

## **Governance and Civic Capacity for the Provision of Drinking Water in Urban Sindh, Pakistan**

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### **ABSTRACT**

*The purpose of this study is to analyse governance and civic capacity for service delivery in the drinking water sector in urban Sindh, Pakistan. The research was designed to systematically analyse the patterns of success and failure of drinking water initiatives in Hyderabad and Sukkur using qualitative methodology with Focus Group Discussion and interviews to understand the roles of collective action, partnerships, local experiences and cooperation alongside governmental and regulatory oversight related to drinking water. It highlights incentives for different actors involved in infrastructure development and maintenance, pricing and regulation. Case studies of collective action in the drinking water sector across Sindh have also been discussed. The main findings of the study are that piped drinking water quality remains poor in emerging cities like Hyderabad and Sukkur and citizen participation in water governance is very limited due to the obstructionist attitudes of local water management bureaucracy. Participatory approaches in governance can be used to harness action from the community in designing, planning and overseeing water service delivery. When used effectively, such models can help inform policymakers, improve knowledge about existing infrastructure, enhance access to information and reduce corruption.*

**Keywords:** Water Governance, Climate Change, Community Participation, Public Policy, Public Financial Management, Co-Production.

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## **1. INTRODUCTION**

The dialogue on the water sector of Pakistan is currently more focused on building water reservoirs, which will undoubtedly help overcome some water shortages during the dry season in the country. However, it is equally important to address other issues faced by the water sector. Inefficient water usage, especially by the agriculture sector, and low quality of drinking water, are some of the severe problems emanating from the poor governance of the water sector. The water supplied to households through taps is almost uniformly poor across the country. Resultantly, the country ranks 80<sup>th</sup> among 122 nations in the quality of drinking water (Azizullah et al., 2011). To this end, Pakistan Council for Research in Water Resources (PCRWR) found that 58% of the publicly owned water supply infrastructure (pumps, filtration, and water treatment plants) is dysfunctional (PCRWR 2010).

Pakistan is urbanising at an annual rate of 3%, which is the highest urbanisation rate in South Asia (Burki 2011). While urbanisation provides great opportunities, its poor quality can make cities hubs of crime, despair, and disease (Glaeser 2012). Drinking water is one of the fundamental requirements for urban centres to thrive, and the governance of the drinking water sector can be considered a reflection of the overall capability and performance of the public sector. It is important to understand that weaknesses and inequalities in the delivery of important municipal services may lead to inequalities, conflicts and violence.

In urban Sindh, one of the fundamental water governance issues is lack of investment in infrastructural capacity and public service provision. In many areas, the pipe infrastructure dates back decades. It has atrophied to a point where leakages are so high that even filtered water becomes entirely contaminated by the time it reaches the end-user.

Like other provinces Sindh has a diverse geographical context. Karachi's water management is dealt by Karachi Water and Sewage Board (KWSB) which has many governance challenges. Water and sanitation in other cities and rural areas is dealt by Public Health Engineering Department (PHED), local government departments (relevant municipalities) and Water and Sanitation Agency (WASA) Hyderabad.

The drinking water situation across Sindh province has been deteriorating due to lack of proper public investment and effective governance. However, Karachi has unique challenges. According to an estimate, the capital expenditure per connection in Karachi is one of the lowest in the region at only USD 7 per year. The average capital expenditure in major Asian cities is USD 88, while it is USD 78 in Delhi and USD 140 in Dhaka (ADB 2004). The KWSB system experiences leakages and thefts from its system, which

amounts to 30-35% of total supply. These leakages are the result of inappropriate management, substandard construction and faulty pipe design (Ahmed and Sohail 2003).

