources management as well as for improving livelihoods. In the process, they have demonstrated the ability to integrate the stakeholders and institutions both horizontally and vertically, and unlocked tremendous potential in dealing with issues of water management and poverty.



Partnership building with Stakeholders

Using the conceptual framework of AWPs, Hisaar Foundation developed the model of Karachi Water Partnership (KWP) which was launched in April 2007 and is now recognized as the first Urban Water Partnership (UWP) in the world.

A core strategy of Hisaar Foundation in developing AWP's is the establishment of Women and Water Networks (WWN's). Women and Water Networks have emerged as a powerful tool that seeks to highlight women's problems, perceptions, perspectives and needs in the water sector. WWN's aim to bring into the fold women from all sectors of society such that

their voice can be effectively channeled into mainstream policies, discussions and actions relating to water. Hisaar Foundation is the host organization of the WWN Pakistan which has over 250 members and several chapters across the country. WWN Pakistan is also a part of the South Asia Women and Water Network (Please see chapter 5 for updates on Karachi Water Partnership and WWN activities).

1.3 Developing Solutions

Developing solutions has been at the core of all programmatic interventions undertaken by Hisaar Foundation. Projects and programmes are designed such that low cost creative solutions form an integral part of all water, food and livelihood related interventions and activities. The vision of the organization is balancing development with environment and its mission is the promotion of appropriate policies and creative, low-cost solutions for conservation in Pakistan by working on water, food, livelihood security and climate change issues, therefore developing solutions is a key component of Hisaar Foundation's overall programme strategy (see chapters 2 and 4 for details of current projects).



Kitchen Garden Training at Landhi

1.4 Emergency Support

Hisaar Foundation has historically launched relief, mitigation and rehabilitation operations after emergencies and natural calamities. In fact, the concept of Hisaar Foundation first originated in 1999 when a group of concerned citizens of Karachi felt the need to respond to the drought crisis in Thar. Within the purview of working towards water, food and livelihood security, Hisaar Foundation has always responded to emergencies and natural disasters faced by Pakistan.

To date, Hisaar Foundation has developed, launched and delivered 13 relief campaigns responding to earthquakes, floods, droughts and other natural calamities, the most recent one being the Thar Drought Appeal in 2014 (See chapter 5).



CEO HF Visiting the Relief Camp

1.5 Securing Sustainable Water for All

The UN Water global goal for the year 2015 is "Securing Sustainable Water for All." This goal emerges as part of the Sustainable Development Goals in the post-2015 Development Agenda. It recognizes that a coordinated effort to promote human well-being, economic prosperity and the preservation of environmental capital is essential to fostering sustainable patterns of water use, management and conservation.

Promoting sustainable water for all implies the protection of water resources from over exploitation and pollution while meeting the needs of water for life, agriculture, energy,

industry, agriculture, cities and households needs to be managed fairly and efficiently. Developing robust solutions to climate disasters requires communities to be included in the mainstream water agenda. Better water management and conservation practices, equitable distribution and allocation, developing adaptive capacities of climate-risk communities necessitate inclusion, integration and innovation in the water sector.

1.6 Moving on From Cooperation to Inclusion, Integration and Innovation

The year 2014 and 2015 marked the beginning of a transformational phase for Hisaar Foundation. With the success of its flagship water conference entitled "Water Cooperation in Action: From the Global to the Grassroots" held in December 2013, Hisaar Foundation changed gears and redirected its focus to improve its think tank function and advance its strategic contributions to the Pakistan water sector. Three major outcomes emerged from the 2013 Water Conference: a Think Tank on the Rational Use of Water; a Universities for Water Network and; the Karachi Declaration on Water Initiatives which included a draft water policy for the consideration of the government.

Demonstrating speed and efficiency and keeping with its core programmatic goals of creating partnerships, developing solutions and providing emergency support, Hisaar Foundation embarked upon several new initiatives in 2014 and 15. Hisaar Foundation developed and launched the Jurio Project as a response to the drought crisis in Thar in March 2014. Although, the immediate relief phase ended in May 2014, Hisaar Foundation continued to work in Union Council Jurio and launched the Total Water Solution Model to improve resilience of the drought-affected communities and provide them with alternative and sustainable solutions for food and water security. As a result of the Water Conference 2013, Hisaar Foundation established and launched a Think Tank on the Rational Use of Water and conducted its inaugural meeting in September 2014. Since then, the Foundation has conducted three meetings and significant progress has been made on the five priority action areas identified by the Think Tank. Hisaar Foundation also established and launched a Universities for Water Network (UWN) in June 2014 and conducted its inaugural meeting by December 2014. The Universities for Water Network has also conducted two meetings since its launch. The research work of the Universities for Water Network is closely tied with the priority action areas identified by the Think Tank.

The Universities for Water Network has also completed preliminary research on Pakistani universities with water related courses, degrees, departments, water professionals and academics and research institutes working on water in Pakistan. Hisaar Foundation continued with other projects throughout the year supported by different donors. All these initiatives and projects manifested a growth in Hisaar Foundation's maturity. The Foundation through its various initiatives and projects demonstrated inclusion, innovation and integration.



Launch of Universities for Water Network



Household level Nadi Ponds in Jurio



Inaugural Think Tank Meeting at Karachi

Chapter 2 - Demonstrating Inclusion

2.1 Dug-wells in Taluka Chachro, District Tharparkar

Old Associates of Kinnaird Society (OAKS) Karachi Chapter and Hisaar Foundation signed a Memorandum of Understanding (MOU) in October 2014 for the construction of dug-wells in four villages of Union Council Saringhiar Taluka Chachro District Tharparkar. Construction work on two wells in village Charnore Saloo Ram Paro and village Veerio Bheel commenced in November 2014 and was completed by January and February 2015, respectively. The construction of the third dug-wells in village Bungal Rind commenced in December 2014 and was also completed by February 2015. The construction of the fourth dug-well at village Wali Dadji Dhani was completed by March 2015. The construction work was managed by AWARE, a local NGO who facilitated in the implementation of the project, under the supervision of Hisaar Foundation.



Signing of the MOU



Dugwells in Chachro

Subsequently, Hisaar Foundation requested OAKS for additional funding to support the construction of new wells to expand the number of beneficiaries and for wide-ranging impact. OAKS approved the request and construction of the new wells was expected to commence by January 2015. However, during this time, the District Administrator, Sindh issued an order to halt all construction work of dugwells made with cement. Therefore, construction work was halted and suspended on a temporary basis. It was mutually decided amongst all involved parties that construction of dug-wells should continue and according to government orders, the new wells should be made of brick masonry. Construction work on twenty six new wells has since then commenced and is expected to be completed by November 2015. OAKS gave additional funding to install solar panels on an existing dug-well in July 2015.



Installation of Solar Panels at Dugwell

The construction of these thirty-one dug-wells have empowered the people of Taluka Chachro by giving them easy access to potable water. The wells supported by OAKS have enabled Hisaar Foundation to include the people of the region and allow them to improve their water security.

2.2 Providing Safe Water in Thano Bula Khan

During December 2014 to March 2015, Hisaar Foundation was involved in a project that aimed to provide safe drinking water by using alternative energy to improve health, hygiene, income earning potential and the overall well-being of villagers belonging to Loghani Palari Village.

Prior to the completion of the project, the villagers from Loghani Palari Village had to walk almost 2 km to access the tubewell which belonged to a landlord and would take women and children upto 4 hours daily to collect the water. Apart from the issue of accessibility the villagers had to face the added constraints of being dependent upon another village's landlord whose main concern was the availability of water for his crops and irrigation.

Hisaar Foundation believed that a critical need of this village in Jamshoro, Sindh could be fulfilled in a cost effective manner. The project would also create a positive impact on the health, hygiene, and income earning potential and overall well-being of the villagers, in particular women and children.

For the project, Hisaar Foundation installed a solar water pump system of 3700 watt. A solar PV system operated submersible pump was installed to drag out groundwater from a depth of 300 feet which was then stored in a central storage tank for further distribution through to each household.



Extracting Water from the Tubewell

The total number of beneficiaries of the project is approximately 450 belonging to 60 households in the Loghani Palari Village. The availability of water will also help in the maintenance and feeding of livestock. Specific objectives of the project included improving health and hygiene of the local community and reducing absenteeism and drop-out ratio among school going age children through easy availability of safe drinking water. Not only is school attendance expected to improve but it will enable women to devote more time to work on more productive other economic or household activities.

