*Preliminary summary

CPSD
CENTRE FOR PEACE, SECURITY AND DEVELOPMENTAL STUDIES

Karachi: The Uroos-ul-Bilad

First Roundtable on Water Crisis Management





Summary:

The Centre for Peace, Security and Developmental Studies (CPSD) hosted its first roundtable of 'Karachi: The Uroos-ul-Bilad' on 24th May 2018, with the topic of 'Water Crisis Management.' Specialists discussed the glaring issue of water scarcity, distribution, quality and Pakistani society's role in dealing with this crisis. The most eminent among the highlighted issues varied from poor water management, wastage of resources to inadequate environmental policy planning and implementation. The existence of local mafias in controlling Karachi's water resources is also a critical question in dire need of consideration. With increasing urbanization, a dearth of resources and a rapidly changing climate – the shortage of water is already affecting millions of people. Through this roundtable, CPSD aimed to facilitate ideas and policies addressing the issue of water scarcity in Karachi. These policy recommendations will then be put forward to the concerned quarters.

The panel consisted of experts in the field and a renowned civil rights lawyer with a diverse audience comprising of civil society members, academics, entrepreneurs and members of the business community. The following key themes were highlighted:

"Karachi's Water Emergency: A Demographic Perspective and Possible Solutions – by Dr. Bashir Lakhani, Director Water Division, Techno Consultant

"A Vision for Karachi: Water Conservation and Innovation for the Future" – by Zohair Ashir, Member Board of Governors Hisaar Foundation

"Water Crisis in Pakistan: A Macro-Analysis of Water Scarcity and Security" – Shahab Usto, Senior Advocate Supreme Court

"Some Appropriate Measures for Dealing with Karachi's Water Crisis" – Umer Karim, Water Sector Development and Management Professional, United Nations Development Programme Pakistan

Formal Proceedings of the Seminar:

Chair's Remarks

Sohail Wajahat Siddiqui
Chairman of Alpha Group of Companies

The chair for the first roundtable, Mr. Sohail Siddiqui opened the session with an emphasis on 3 key concepts regarding water: husool, istimaal, and hisaab. Giving a brief background, he elaborated on Pakistan's depleting water sources, distribution losses, and need for metering and regulation. With a great shortfall in water supply, the tanker mafia has filled in the vacuum, making over 30 billion rupees per annum. He said that amongst Karachi's distribution problems is the huge water loss, up to 40% of all the water available. And in the absence of a water recycling system, all sewerage is dumped into the ocean, drastically harming marine life. Though foreign funding has been available since the 1970s, the authorities have failed to maintain technologies such as desalination and telemetry etc. He also described briefly the politics and corruption surrounding water in Pakistan, as there was no trust between provinces on this issue. No work has been done by politicians on Pakistan's water security, merely politicizing the building of dams, and doing so for short-term electoral gains. Citing the water crisis in Cape Town, Mr. Siddiqui reminded that Karachi has water for just another 6-15 days. To meet the demands of the city, he urged for the funding and establishment of desalination plants by utilizing solar energy.

Dr. Bashir Lakhani
Director Water Division, Techno Consultant

Providing tangible details, Dr. Lakhani gave numbers and statistics to facilitate a better understanding of Karachi's water crisis in his presentation, **"Karachi's Water Emergency: ADemographic Perspective and Possible Solutions."**

Adding to an estimated population of 22.7 million – which is reduced to 14.9 in the census – Karachi's 2.5% population growth rate adds another 7 million every year. There has been however, no proportional increase in the water supply in the last 20 years. In contrast to the requirement of 1225 million gallons per day (mgd) at 54 gallons per person, the current capacity is 550 mgd from the Indus system and a 100mgd from the Hub Dam Reservoir. With lowering water levels due to lack of rain, Keenjhar lake has only one or two months of water left. Describing the flow measurement that he conducted, Dr. Lakhani said that our water extraction system from Keenjhar has serious issues. The K-IV water project aimed to provide Karachi with another 1200 cusecs, but the project which was aimed to complete in 2015, has only recently started. However, there are many issues with this project, namely its requirement of a 127 km transmission system from Keenjhar to outskirts of Karachi where already mega-projects have sprung up causing a probable future diversion of water from the city. Despite a required budget of Rs. 10 billion only Rs. 2-3 billion are funded. A project that would've taken 10 years, will now take 20 years till completion.