Today's complex urban governance challenges require innovative solutions, including collective action by stakeholders. Instead of considering water only as a traditional market good, it should be taken as a collective resource for communities (Iftikhar et al., 2017). In this context, the self-governance and polycentric framework for the management of Common Pool Resources (CPR) is highly relevant (Ostrom and Gardner 1993). A blended entrepreneurial model of public and community partnerships may allow for more community involvement. One such model for water distribution, which has documented success and expansion is Bhalwal's Changa Pani (clean water) Program (CPP) in District Sargodha in Punjab (Iftikhar et al., 2017). The CPP has also inspired the overall objectives and approach of this study.

This research mainly focuses on governance and civic capacity for service delivery in the drinking water sector in urban Sindh, documenting the experience of two rapidly urbanising cities, Hyderabad and Sukkur. The three main research questions of this study are as follows:

- What are the weaknesses in the current governance of the drinking water sector in Sindh?
- What are the key constraints in community-government partnership for service delivery of clean drinking water?
- What are key lessons from existing partnership initiatives in the drinking water sector in Sindh?

The findings and recommendations are expected to inform policymakers at the provincial and city levels about the appropriate levels of community involvement. This can help ensure sustainable water governance and efficient service delivery for the provision of one of the most fundamental human rights, namely, access to clean drinking water.

The remaining paper is structured as follows: Section Two discusses the methodology. The next three sections present the findings: Section Three shares the diagnostic of the drinking water sector in Sindh (especially Hyderabad and Sukkur); Section Four discusses partnerships and collective action in the water sector; and Section Five presents case studies from Sindh. The final sections lay out detailed lessons learned, policy recommendations to improve water service delivery in urban Sindh and offer concluding analysis.

## **2. METHODOLOGY**

The conceptual approach to the study is broadly that of blended institutionalisation anchored in a common pool resource-based participatory framework. The study analyses the roles of collective action, partnerships, cooperation alongside governmental and regulatory oversight related to drinking water. It adopts a qualitative approach along with some descriptive analysis of key data, explained diagrammatically in Figure 1. The following points summarise the key data collection to answer the research questions presented in the introduction:

1. Collected data on government-run water supply schemes,
2. Collected data on the level of participation in water supply schemes,
3. Emic perceptions of functioning and effectiveness,
4. Systems of cooperation within communities and collaboration between communities and the government, and,
5. Perceptions of partnership avenues.

The following tools were used to collect data:

### **2.1. Focus Group Discussions (FGDs) (Tool 1)**

A total of four FGDs were conducted, two each in Hyderabad and Sukkur. About 10 to 15 people participated in each FGD. The participants were selected from different segments, including government employees, representatives of non-profit organisations and civil service organisations, welfare workers, local government officials, and consumers (both at the household and commercial levels). Multiple responses were recorded due to diversity in perspectives. The themes emphasised within the FGDs were around regimes of cooperation within communities and the government and emic perceptions of partnership avenues. Feedback during the FGDs centred around water supply and quality-related issues, causes of poor governance, and unavailability of any mechanism to get the public input or opinion on using water supply services.

### **2.2. Individual Interviews (Tool 2)**

More than 35 interviews were conducted during visits to Karachi, Hyderabad and Sukkur. The information received from interviews was used to understand property regimes in the water sector and emic perceptions of functioning, effectiveness and partnership avenues. Information was related to the quality and supply of water being used by citizens in both cities.

### **2.3. Key Informant Interviews (KIIs) (Tool 3)**

Semi-structured interviews were conducted in each city (Karachi, Hyderabad and Sukkur) with relevant officials and stakeholders, as listed in Appendix I and II. The participants were selected purposefully, representing all stakeholders involved in water management in each city. Semi-structured interviews allowed focus on core themes of the study along with adequate flexibility to capture any pertinent information that was not incorporated in the instruments initially.