The use of Solar Pumps will result in long term cost efficiencies, greater water volume and reduced time to extract and collect water. Handpumps were not been considered for this project because the depth of the well is greater than 250 feet and the use of handpumps requires regular maintenance.

This project was sponsored by the Association for the Development of Pakistan (ADP). ADP is a volunteer-driven, engaged philanthropy organization that funds carefully selected development projects run by local NGOs in Pakistan. It supports high impact projects in a range of sectors including water, education, health and energy.



Fixing solar panels to power the Tubewell

2.3 Solar Powered Dug Wells in Tharparkar

Hisaar Foundation has installed solar run submersible pumps in five villages (Punj Pura, Katho Jam, Borli Bheel (Jalal Poro), Borli Bheel (Doongro Poro and Moorji Ji Wandh) of the union council Jurio. These pumps were fitted at the bottom of dug wells and connected with solar energy panels. These solar run pumps are used to extract water from an average depth of 200 feet. The work on dug wells and installing solar run water pumps on the wells for extraction of water started in the months of January and February 2015 and was completed in the months of May and June 2015. Additionally, Hisaar Foundation also constructed fiber water tanks on the platforms of the dugwells so that water could be also be stored during the daytime.

The UBL-supported project is located in five rural villages near Mithi District Tharparkar. The community played an integral role in identification of the project location and management of the wells. The depth of the well varies between 200 and 250 feet, with an internal diameter of 3.5 feet and an external diameter of 4.5 feet. The project is providing fresh clean drinking water to five communities at five different locations. Not only is it providing water to the human population of the area, it has also provided easy access of drinking water to local wildlife. The community impressions that Hisaar Foundation and its local partner have received are that there is a reduced rate of waterborne diseases, which were known to have previously contributed to a high rate of infant mortality and morbidity. They also have to spend less time and physical effort on extracting water (previously done by either by pulling it out of wells themselves or with the help of animals). Women who were mainly responsible for collection of water for domestic use now have extra time, which they can effectively use on productive activities.



Community Utilising Water from the Dug Well

2.4 Providing Safe Water in Peri-Urban Areas

During the year 2014, the Foundation continued with its routine operations of working with donors to install water related facilities to increase access to safe drinking water for the communities. Hisaar Foundation has been actively engaged in provision of safe drinking water and improvement in the water conditions amongst urban and rural communities and in particular the mega city of Karachi.

With the support of Faysal Bank, Hisaar Foundation installed water filtration plants at two locations, one at Rehri Goth benefiting the coastal fisherfolk community in February 2014 and the second one was installed in April 2014 at Sheedi Village Road, 8 Chouck, Baghdadi, Lyari Town. The aim was to provide safe drinking water to the residents of Karachi, thus contributing to reduced waterborne diseases and improved health. The Rehri Goth project is benefitting 5,500 residents in getting safe drinking water and the one in Lyari is benefitting 5,000 residents.



Lyari Filtration Plant Project



People Using the Filtration Plants

Chapter 3 - Demonstrating Integration

3.1 Think Tank on Rational Use of Water

While the government and its various agencies talk of water, there is no clear leadership or "ownership" exhibited by them in pushing this agenda to the forefront of national priorities. The civil society and the private sector also lag behind on making appropriate water management a high priority. Pakistan does not have an agreed water policy to guide water management and conservation, resulting in inconsistent and ad hoc handling of water systems and operations across the country, mediated largely by power play among entrenched interests.

Today there is no formal multi-stakeholder platform on rational use of water to collaborate and develop joint approaches for overcoming water challenges.

Following its international conference held in December 2013, "Water Cooperation in Action – From the Global to the Grassroots" and issuance of Karachi Declaration on Water Initiatives 2013, Hisaar Foundation has developed a three-pronged approach to move forward: a Think Tank on the Rational Use of Water, a Universities for Water Network and a draft water policy for the consideration of the government.



Discussion at The Think Tank Meeting Karachi

3.1.1 Purpose and Goals of the Think Tank

The main purpose of the Think Tank is to provide national leadership in Pakistan on the crucial issue of promoting the rational use of water, its improved management and providing policy directions. The goals of the Think Tank are to develop and present water policy alternatives as an aid to the government, bring together creative minds from across development and corporate sectors to work on key water issues and carry out advocacy amongst all stakeholders.

The Think Tank is expected to accomplish the following goals:

- Establish a national forum for discourse on rational use of water
- Develop and present water policy alternatives as an aid to the government to come up with a comprehensive and viable water policy for Pakistan
- Bring together creative minds from across development and corporate sectors to work with water experts for deliberations on key water issues and solutions
- Carry out advocacy and networking for rational use of water at the highest levels of government, civil society and the corporate sector
- Provide guidance to Pakistani universities (through Hisaar Foundation's Universities For Water Network)

The following individuals are members of the Think Tank: Dr. Daanish Mustafa, Mr. Khalid Mohtadullah, Mr. Mirza Qamar Beg, Dr. Salman Shah, Ms. Seema Taher Khan, Ms. Simi Kamal, Mr. Zohair Ashir and Dr. Sarosh Lodi (as capacity of Chairperson Universities for Water Network). The uniqueness of this Think Tank is that its members have diverse profiles, experiences and backgrounds, so as to encapsulate a holistic and all-encompassing view of the issues at hand. The Think Tank not only comprises water experts, but also an economist, public servant, advertising and media personality, and an individual with background in social policy and management strategy. The group is also diverse in terms of geographic and provincial representation covering all the major regions of Pakistan.

The Think Tank works through a "theory of change" framework which puts behavior and policy change at the center, that is, with the ultimate objective of changing the reality on the ground. The Think Tank works towards behavior and policy change through the following mechanisms:

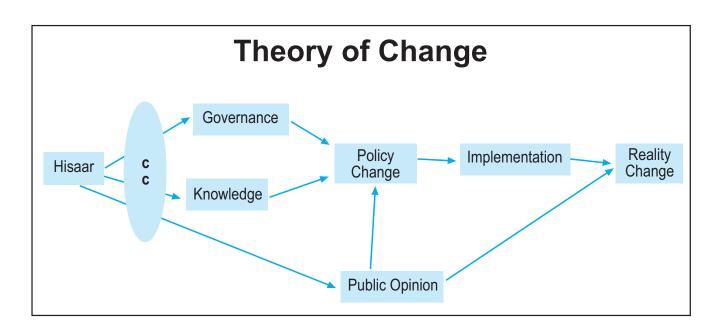
- Knowledge generation and sharing provided through the ambit of the Think Tank and Universities for Water Network
- Engagement with government institutions for debate, improved management and capacity building
- Engagement with other stakeholder groups, especially corporate sector
- Affecting public opinion through pressure groups, lobbying and campaigning

The Think Tank also recognizes that climate change is a critical factor to be considered and all initiatives and priority areas are viewed through the overarching lens of climate change. The Think Tank members have identified twenty five potential priority areas where further action, research and thought is required. The priority areas are outlined below:

3.1.2 Priority Areas of the Think Tank

Universe of Priorities

- 1 Indus Water Treaty
- 2 Indus Basin Management
- 3 Saline Groundwater/Water Management
- 4 Outside Indus Basin Groundwater (Artesian)
- 5 Water Management in Barani (rain-fed) Areas
- 6 Watershed Management
- 7 Delta Ecosystem
- 8 Coastal Urban
- 9 Coastal Fisheries
- 10 Urban Water Supply
- 11 Water Storages
- 12 Water Quality (Agri/Urban)
- 13 On Farm Water Management
- 14 Flood Management (Indus/Flash)
- 15 Drought
- 16 System Maintenance
- 17 Water Rotation Schedule
- 18 User Charges
- 19 Urban Landscape
- 20 Riparian Ecosystem
- 21 Rights vs Commodity
- 22 Urban Aquatic Ecology
- 23 Preservation of Lakes (Alpine/Riparian)
- 24 Industry Impact
- 25 Indigenous Systems



Out of the twenty-five priority areas identefied, the Think Tank members have selected five areas to undertake further action and research in the first three years. The Think Tank has set itself an ambitious agenda for which it has identified certain priority areas in which it wishes to work and contribute to in the first year: Indus Basin Management, Groundwater Management, Drought, Indus Water Treaty and Urban Water Management. The five priority areas identified by the Think Tank members are discussed below:



TT Meeting at Lahore

Efficient Management of the Indus Basin

The Indus requires diverse technical and strategic expertise to continue to deliver the water needs of Pakistan. It forms the backbone of Pakistan's water economy and supports the world's largest contiguous irrigation system. It needs both conservation and improved management.