He said that we need solutions that can be implemented in 8-12 months. For example, the K-III project, and unconventional water extraction methods. Giving the example of water obtained from hard rock in Quetta, Dr. Lakhani said that similar processes could be used for Karachi. He also advised tertiary treatment systems that can add another 100 mgd through water purification. Furthermore, he advised a practical course of action to include water rationing, timed water supply and better management.

Zohair Ashir
Member Board of Governors, Hisaar Foundation

Emphasizing the primacy of collective rather than individual wisdom, Mr. Zohair Ashir presented his topic, **"A Vision for Karachi: Water Conservation and Innovation for the Future"** with an initial background of the Hisaar Foundation's work in dealing with the water crisis. The foundation is involved with grassroot level projects doing different programs like digging wells in Thar and creating a network of Pakistani universities doing research and policy-making on the issue. He said that without a 50-year planning scheme, Pakistan's problems will not be resolved. Focusing on ideas and individual responsibility,

Mr. Ashir stressed our responsibility for ethical and efficient usage of water in our own homes through water conservation, water harvesting and unconventional usage of water. Karachi's groundwater is depleting and because of the poor quality of water around 35% of all children are admitted in hospitals for diarrhea. Compared to many countries, Pakistan has a greater water level however, without policy direction, discipline and management, we will not achieve our goals. As more than 92% of water goes into agriculture, we have to figure out ways to more efficiently use this water e.g. through drip irrigation techniques. Following other countries' example like Japan's water rationing, Pakistanis can also maximize water usage through color scheming e.g. using grey water for gardening, yellow for flushing etc. This is how water is used 5-6 times before it is discarded.

Mr. Ashir highlighted the importance of planning, discussion and intellectual cooperation in dealing with the water crisis. In this regard he described the future think-tank, Punjwani Hisaar Center for Water Studies in NED (aimed to be operational in 2019) which will bring in three streams of research: engineering, social sciences, and data analytics. Through this interdisciplinary framework, more robust policy proposals can be achieved. With the involvement of the social sciences, the human behavior aspect of the issue can also be understood, which is critical for any solutions to Karachi's water crisis.

Shahab Usto

Senior Advocate Supreme Court and Civil Rights Lawyer

Mr. Shahab Usto, a senior advocate renowned for his groundbreaking case on the water crisis, "Usto vs. Govt. of Sindh", was next to speak on the issue of **"Water Crisis in Pakistan: A Macro-Analysis of Water Scarcity and Security"**. He talked about the macroeconomic issues, more political than managerial, describing the crisis as policy failures and mistakes which have piled up over the years. The poorly drafted Indus Waters Treaty has left grey areas which now have to be reinterpreted, it is obvious that the World Bank has shown its helplessness in front of the Indian govt's "might is right" policy. Now dams and reservoirs are being built that would further decrease the flow of water in Pakistan. This issue needs to be fixed without war. Since the 1950s, our water levels are down by 70%. The situation looks bleak as the population is increasing, with