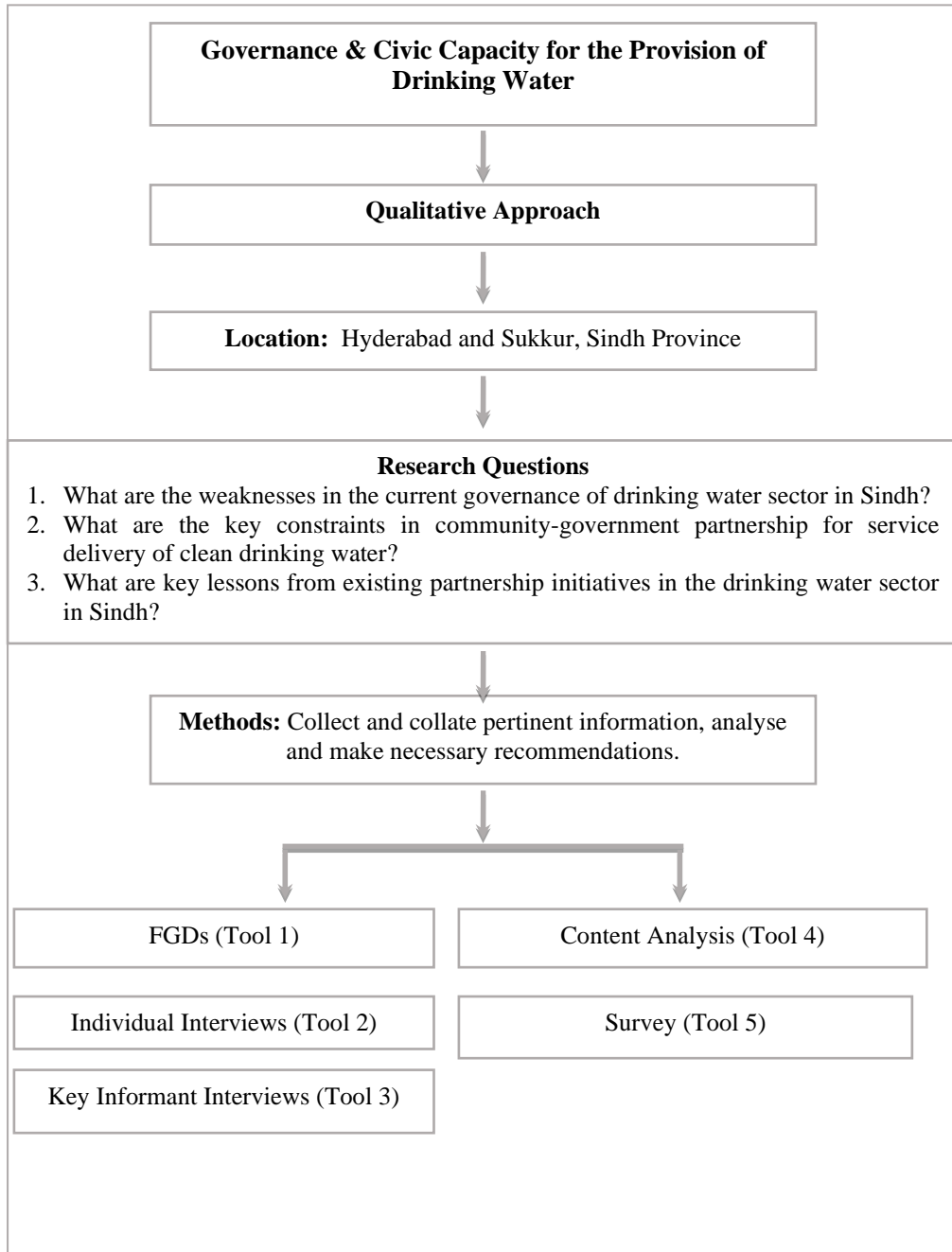
### **2.4. Content Analysis (Tool 4)**

Annual Development Plans (ADP) of the Government of Sindh and other official documents by the relevant municipal and water agencies were collected and analysed. The demand and supply of water and public investment in the water sector were examined through these documents.