• Balochistan Groundwater Management

Balochistan is in a dire state in terms of the depletion and mismanagement of its groundwater reserves. The unchecked extraction of sweet water aquifers has depleted groundwater and the karez systems have been virtually destroyed. Unchecked extraction continues in spite of ground water legislation. There is a need to explore additional aquifers as well as implement swift measures to safeguard the groundwater resources in the hard rock areas of Balochistan.

Drought Management and Arid Zones

The Think Tank will focus on arid zones within the drought paradigm focusing on preventive measures for the loss of livestock, crops and lives. There is a scope for effective research which can then be disseminated, especially in the field of developing a mitigation strategy and building resilience of drought-affected communities, so that in future they are better prepared to withstand climate shocks.



HF Team Site Visit at Kasoor

Indus Water Treaty/Trans-boundary Water

The Indus Water Treaty (IWT) has been a long standing area of contention and diverse views within Pakistan. Negotiations with India over the years have been marred by lack of preparation by Pakistan's side, along with lack of leverage given Pakistan's internal issues on water distribution. The transboundary issues with Afghanistan also need to be addressed. The realities and the basic assumptions behind the Indus Water Treaty have changed, and therefore, revisiting the Treaty should be explored further.



TT Members with WAPDA Chairman Mr Zafar Mehmood at Lahore

3.1.3 Achievements to Date

The Hisaar Foundation Think Tank on the Rational Use of Water has convened four times since its launch in September 2014, three times in Karachi and once in Lahore. Five priority areas have been carefully identified and selected by the members to

undertake further research and action. Papers have been produced at various stages and significant progress has been made in the areas of Balochistan Groundwater Management, Drought Management and Arid Zones, Urban Water Management and Indus Basin Management.

Along with their deliberations on the critical priority areas, the members of the Think Tank have also initiated dialogues to build consensus amongst various stakeholders regarding the rational use of water. In 2014 and 2015, members met with Chairman WAPDA, representatives of international development agencies and local foundations, water sector stakeholders in both Karachi and Lahore and farmers residing in Kasurvillage situated alongside the Indian border.



Meeting with Farmers

3.2 Universities for Water Network

The Universities for Water Network (UWN) was formally launched on 7th June, 2014 with the signing of a Memorandum of Understanding (MoU) between Hisaar Foundation and NED University of Engineering and Technology (NEDUET).



Signing of MOU between HF and NEDUET

The UWN was established with the realization that Pakistan faces serious issues in terms of water sustainability and security. At the moment, there is limited focus on water issues in Pakistan, however, the increasing pressures of climate change, population growth, urbanization and growing energy needs are together putting greater demands on our limited freshwater resources. But there is lack of critical thinking and little planning for the future in terms of what is required to manage our water resource and prime our water infrastructure for optimal use. Pakistan has a population of 180 million of which 66 percent are dependent on agriculture, 96 percent of the water use is for agriculture purposes, more than 30 percent of the population lives below the poverty line and 58 percent are already food insecure.

In this scenario Pakistan is further handicapped by adearth of research and scientific intelligence. Sensible approaches to advocacy, policy making and solutions to water and food problems need to be based on scientific database and research. Such research capabilities and the related capacity to use this research is urgently needed. Water resources are also grossly mismanaged in Pakistan resulting in huge losses due to wastage, pollution and poor management. This further exacerbates imbalances in food and livelihoods and results in water shortages across the country.



First UWN Meeting at NEDUET

The Universities for Water Network intends to bridge the gap between theory and practice by developing sound research capabilities and fostering scientific investigations and in-depth study.

3.2.1 Vision and Objective of Universities for Water Network

The vision of the Universities for Water Network is to develop the knowledge and skill base for water sectors, as well as water related disciplines, degrees, and departments that will be required by Pakistan in the next 100 years.

The main purpose and overarching objective of the network is to set up an international level Hisaar Institute for Interdisciplinary Studies on Water at a Pakistani university which provides interdisciplinary research, education and training in the water sectors.

Some of the deliverables of this Network are as follows:

- Development of database on literature available in the public domain on water in Pakistan
- Development of database on Pakistani universities working on water
- Development of database on researchers and academics working in Pakistan's water sector
- Development of E-portal on water (web-based repository of literature)
- Institution of the Hisaar Award on various competitions for students including projects, posters, research and community-based actions
- Development of curricula of academic programmes
- Establishment of Hisaar Institute for Interdisciplinary Studies on Water (long term)
- Publishing of international standard journal on water (long term)



UWN Meeting 2 at MUET

The members of the Universities for Water Network represent a diverse geographic coverage across Pakistan and each bring with them a unique specialization in the water sector. Members of the Universities for Water Network are also selected based on their willingness and support to the UWN. Currently, there are five active members of the Universities for Water Network as follows:



UWN Meeting 3 at UAF

Location	Specialization
Karachi, Sindh	Engineering and Urban planning
Karachi, Sindh	Geography and Environment
Jamshoro, Sindh	Engineering and Research
Faisalabad, Punjab	Agriculture
Lasbela, Balochistan	Marine sciences and Agriculture
	Karachi, Sindh Karachi, Sindh Jamshoro, Sindh Faisalabad, Punjab Lasbela,

3.2.2 Achievements to Date

The Universities for Water Network has met three times since its launch in June 2014, once in Karachi at NEDUET in December 2014, once in Jamshoro at MehranUniversity of Engineering and Technology (MUET) in April 2015 and most recently in Faisalabad at University for Agriculture, Faisalabad (UAF) in October 2015. The UWN has produced preliminary lists of the following:

- List of Pakistani universities with water related degrees, departments, courses and disciplines
- List of water professional and academics working in Pakistan
- List of research institutes working on water issues in Pakistan

The UWN has also conducted research for the Think Tank to fill the research gaps identified by the members. Preliminary work is also underway to develop an E-portal which will house a web-based repository of literature on water in the public domain.

3.3 Hisaar Institute for Interdisciplinary Studies on Water

The Hisaar Institute for Interdisciplinary Studies on Water will play a pivotal role in developing and fostering interdisciplinary studies on water. This institute will have its foundation in the Integrated Water Resources Management (IWRM) school of thought and will provide a holistic academic work on water issues, cutting across sectors and disciplines. Currently, there are two separate streams for studying water issues: the engineering stream which includes hydrology, hydraulics, infrastructure, environmental sciences etc and social studies stream which includes geography, climate change, sociology, social work, politics, and community-based approaches. One aim of the proposed institute would be to learn from these disciplines, inter-relate them, close the boundaries amongst these disciplines and then move to behavior change. Through this initiative, academia will assist government and citizens to adopt new policy and practices so we better conserve and utilize our water resources in a world of climate uncertainty and burgeoning problems of water and food security.

In the current world scenario, water is at the forefront of the world's most pressing global challenges along with climate change, global warming, natural disasters, and population growth. In such a context, it is now necessary more than ever to develop an integrated approach to water management which provides an interdisciplinary perspective which recognizes all the linkages and is cognizant of the ramifications of particular actions on the range of stakeholder groups.



UWN Members Field Visit of Experimental Farm

All research papers, articles and documents produced by the Universities for Water Network will ultimately be published under the umbrella of the Hisaar Institute and the proposed academic journal, however, ownership and intellectual property rights will remain with the authors.

3.4 Women and Water in Central and South Asia

December 2015 marks the culmination of a three-year project in collaboration with George Washington University entitled "Women and Water in Central and South Asia" which aimed at building international social capital for sustainable peace and development.

The project envisaged to foster people-to-people relations and enhance capacity on water resource management as a key element in building a stable and prosperous Central and South Asia. The project brought together young female water professionals, social entrepreneurs and activists from Kyrgyzstan, Tajikistan, Afghanistan, Pakistan and India, to discuss their experiences and innovative solutions on community-level water management and gender issues.