no sound water policy in place. Mr. Usto said that as the water problem had become political, we need to build dams without causing damage to lower riparian regions, which is a valid fear in people. Issues like the Kala Bagh Dam must be resolved in a constructive dialogue, without politicizing the problem or accusing the other of treachery. The problem is that Pakistan as a federal state has its legal/constitutional framework. Water is part of the Federalist Part II; any problems between provinces are supposed to be resolved in the Council of Common Interest, which unfortunately has remained a dead horse in need of a kick to get it working.Describing his comprehensive visit to all villages, towns in Sindh Mr. Usto talked about the entire panorama of the water crisis. Though Sindh and Punjab have similar problems, Sindh's context is different as nobody is ready to take ownership of problems. Four essential elements of the modern state are: Governance, Land, Labor, and Capital. We lack in all four things and this shows in the way our public land is looted and our public offices are manipulated and exploited in the unholy alliance between most bureaucrats, politicians and middle-men. This "trichotomy of evil" is present everywhere in Pakistan. Of the 2300 rural water/drainage supply schemes, 955 are dysfunctional and the rest not working. Mr. Usto narrated that of 539 schemes which were supposed to be rehabilitated in one or two years, not a single scheme is functional. In rural Sindh, sewage of entire areas is dumped into a nearby river or canal, and from there resupplied to the people. He said that all the people of Sindh are now using sewage water as drinking water; in Karachi 91.7% water is not fit for human consumption, as it has a presence of E. Coli bacteria.

Around 550 million gallons of water is destroyed every day in Karachi – the city does not have a single water filtration plant. He said that our callousness to the point of self-destruction has led to untreated sewerage, nuclear waste, chemical dyes, heavy metals etc. in the water stream. Talking about the Sindh Environmental Protection Agency or SEPA, who are mainly responsible for this crisis, Mr. Usto described the extortion that takes place. Only a few people use protocol in disposing nuclear waste, with the vast majority disposing of it as they please. He said that Sindh's biggest problem is the rotten system of governance. In 2016, when the commission was formed, many companies were dissolved, including Pak Oasis, the Sindh govt's outsourcing project, with orders given to make the TP1 and TP 2 (treatment plants) functional by June 30th. To combat the water tanker mafia, meters will be installed in all 150 pumping stations. Meter installations will bring to truth the excuses given about distribution leaks and old, damaged lines. Citizens can now sue the company for providing contaminated water. Additionally, there will be official water tankers,

working on fixed price. Apart from Karachi, Hyderabad will also get 4 filter plants. 5-6 other major cities have also started receiving clean water, including Sehwan.

On a hopeful note, Mr. Usto affirmed that great things were possible if the entire government used its human resources on this issue, as only one retired judge was able to achieve so much in the commission. Bribery and the politics of deceitfulness must be tackled for serious change. Ending his speech, Mr. Usto informed that he is in the midst of drafting a petition for Law of Torts, to provide every person with the right to sue for poor quality of public amenities. This is how mass corruption could be thwarted as it was done so in other advanced countries, like the US.

Umer Karim
Water Sector Development and Management Professional,
United Nations Development Programme Pakistan.

Towards the end of the session, Mr. Umer Karim spoke on **"Some Appropriate Measures for Dealing with Karachi's Water Crisis."** He discussed the importance of infrastructure development as Pakistan is already facing a population explosion. It will become tougher for us to deal with future crises if the quality and condition of our pipelines, reservoirs, canals and irrigation methods remains poor. Speaking about water conservation, Mr. Karim advocated the use of color grading schemes to denote the quality of water to be used in different tasks and the building of better reservoirs to catch water from rain and flash flooding. As Karachi is one the most sparsely vegetated metropolises in the world, Mr. Karim called for the building of artificial forests in Karachi, which are appropriate for the soil and subsoil. In this manner, he argued, the heat can be alleviated. In addition, groundwater exploitation must be stopped because it has already ruined much of the city's subsoil. Water must be treated for carbonates that have been extensively found in water samples taken from Gadap and Malir. These are known to cause many illnesses. Furthermore, Mr. Karim suggested that future exponential growth in population must be dealt with through a legal framework by placing issues in relevant categories and establishing systems of governance and regulation that will be lucrative in the future.

Interactive Session:

During the speeches, an interactive discussion was encouraged with the main theme being optimism or pessimism regarding the water crisis. The session saw a mixture of responses, with some saying that the future is bright as management will improve. Others saw a gloomy future with declining water levels and already hotter, drier weather which is showing in the crop turnout this year. The session ended with a resolve to do more, individually and collectively, and to take responsibility and ownership of the water crisis faced by Karachi.