### **2.5. Survey (Tool 5)**

A field survey was conducted in Hyderabad and Sukkur to verify physically and know the current status of all the filtration plants in Hyderabad and Sukkur. The questionnaire prepared for the survey is attached as Appendix III.

**Figure 1: Qualitative Approach used in the Study**



Source: Authors' own.

In order to analyse the success and failure of a few water schemes under varied governance regimes, the study adopted the typology of community participation developed by Sarzynski (2015) in the case of climate change adaptation. It involved the following elements that were used in this study for water sector governance:

- a. Traditional government-led planning,
- b. Non-governmental planning,
- c. Inclusive planning,
- d. Partnerships,
- e. Non-governmental provision, and,
- f. Co-production.

Sarzynski (2015) built the typology of citizen participation based on Arnstein's (1969) conception of citizen participation to delineate forms of involvement as rungs of a ladder in the climate change context. In Arnstein's framework, the lowest rungs exhibit non-participation modes of interaction (manipulation and therapy). The middle rungs show evidence of token forms of participation, with a small degree of authority or influence permitted civic engagement. The highest rungs are the most influential and include citizen control, where substantial power is granted to citizens, and the role of self-governance is strong. In Sarzynski's typology, the level of participation increases as we go down, i.e., traditional government-led planning represents the lowest form of participation while co-production reflects the highest form.

### **3. WATER GOVERNANCE MODEL: WEAKNESSES AND CHALLENGES**

This section presents a descriptive analysis of the weaknesses and challenges in water sector governance in Sindh province, which may be relevant to other provinces as well.

#### **3.1. Weak Local Government/Lack of Decentralisation and Local Empowerment**

Well-planned local governments play a crucial role in improving governance and service delivery in the drinking water sector. Pakistan has not pursued devolution to the grassroots level in true spirit; hence, provincial governments are directly responsible for allocating resources, identifying development schemes and operations. Under the Constitution of Pakistan, provinces are expected to delegate relevant functions and powers to the local governments. However, provinces have a vested interest to concentrate mandates and finances under the provincial departments/offices. Hence, the goal of empowered and professional local governments remains elusive. Provincial governments in Sindh are generally formed by the political parties gaining electoral votes

from rural Sindh. Thus, Karachi and other urban areas were rarely allowed to have empowered local governments. Many scholars believe that this is the legacy of the colonial history of the Indo-Pak continent. The 'Local Government Ordinance, 2001' is generally considered an ambitious initiative to strengthen local government in the history of Pakistan. One of the academics based in Hyderabad expressed his view about the success of the community-based approach as follows:

*Citizen Community Boards (CCBs) were established in Musharraf's era to promote community participation. on 20-80 partnerships, 20% of the cost was to be paid by the community, and 80% paid by the government. Villages are willing to provide labour but are less willing to pay cash. There have been many successful cases in the past where villagers gave land and labour for water supply schemes.*

### **3.2. Soft Budget Constraints**

Local governments and other agencies dealing with the water sector can approach provincial finance departments for any shortage of funds (even for ex-post approvals of expenditures), which may be considered a dynamic commitment problem (Kornai et al., 2003). A soft budget constraint, thus, emerges when the supporting organisation (such as the provincial government) is willing to cover the costs of the budget-constrained organisation in case revenue collection does not meet the mark. The organisation facing a soft budget constraint may turn away from productive activity and move instead toward rent-seeking behaviour.

### **3.3. Flaws in Legislation/Policy Framework**

The analysis of the data collected on water schemes revealed severe weaknesses in the various phases of Public Financial Management (PFM), namely, policy, planning, execution, reporting, and monitoring. Comprehensive water sector plans are missing at the city and district level. There is no clarity amongst officials of different water-related agencies such as PHED, local government departments, Planning and Development Department (P&DD) and local municipalities about the strategic priorities for public investment in the water sector. In fact, there is a lack of a comprehensive and integrated water policy to tackle issues in this sector across the province. Without such a policy, there is a gap regarding direction and interventions in the water sector. The Sindh government officials informed that a new water policy is being drafted which may address some of the challenges mentioned above. Still, during the study period, local level officials and citizens did not have any information regarding such developments.