The project promoted innovative communication on water resource management through in-person exchanges (workshops in Bishkek Kyrgyzstan, Mumbai India and Washington DC USA), new technologies (webinars) and the visual arts (video shorts).

The project targeted young women in the five countries to empower local communities to build sustainable water management and consumption practices. The project focused on enhancing women's advocacy capacity to ultimately achieve the following objectives:

- Improve their technical understanding of the issues and learn from their peers across borders
- Build leadership skills
- Establish cross-country links in water resource management issues
- Increase the ability to access decision-makers and influence policy directions Four women participated in the project on behalf of Hisaar Foundation:

Dr. Rahat Jabeen,

Ms. Farwa Tassaduq,

Ms. Bhagwani Rathore

Ms. Kamla Meghwar.



Women gathered around the ecosan toilet sewer drain



WWCASA-participates-in-a-water-sanitation-and-hygiene WASH-lesson-at-a-village-school-in-Panchgani-India



WWCASA Conference at India

Chapter 4 - Demonstrating Innovation

4.1 Aab-e-Thar: Total Water Solution in Union Council Jurio

Hisaar Foundation's vision calls for balancing environmental concerns with the need for development through innovation. Its mission calls for promoting appropriate policies and creative, low cost solutions for conservation in Pakistan on water, food and livelihood security and for addressing the broader climate change issues.

The government of Pakistan declared a drought crisis in district Tharparkar in March 2014. In keeping with its mandate of providing emergency support, and leveraging the knowledge and experience of its CEO, Dr. Sono Khangharani, Hisaar Foundation launched an appeal in March 2014 to provide immediate relief to the affected victims of the Thar drought. Hisaar Foundation called for support in cash and in kind to provide food ration packs that included flour, sugar, oil, tea, lentils, ORS and medicines and energy biscuits to school children to alleviate their immediate nutritional needs. All relief work was conducted under the direct supervision of the CEO.



Registration to Receive Rations at HF Relief Camp

The immediate relief phase started in March 2014 and culminated in May 2014. Hisaar Foundation conducted an assessment of the long term drought situation in the Thar region, and developed a plan to provide rehabilitation to the families to cope with drought crisis. Subsequently, Hisaar Foundation extended its relief efforts into the rehabilitation phase and devised a long term solution that was aimed at building drought-resilience mechanisms to enable local communities to better cope with impending drought crisis situations.

The assessment indicated due to the failure of monsoon rains in 2014 and also inflation, the poor families who were facing food shortages, would continue to face these shortages due to lack of rain. Out of the total population of Thar of 1.2 million, 70% of the families fall in the "poor families" category who would face the harsh reality of water and food shortages. Therefore, the Foundation decided that innovation was required to provide rehabilitation to these drought-affected communities in a manner that would alleviate their current miseries but also enable them to cope with impending crises in a better way.

The conventional method of water supply in Thar is the dug well which is believed to be the best method as well. However, In a normal day, villagers spend around 4-6 hours on average to fetch 6-7 pots (90-105 liters) of water from the dug-well. However this time is escalated to 6 hours a day during the dry season. This especially affects the women who are responsible for carrying water. Often children also have to accompany their mothers in water collection which In such event children have to sacrifice daily studies, for which they were reprimanded by their teachers.

Hisaar Foundation realized the need for innovation in water collection and storage mechanisms and wanted to develop an innovative method of water collection and storage which would lead to an improvement in the lives of the Thar people and provide a secure buffer in case of future drought-like condition. Hisaar Foundation believed that the solution lay in reviving indigenous methods of rain water harvesting in desert areas. Thus the Total Water Solution model was developed which comprised the following:

 Construction of water storage tanks at household, community and village levels (nadi, chalho and chonra ponds)



Chonra Pond

- Shrub and tree plantation to provide fodder for livestock and berries for human consumption
- Initiation of ber grafting which is a staple diet of the Thar region. The ber can augment production manifold with the availability of water supply
- Promotion and training of Thari women to engage in Kitchen Gardening in order to produce seasonal vegetables (tomatoes, okra, carrots, potatoes, radish, etc.)

Union Council Jurio was chosen as the target area to implement Hisaar Foundation's Total Water Solution model in Tharparkar, based on the potential catchment area of rainwater harvesting structures. Jurio consists of 8,000 families with more than 50,000 men, women and children. Sukaar Foundation was chosen as the implementation partner because they already had a strong presence in the target area. However, all the implementation and construction work was done under the supervision of and in consultation with Dr. SonoKhangharani, CEO, Hisaar Foundation.

The following villages of Jurio were targeted for the initiation of water, food and livelihood activities:

- Village Khario Nara (Household level nadi ponds)
- Village Kharo Junejo (Village level communal chalho pond)
- Dessar Ji Wandh (Hamlet level rainwater chounra Ponds)

One village level communal *Chalho* pond was constructed at village Kharo Junejo. A *Chalho* is an ancient bowl shaped makeshift structure made from mud for collecting water for temporary use in Thar. The diameter of the upper rim of the bowl measures 80 ft and at the bottom 16 ft with a depth of 12ft. The excavated pit is pressed and leveled and then a geo-film is laid down over the entire excavated surface, the joints between the sheets of geo film are plastered with a special water-proof solution and the geo-film is then covered with brick pavement which is in turn covered with a layer of concrete. The pond is fenced with a three feet high wall with an additional two feet iron fence at the top of the wall. Rainwater from the catchment flows first into a deep cylindrical chamber/pit

where debris is deposited as sediments and relatively cleaner water then flows through a furrow into the pond Four hand pumps are installed to fetch water from the pond. The capacity of each chalho pond is one million liters. Trees requiring less water and providing greater shade will be grown around each *chalho* pond to slow down the evaporation process. The pond provides drinking water to a village of around 70 households for more than six months during dry spans.

Four (4) hamlet level *Chonra* ponds were constructed in village DessarJi Wandh. Based on the local technology of the groundwater tanks/cisterns, which have been used in Thar for many years, by the time passed, the design has upgraded and developed *a Chonra* (local thatched hut of Thar) shaped large ground water tank for up to fifteen households. The mug/face of the *chonra*-shaped hole is covered with cone shaped structure (like an upper shape of local chonra which is made of local thatched material). A small hole is made in the upper turret to channel water into the finished pond). The fill material is kept moist for 5 days to make the structure stable, hard and strengthened.

The internal shape of the *Chonra* pond is constructed using a very thin lining of cement, ash, sand, lime and local material. (Around 25 mm thickness of 1:1:1 cement/sand/and mixture of lime etc) The *Chonra* pond is around 4.5 metres deep with circular of 4 diameter and having total capacity of around 60,000 liters. In addition, a saucer shaped concrete catchments of 15 square meters is constructed around the *chonra*-pond in order to harvest/catch the rainwater. Based on above quoted estimation that 100 square ft of flat rooftop harvests around 3,000 liters of rainwater during a good rain in Thar, in this way the catchments of 15 square meters will harvest water of around 75,000 liters, which is sufficient for a *Chonra* pond with a capacity of 60,000 liters.



Mr. Bilal Mustafa, President&CEO of KASB Bank handing cheque to HF team

Hisaar Foundation 2 Year Report

The catchments are fenced with cemented pillars and iron net and with an entry of a door to curb animals etc not to damage the catchments. It is estimated that a *Chonra* pond will provide drinking water for five households of a village up to two months of the dry season. The catchment slabs will be cleaned before every rain to make the water of a good chemical and adequate bacterial quality. The inlet holes will be sealed until the rains come and water only allowed into the *Chonra* pond when the slabs have been cleaned.

In addition, 91 *Nadi* ponds at the household level were constructed in village Khario Nara. Hisaar Foundation also conducted kitchen gardening training programmes in these villages to educate the communities on alternate sources of food such as tree plantation and ber grafting. In addition, villagers were trained how to grow crops for food and fodder using limited water resources.

The above work in Tharparkar district was made possible by the generous contributions of the following: KASB Bank, Serena Hotel, HOPE Trust, and individual philanthropy.



Household level Nadi Ponds in Jurio



Tree Plantation



Filled village level Chalho Pond after rains of 2015

Chapter 5 – Programme Activities

Throughout the years 2014 and 2015, Hisaar Foundation Governors, Council Members, staff and representatives continued to engage in activities to promote water, food and livelihood security.

5.1 Emergency Support

Thar Drought Relief Campaign

In March 2014 most areas of Sindh's Tharparkar district were facing a famine-like situation. Over 175,000 families were reported to have been affected by the drought.Responding to the crisis, Hisaar Foundation launched the Thar Drought Relief Campaign on 8th March, 2014, with a focus on water, food and livelihood security. Hisaar Foundation extended support and relief to over 2,400 families and 30,000 school going children in the Talukas of Mithi and Chachro on an emergency basis by providing them with food ration packs, energy biscuits, soaps and some medicines



HF Relief Centre

Hisaar Foundation had set a target of Rs. 7.5 million (inkind and cash) for its Thar Appeal campaign but due to the generosity and support of the donors, Hisaar Foundation was able to exceed the target by a margin and raise Rs. 9.5 million (in-kind and cash).

5.2 Karachi Water Partnership

Celebration of Global Handwashing Day 2014

Under Hisaar School Advocacy /Activation Progamme, Hisaar Foundation celebrated Global Handwashing Day at Quaideen Public School (Shara e Faisal), an adopted school by Sharmeen Memorial Trust and Mashaal Academy (Neelam Colony), an adopted by Lyceum School on 15th and 23rd of October 2014 respectively.

These two events were attended by over 250 school children and teachers. Mr. Tofiq Pasha Mooraj, Governor Hisaar Foundation and two staff members of Hisaar Foundation Ms. Saleha Atif and Ms. Rizwana Batool gave speeches on Handwashing Day and the importance of washing hands at these schools. Hisaar Foundation's Mascot Bubbles also interacted and had fun activities with school children.



Bubbles and HF team with school children at Global Handwashing Day

Hisaar Foundation distributed water facts and water conservation guidelines (for homes, schools) amongst the teachers and school children. Soap and gift pack were also distributed amongst the children by Sharmeen Memorial Trust and Lyceum School.

School Awareness Campaign

Under Hisaar School Advocacy /Activation Progamme, the Council Member of Hisaar Foundation, Dr. Rahat Jabeen- Senior Environment Specialist and water expert delivered a presentation on water management and water issues to the students of Beaconhouse School System-Jauhar Campus- Karachi on 28th November 2014 as guest speaker. Ms. Rahat discussed the water resources, availability, and issues of water management particularly in agriculture and at the domestic level.

She explained various activities that an individual and students at school level can adopt like water watch guards, water conservation through split conditioners, recycling food waste and recycle men etc. the session was concluded with an interactive Q &A. The Hisaar Foundation jingle was also played for the students which was tremendously enjoyed by all.

Water Conservation and Better Management Campaign

As a tribute to World Water Day celebrated globally on 22nd March, Hisaar Foundation visited the Iqra Noor-ul-Atfal School in Landhi, Karachi on 13th March, 2015. Around 100 students from class 1 to class 8 and 6 to 7 teachers attended the session in the school's assembly hall. This session was organized by MsRazia Sultana member of WWN Landhi with the support of other WWN members.

The students and teachers were sensitized to the need to conserve water and were also given tips on the many ways in which they can avoid wasting water. Children were asked to participate in a debate about water conservation and usage. They were also asked to respond to questions concerning the water presentation.



Saleha Atif conducting Water Conservation Session

Small gifts were distributed to children who participated in the activity. Water conservation guidelines for schools and homes were distributed at the end.

Women and Water Network (WWN) Landhi

This activity is part of the Hisaar Foundation WWN programme with the aim to re-activate WWNs of Karachi. A meeting was held on 13th March, 2015 in Landhi to restart WWN Landhi activities. In the meeting local water issues were discussed. The area does not have a functioning water line. The reasons for such issues were hashed out and possible proposals for solutions were considered. A new executive committee of WWN was appointed and the committee members were tasked with initiating new members to the network, raising awareness in local schools and accurately identifying local water issues and collectively taking them forward to municipal authorities. HF offered to function as a resource to contact notable individuals. Several of these women had attended Hisaar Foundation's Kitchen Garden trainings and were eager to share their success stories. Ms Saleha Atif, Programme Manager, Hisaar Foundation, addressed the women and asked them to cooperate and actively support the Women and Water Network initiative.

Kitchen Gardening Training for Women

The aim of the training was to enhance the capacity and skills of urban women to acquire self-sufficiency in food by growing fresh nutritious and low-cost vegetables in their homes through judicious use of scarce recycled water, and thus ensure both food and water security. The Hisaar Foundation team visited Gulistan-e-Jauhar on 17th March, 2015 to provide basic Kitchen Garden Training to a group of 15 women. Ms.Shanaz Jamil member of Karachi WWN organized and conducted the training with the Hisaar Foundation team.

The group of women was sensitized about the importance and benefits of kitchen gardening and the methods of growing vegetables, container gardening and use of recycle materials. Ms Atif, Programme Manager HF, gave an introduction of kitchen gardening module. She spoke about water conservation and better management practices for kitchen gardening. Basic information was discussed such as how to recycle water for indoor plants, the variety of household items that can be used for pots, which plants to grow in what season, etc. Women were keen and enthusiastic about the concept of kitchen gardening and were interested in receiving further training

The Housing Scheme had ample outdoor space that has the potential to be converted into a community garden. Practical session/training of sowing seeds in pots and recycled container was given to the group.



WWN Members

Ms Atif also introduced the WWN programme and encouraged them to form WWN in their neighbourhoods. The water challenges facing these women were also discussed and potential solutions were identified. In the end, Hisaar Foundation staff distributed vegetables seeds and kitchen gardening training modules to each of the participants.

Since the rollback of the local government system in 2011, Karachi Water Partnership has lost its momentum. While the first urban water partnership in the world is still active in pockets across the city, a vacuum has been created in the government-citizen partnership model and there is no active partner of Hisaar Foundation who can champion the concept and take the model forward. With the dissolution of the local government system, the premise of the AWP platform has been compromised. Since there are no channels government-citizen collaboration and citizen-based activism, KWP has been unable to identify and create avenues for alliance building and change the way citizens think about using and managing water.

5.3 National Engagements

Pakistan National Consultations Towards a Post-2015 Development Agenda

Pakistan Water Partnership held the first national consultation on the post-2015 development agenda on 18th February, 2014 to which Hisaar Foundation was invited to participate as an important stakeholder in the water and allied sectors of Pakistan. The consultation was a part of a series of broader consultation exercise throughout the world both within and external to the UN to consider the post-2015 development agenda framework.

World Water Day Celebration 2014

Hisaar Foundation organized as well as participated in seminars, workshops and training sessions on water and environmental issues conducted by FPCCI. As part of World Water Day 2014 celebrations, Chairperson, Mr. Zohair Ashir spoke as a guest speaker and made a presentation on water conservation and the effects of climate change at a seminar organized by Hisaar Foundation in collaboration with the Federation of Pakistan Chambers of Commerce & Industry (FPCCI) at the Federation House, Karachi on 22nd March, 2014.

Sindh Drought Mitigation Committee

CEO Hisaar Foundation, Dr. Sono Khangharani was invited in May 2014 by the Government to be a part of the committee which formulated the framework for setting up the Thar Development Authority which is expected to be tabled as a bill in the Sindh Assembly. Impressed with Hisaar Foundation's continuous interaction and engagement with the Provincial Disaster Management Authority (PDMA), the Government of Sindh requested Dr. Sono Khangharani to become a member of the Government appointed body on drought. The PDMA also issued an appreciation letter to Hisaar Foundation for its contributions and efforts during the drought in Sindh.

Seminar on Constraints Emerging from Recent Drought and Government's Role

Hisaar Foundation was invited by Action Aid Pakistan Karachi to facilitate a seminar organized by Sami Foundation in June 2014 titled "Constraints Emerging from recent Drought and Government's Role" in the district Umerkot. Dr. Sono Khangharani, CEO, Hisaar Foundation facilitated this seminar. The seminar was well attended by members of the district administration, NGOs, Hisaar Foundation staff and others. Dr. Sono Khangharani also visited Maleer CBO of Ramsar village along with the Sami Foundation management team and AAPK Project team to engage in a dialogue with CBO members on how to reduce the vulnerability and create more resilience in order to cope with the situation of drought and other emergencies.

Hisaar Foundation invited by AWARE to Participate in Seminar on Drought

Dr. Sono Khanagharani, CEO Hisaar Foundation and recipient Tamgha e Imtiaz, participated as keynote speaker in the District forum on "The Drought and the Role of the Government" held on 5th July, 2014 at Chachro. A total of 120 participants attended the talk and the focus of the seminar was on drought related resilience strategy and discussing the role of Government. The discussions during the forum led to developing an analysis of the role of the government in terms of facilitating local production and resource generation and enhancing coping capabilities of the vulnerable communities.

Hisaar Foundation Seminar on Combating Water and Food Challenges in Thar

Upon the completion of the second phase of the Jurio Project, Hisaar Foundation organized a seminar on Monday 27^{th} October 2014 on "Combating Water & Food Challenges in Thar – The Jurio Project" which showcased the outcomes of the project. The Jurio Project focused on providing relief and rehabilitation to the inhabitants of the Union Council Jurio, TalukaMithi, District Tharparkar based on the innovative Total Water Solution model developed by the Foundation.

Thar Drought Seminar – Factors Impacting and Measures Mitigating Drought

A provincial seminar was organized by Hisaar Foundation, entitled, "Thar Drought Seminar – Factors Impacting and Measures Mitigating Drought" on 10th January, 2015 at Movenpick Hotel Karachi, supported by ActionAid Pakistan Karachi Office. The Seminar focused and disseminated recommendations from the National Humanitarian Network regarding the current Thar drought. The event was attended by around 80 participants of different groups of stakeholders; including Provincial Government officials, Thar Drought Policy Committee members, different National/International NGOs, major NGOs working in Tharparkar, CSR representatives from corporate sector, representatives from media houses. Stakeholders deliberated upon issues arising from drought, its impact on local population and mitigation measures.



Panelists during the Q&A session

Seminar on Disaster, Environment and Climate Change

The Hisaar Foundation team participated in the seminar organized by Pakistan Poverty Alleviation Fund (PPAF) to bring together Local Support Organizations (LSO's) and NGO's on the topic of climate change adaptation and mitigation. The seminar was conducted on 14th April. 2015 at MakliThatta. Dr. SonoKangharani, CEO Hisaar Foundation introduced Hisaar Foundation's objectives, programs and activities to the participants and Tofiq Pasha Mooraj, Governor Hisaar Foundation emphasized the importance of kitchen gardening and explained Hisaar Foundation's activities in this regard. Hisaar Foundation had set up a stall which displayed organization documents including project reports, modules, water conference 2013 reports, international water conference 2015 brochure etc. Water conservation guidelines in Sindhi and vegetable seeds were also distributed.

Hisaar Foundation also shared information with participating LSO's and exchanged contact details.



Dr. Sono Speaking at the Seminar



Eager Participants at the Hisaar Foundation Stall

Earth Day Seminar

In honor of Earth Day which is celebrated each year on 22nd April, Hisaar Foundation organized an Earth DaySeminar with the support of the Federation of Pakistan Chambers of Commerce and Industry (FPCCI). The theme of the seminar was "It's our turn to lead" in keeping with the global theme declared for Earth Day in 2015. The seminar was specifically targeted towards university students and youth but it served to create awareness of the importance of Earth Day and inculcate civic responsibility towards our planet Earth in all of us.

The main purpose of the seminar was to remind us all of the importance of the 5 R's of conservation and the environment: Reduce, Reuse, Recycle, Restore and Replenish. The seminar also focused on increasing youth responsibility and youth action for the preservation of Earth's precious resources and building a clean and healthy future.



Youth Participation from Different Universities

Mr. Siddique Sheikh, Advisor on Social Sector, FPCCI, delivered the welcome remarks. Mr. Zohair Ashir, Chairperson Hisaar Foundation, briefed the youth on the importance of Earth Day the role of Hisaar Foundation in the environment sector as well as the conservation, management and preservation of Earth's resources. An interactive open session with the participants on "Role of Youth in Future of Saving Earth", moderated by Ms. Simi Kamal, Chair Academic Committee, Hisaar Foundation was well received by the gathering. At the end of the event Ms. Saleha Atif, Assistant Programme Manager, Hisaar Foundation gave a vote of thanks.

Over one hundred department heads, teachers and students from various universities across Karachi participated in the seminar.

Global Citizen's Consultation on Worldwide Views on Climate and Energy 2015

Hisaar Foundation was invited to a Global Citizen's Consultation on 6th June, 2015 in Islamabad to elicit the "Worldwide Views on Climate and Energy 2015." Two representativesparticipated at the seminar of behalf of Hisaar Foundation. This consultative meeting was jointly organized by Sustainable Development Policy Institute (SDPI) and Center for Climate, Research and Development (CCRD) of COMSATS Institute of Information Technology.

Seminar on World Day to Combat Desertification and Drought

A one day seminar was jointly organized on 16th June, 2015 by the Department of Remote Sensing and Department of Geography (University of Karachi) at the SUPARCO premises to observe the World Day to Combat Desertification and Drought.

The purpose of the unique occasion was to highlight the problems and identify ways to prevent long-term devastation of the environment, people and economy of Pakistan. Dr. Sono Khangharani, CEO HF was invited as a guest speaker to talk about the "Desertification in Sindh in the Context of Drought and Development." Representatives of Hisaar Foundation also participated at the seminar.

Consultative Discussion on Impacts of Climate Change

On behalf of the Climate Proofing Growth and Development (CPGD) Programme of the Department for International Development (DFID), Hisaar Foundation held a consultative meeting on Wednesday 12th August 2015 led by Dr. Pervaiz Amir, Council Member, Hisaar Foundation. The consultative discussion was on "Estimating the impacts of climate change on sectoral demands of water" and aimed to elicit the views of stakeholders on the provincial level to gauge the future demands of water in Pakistan in the next 10 years.



Dr. Pervaiz Amir, Council Member HF conducting Consultation Meeting

Roundtable Meeting on Hisaar Foundation Initiatives for International Agencies and Local Foundations

Hisaar Foundation hosted a high-level Roundtable Meeting with international agencies, foundations and government organizations to give a briefing on the Hisaar Foundation Think Tank on Rational Use of Water and the Universities for Water Network. The one day roundtable was aimed at sharing the progress of these two connected initiatives to date and seek insights and support from key international and national players in the water, environment, food and climate change sectors. The purpose of the briefing session was that at the end, the participants would have a clear understanding of the goals and objectives of these HF initiatives and be in a position to identify areas of mutual collaboration.



Think Tank Chairman, HF Chairman and WAPDA Chairman at the Stakeholders Session

The briefing session was well attended by over 35 participants and included representatives of organizations such as WAPDA, UNDP, UNESCO, IUCN, WWF Pakistan, Engro Foundation, FAO, Water Aid, and Urban Unit among others.



Participants at HF Roundtable Meeting with International Organizations, Foundations and Government Departments

Stakeholders Workshop to Deliberate Water Aid Country Strategy

As an important stakeholder in the Pakistan water sector, Hisaar Foundation was invited to participate in a consultative workshop in Islamabad on Tuesday 27th October, 2015 hosted by Water Aid to review and refine the Water Aid country strategy for the next five years from 2016 to 2020.



Water Aid Stakeholder Consultation

5.4 Media Engagements

Throughout the year, Hisaar Foundation Governors, Council Members, Chief Executive and staff members participated in various talk shows, radio shows and other media events. The purpose was to educate, inform and enlighten people regarding the importance of water and highlight the water issues and challenges facing Pakistan. Hisaar Foundation representatives also created awareness about the work of Hisaar Foundation in the areas of water, food and livelihood security.



Saleha Atif and Sanaa Baxamoosa, Managers HF at FM107 on World Water Day

5.5 Ramazan Appeals

Over the years, the generous donations and zakat contributions have enabled Hisaar Foundation to reach out to victims across Pakistan in all four provinces. In keeping with its mission of providing rehabilitation support and water, food and livelihood security, Hisaar Foundation launched its annual Ramazan Appeal for zakat and donations, to raise funds for the Foundation's school water and sanitation rehabilitation and emergency support programmes. In 2014 and 2015, the Ramazan Appeals specifically focused on the Foundation's relief and rehabilitation efforts in Tharparkar.



Dr Sono at TV1 Talkshow

Chapter 6 – International Water Conference 2015

Following its flagship water conference in 2013 on "Water Cooperation in Action – From the Global to the Grassroots" Hisaar Foundation is hosting its bi-annual international water conference in Karachi once more on 17th and 18th November, 2015. The title for this year's conference is "Securing Sustainable Water for All" and the theme is "inclusion, integration and innovation."This conference is aimed at reaching out to all the stakeholders to develop investment in innovation, encourage integration and promote inclusion of all stakeholders in an effort to secure sustainable water for all.

6.1 Scope and Aims of the Conference

The scope of the conference reflects the theme of the UN Water dedicated global goal for 2015: "Securing Sustainable Water for All." This theme recognizes that a coordinated effort to promote human well-being, economic prosperity and the preservation of environmental capital is essential to fostering sustainable patterns of water use, management and conservation.

Promoting sustainable water for all implies the protection of water resources from over exploitation and pollution while meeting the needs of water for life, agriculture, energy, environment, industries and other uses. It further implies protection of communities from water-related disasters and recognizing the basic human right to safe drinking water and adequate sanitation.

By sharing research findings, technical solutions, innovations, inclusive models, examples of integration and experiences at different levels, policy level dialogue on sustainable water can be initiated for ensuring conservation, sustainability and integrated management of water resources in Pakistan, South Asia and globally.

The aims of this conference are to:

- Identify avenues of integration, innovation and inclusion in order to ensure water security and sustainable water for all
- Identify strategies for promoting and implementing and inclusive sustainable water policy
- Reach out to all critical stakeholders including government, academia, civil society, media, business and corporate sector, urban and rural communities, and experts on water to develop integration
- Showcase models and experiences from across the world that display innovation and integration

Over 1200 people are expected to attend this event mainly from Pakistan, South Asia and across the globe. The conference is being promoted through its website, social media, newspapers, television channels and extensive email communications.



Karachi Delcaration on Water Initiatives at HF Conference 2013

6.2 Conference Format

The conference format is organized in an array of ways appropriate to topic, content and participants of each proposed session. The conference will include but not be limited to the following:

- Plenary and Technical Sessions
- Panel and Roundtable Discussions
- Networking Opportunities
- Exhibition of Water Products and Services
- Initiatives by Academia
- · Government Agenda and Commitment
- Hisaar Foundation Partners' Meeting

6.3 Conference Participants

A diverse and rich variety of participants are expected at this conference bringing a wide selection of water sector experts and professionals and reaching out to nontraditional players. This event will be attended by International Speakers, Government Representatives, Corporate Leaders, Members of the Academia and Donor Agencies, Professional Bodies, Members of the Women and Water Networks and Representatives of Community Based Organizations. It will also be attended by University and Research Organizations, International Water Organizations and Non-Government Organizations. Media Representatives, Partners of Hisaar Foundation, Youth and Student Organizations, Water Related Manufacturers and Service Providers are also expected to participate.

6.4 Conference Organizers and Leaders

Prominent water experts and leaders in their respective fields are directly involved in the planning, execution and monitoring of this conference. These include Mr. Khalid Mohtadullah, Dr. Salman Shah, Dr. Parvaiz Amir, Ms. Simi Kamal, Dr. Daanish Mustafa, Dr. Sarosh Lodi, Mr. Mirza Qamar Beg, Ms. SeemaTaher Khan, Dr. Noman Ahmed, Dr. Imran Ahmed and Mr. Zohair Ashir. Other members of the Hisaar Foundation Board and Management actively involved in this venture are Ms. Nadira Panjwani, Mr. Badaruddin Vellani, Mr. Ashraf Kapadia, Ms. Meher Noshirwani, Mr. Tofiq Pasha Mooraj, Dr. Sono Khangharani and the team of Hisaar Foundation.

Three Conference Committees are actively functional: Steering Committee led by Mr. Zohair Ashir, Academic Committee led by Ms. Simi Kamal and the Management Committee is which is led by Mr. Ashraf Kapadia and Dr. Sono Khangharani.



Conference 2013



Chapter 7 - Governance

Hisaar Foundation is a board driven organization channeling the energy of volunteerism from the top-down. Board Members and Council Members pledge not only their time but also make a range of contribution from donations to professional services and advice, free of charge. Members of the Board appear on media on behalf of Hisaar Foundation and speak out on various international and national forums. They provide leadership and guidance to the executive arm of the organization and practice the spirit of volunteerism at the highest levels.

Good governance practices have been followed at Hisaar Foundation since its inception. Every three years, elections are held and some Governors retire to make way for new ones. This year also, following the Annual General Meeting held on 27th October, 2015, sitting Governor(s) retired and new Governor(s) were inducted. The Board of Governors for 2012 to 2015 was as follows:

- 1. Zohair Ashir (Chairperson)
- 2. Abdul Ghaffar Pirzada
- 3. Amjad Igbal Ahmed
- 4. Ashraf Kapadia
- 5. Badaruddin F. Vellani
- 6. Mahmood M. Kazmi
- 7. Mariam Halai
- 8. Meher M. Noshirwani
- 9. Nadira Panjwani
- 10. Tofiq P. Mooraj

The newly elected Board of Governors for 2015 to 2018 is as follows:

- 1. Zohair Ashir (Chairperson)
- 2. Amjad Iqbal Ahmed
- 3. Ashraf Kapadia
- 4. Badaruddin F. Vellani
- 5. Mariam Halai
- 6. Meher M. Noshirwani
- 7. Nadira Panjwani
- 8. Sarfaraz Rehman
- 9. Tofiq P. Mooraj

7.1 Profile of Current Board of Governors



Zohair Ashir (Chairperson)

Management specialist with over 30 years of professional experience in the development and private sectors in areas of Institutional Development and Strategy, Policy, Monitoring and Evaluation, Research and Project Management, Mr. Zohair Ashir has multi-sectoral international, regional and national experience in the development sector with concentration of work advisory services in Poverty Reduction, Education, Health, Social Protection and Water sectors. He serves in an advisory capacity with the World Bank, USAID, ADB, State Bank of Pakistan, DFID, JICA, UNDP and others and in the private sector he also serves as a Strategy Adviser to the organizations in the Banking, Telecommunications, FMCG, Energy and Pharmaceuticals sectors. Previously was employed by Aetna Life and Casualty Insurance Company and Baptist Memorial Hospital in USA, and, Aga Khan University Hospital in Pakistan. Mr. Ashir devotes considerable time as a volunteer to non-government and civil society organizations and serves as a member on several Boards. He has work related experience in the United States, South East Asia, South Asia, UAE and Pakistan and is a shareholder in two organizations, AASA Consulting (social policy consulting) and Access Consulting (Technology firm). He holds a post graduate certification in Hospital Management from University of Minnesota and under-graduate degree from University of Memphis in USA.



Amjad Igbal Ahmed

A Chartered Accountant by profession from the Member Institute of Chartered Accountants England and Wales, Mr. Amjad Iqbal Ahmed is the Chief Executive and partner of a family business.



Ashraf Kapadia

Ashraf Kapadia is a very senior Management and IT Consultant with 44 years of experience in the IT Industry. During his long career, he has worked in various technical and managerial positions in Pakistan, England, Italy, United Arab Emirates, and the United States of America, and has been involved in many large and complex projects. Ashraf Kapadia formed AshrKap Consulting in July 2004 which is a not-for-profit organization with the objective of providing mentoring and guidance to young entrepreneurs and start-ups and continues to provide mentoring on a no-cost, no-obligation basis. He joined AT&T Corporation in May 2015 and currently serves as the Country Manager (Pakistan Branch). Ashraf Kapadia has also served as the Chairman of the Pakistan Software Houses Association (P@SHA), Chairman of the Computer Society of Pakistan (CSP), member of the Board of Directors of Pakistan Software Export Board (PSEB), member of the Management Committee of the Karachi Institute of Information Technology (KIIT), Chairman of the Organization of Pakistani Entrepreneurs (OPEN) Karachi Chapter, member of the Board of Trustees of the Publican Alumni Trust (PAT), member of the Board of Governors of Hisaar Foundation, and member of the Board of Directors of MIT Enterprise Forum of Pakistan.



Badaruddin Fatehali Vellani

Badaruddin F. Vellani is an Honours graduate in Chemical Engineering from the Loughborough University of Technology and also a Barrister at Law from the Middle Temple (London). Mr. Badaruddin Vellani was called to the Bar in 1982 and commenced legal practice in Karachi immediately thereafter. Mr. Vellani is enrolled as an Advocate of the Supreme Court of Pakistan and is a partner in the law firm of Vellani & Vellani. In addition to his legal practice, Mr. Vellani is a member of the Board of Directors in several multinational companies covering the FMCG, manufacturing, medical and philanthropy sectors and is also a member of the governing body of several not-for-profit organizations.



Mariam Halai

Ms. Mariam Halai, a financial consultant, heads the Research & Analysis Bureau, a consulting firm offering financial analysis and accounting services to small businesses since 1990. She was a part time lecturer, teaching Accounts and Finance at Institute of Business Administration, Karachi for 10 years. Currently, she serves on the Managing Committee of SCINOSA (Society for Children in Need of Special Attention), a school for special children, and AEF (Accident & Emergency Foundation), an NGO managing JPMC's Emergency Operating Theatre.



Meher Marker Noshirwani

MsMeher M Noshirwani with Masters in Sociology from the University of Essex, United Kingdom. As a sociologist with 27 years of experience in the field of women, development, environment and climate change, first with ShirkatGah (a women's NGO) and currently with TCCR, she has developed projects and programmes on the theme of gender, livelihoods, and sustainable development.

As a member of IUCN's Pakistan National Committee she has served on the Executive Committee of the Pakistan National Committee (PNC), participated in four of IUCN's World Conservation Congresses and has been a member of IUCN's Commission CEESP since 2010, and a member of the theme on Sustainable Livelihoods and Sustainable Use Specialist Group.

She is currently also working as a Consultant and Researcher on Gender and Environment issues and is the Regional Vice Chair for Asia of the Commission on Environmental, Economic, and Social Policy (CEESP) of IUCN and is also the Technical Advisor to the Trust for Conservation of Coastal Resources (TCCR).



Nadira Panjwani

Ms. Nadira Panjwani, a social worker and philanthropist based in Karachi, is the Founder and Managing Trustee of the Panjwani Charitable Foundation and Trusts, Managing Trustee of the PANAH Shelter Home for Women and All Pakistan Women's Association, Founding Director of the Pakistan Human Development Fund, Founder of the Zainab Panjwani Memorial Hospital and the Dr. Panjwani School/College for the Blind and a member of the Jinnah Society. Ms. Panjwani has been teaching at the Bahria University, as an honorary lecturer at the post graduate level since 1996 and has also served as a member of Board of Governors of the Higher Education Commission of Pakistan, Syndicate of the Dow University of Health Sciences, Board of Governors of the National University of Modern Languages, Syndicate of the NED University, Executive Board of the ICCBS University of Karachi, Board of Governors of the Bahria University, and numerous other academic and health bodies. Nadira Panjwani also served as the Minister for Women Development and Population Planning in the 2007-2008 caretaker cabinet of Sindh. In recognition of her meritorious services in the field of public service, the President of the Islamic Republic of Pakistan conferred upon her the prestigious awards of Sitara-i-Imtiaz in the year 2000 and Hilal-i-Imtiaz in 2004.



Sarfaraz A. Rahman

Sarfaraz Rahmanis a chartered accountant by qualification and has 30 plus years of professional work experience, mainly in the FMCG industry. He commenced his career with Unilever in 1983 and spent time in Finance, Marketing Services, Management Accounting and Cost Saving projects. Moving on to Smithkline Beecham, he was involved in the Merger and Strategic Planning at the time of the merger. Later, he spent several years abroad with Jardine Matheson/Olayan mainly in Finance and Business Development. He set up the first Logistics Service Provider in the Middle East. Mr. Rahman then moved to Pepsi Co, managing the Pakistan/Afghanistan Business Unit. In 2000, he received the Chariman's Award, whereas under his leadership the company won the Franchise of the Year in 2001. Mr. Rahman launched Engro Foods Limited (EFL) in 2005, and for over six years he was in the position of CEO. The company won the G20 World Top 15 company award in early 2012, as a leader in innovation worldwide. Sarfaraz then moved out of commercial operations into CSR with Dawood Foundation in November 2011. Mr. Rahman moved back to Engro Foods Limited as Chief Executive Officer with the Company winning the prestigious FT/IFC Transformational Business Award 2014 under his leadership.



Tofiq Pasha Mooraj

With 30 years of experience in horticulture, floriculture, landscape designing, home based food production and water management, especially of smaller farms at the grassroots level, Mr. Tofiq P. Mooraj has introduced different varieties of high revenue crops interfaced with using water judiciously in different areas of Sindh, in particular the Indus Delta and the Indus Basin region. His special field of interest is the development of food and protection of environment, especially water. Mr. Mooraj is a Member of Pakistan Water Partnership, Indus Delta Area Water Partnership, an active supporter of the Women and Water Network Pakistan and also a South Asia Focal Point of the Dialogue on Water Food and Environment.

Chapter 8 - Donors and Partners for 2014 and 2015

Hisaar Foundation would like to express gratitude to its corporate donors, partner organizations and philanthropic individuals who helped us in our mission to develop low-cost solutions and promote appropriate policies and technologies for water resources development and conservation in Pakistan. The following is a list of our donors who helped us in 2014 and 2015:

- Action Aid Pakistan
- Adamjee Foundation
- Association for the Development of Pakistan
- AWARE
- English Biscuit Manufacturers (Private) Ltd.
- Engro Foundation
- Faysal Bank Limited
- Federation of Pakistan Chambers of Commerce and Industry
- First Habib Bank Modaraba
- Froebel Education Centre
- George Washington University, USA
- HOPE Trust
- KASB Bank
- Old Associates of Kinnaird Society (OAKS) Karachi Chapter
- Pakistan Relief Foundation
- SUKAAR Foundation
- The AMI School
- Unilever Pakistan Limited
- United Bank Limited
- Water Sector Improvement Project, Government of Sindh
- Philanthropic Individuals

Acknowledgements

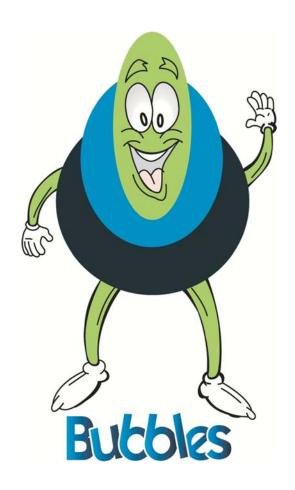
Hisaar Foundation has been establishing itself at the forefront in the water sector, and has been committed to water security in the context of efficient management, conservation, climate change, and droughts. It continued concentrating on innovation and affordable solutions in Thar and Kohistan, the drought-affected regions of Sindh. Hisaar Foundation took along new partnerships in serving communities in need, in Thar, specifically in drought emergency. It created a development approach for mitigating drought, which is being replicated by its partners in the same area on scale.



Let me take this opportunity and acknowledge my colleague, Sanaa Baxamoosa, who has put everything together and made it possible to bring this report out on time. Her role remained exemplary. I acknowledge the hard work of Simi Kamal for her inputs and efforts in editing the report, and Zohair Ashir, for general oversight. I recognize the role of the Governors of Hisaar Foundation who encouraged us to produce this report. I would also like to acknowledge my colleagues, Saleha Atif and Kausar Hashmi, their contribution this report is laudable. I would also like to acknowledge my colleague, Aatir Jilani who maintained good records and made documentation of projects that much easier. In the end, I would like to acknowledge the support and contributions of our partners and donors. Without their support, it would not have been possible to sustain Hisaar Foundation.

Sono Khangharani

CEO, Hisaar Foundation





(set up under section 42 of the companies ordinance 1984)
Approved Non-profit Organization under section 2(36) (c) of the Income Tax Ordinance. 2001
CSO Certification Award: PCP - 2012/231

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