### **3.4. Transparency**

There is a lack of transparency in the overall Annual Development Plan (ADP) portfolio, including all sub-sectors of water supply schemes (The World Bank 2017). Nevertheless, it is more severe in the rehabilitation and maintenance of water supply schemes. Most of the water sector infrastructure is underground, making it challenging to track expenditures on repair and maintenance. This has resulted in corruption and mismanagement, as reported by different citizens and officials. PC-1s prepared by the provincial governments do not take account of local dynamics and schemes are designed in isolation.

Data from Sindh's ADP showed that out of 116 approved water supply schemes from 2005 to 2015, there were 62 schemes on which there was zero expenditure. Out of 124 unapproved schemes (2005-15) that are part of the ADPs of Sindh, there were positive expenditures on 21 water supply schemes. These unapproved schemes were appearing as ongoing projects in the ADPs. Unapproved schemes should not be included in the ADPs, to begin with. The fact that positive spending was reflected on such projects shows just how unchecked and prevalent corrupt practices are in the water sector in Sindh. It can be construed that unapproved schemes are included in ADPs based on political preferences instead of any rigorous analysis of developmental needs of particular areas or regions. This type of information also shows that there is a lack of accountability in the water sector. Ad-hoc financial releases is one of the reasons why PC-1s are revised again and again, which reduces transparency.

### **3.5. Overlapping Responsibilities**

Multiple departments in Sindh have put forth policies for water governance, but none of them has been implemented yet. In 2008, the local government crafted its own policy which was also not implemented. After another gap of almost nine years, the Public Health Engineering Department (PHED) issued the 'Sindh Water Policy' in 2017. Under this regime, PHED has the sole mandate for water service delivery in both urban and rural Sindh (Government of Sindh 2017). The overarching problem with all these efforts is that the department that develops the policy puts itself at centre stage, ignoring all legal and constitutional mandates that should in principle guide the policy. Within the drinking water sector, there is considerable confusion across the departments about roles and responsibilities. Demarcation of urban areas has not been done appropriately; as a result, WASA ends up catering to a much larger population than that stated in the Census. As a result, there is a lack of accountability, and the concerned departments blame each other for the failure in governance. Planning and Development (P&D) Board of the Government of Sindh is supposed to resolve such misalignment among different agencies and departments at provincial level. However, it appears that there is a lack of effectiveness of the P&D Board in this regard.

### **3.6. Water Pricing**

Inadequate revenue generation and tariff collection are the key bottlenecks to the institutional and financial sustainability of water and sanitation services. The sector is highly subsidised, and any discussion of tariff reform meets with political opposition. However, people generally believe provision of drinking water by the State is a right rather than a commodity. This means the political and social context in Pakistan is not conducive for recovering the cost of water provision. While this argument has some merits, it is important to understand that the free/subsidised provision of water is not a sustainable solution. Certain impoverished areas may be supported in this regard by adopting a development model where water provision is subsidised, however, a paid service provided to wealthier areas and households can substantially improve recovery of running costs in the country. Achieving the recommended long-run target of 100% piped and safe water supply will require water meters and tariffs that cover at least Operation and Maintenance (O&M) costs and ensure sector sustainability.

In Hyderabad, the water charges (at the time of the survey) was PKR 169 per month for domestic consumers and PKR 300 per 1000 gallons for commercial users. In Sukkur, PKR 360 per annum was being charged for a domestic connection, PKR 720 for a commercial one. Northern Sindh Urban Services Corporation (NSUSC) tried to implement water meters, but this was not successful. There are around 200,000 connections in Sukkur. Annual recovery is PKR 40,000 while the O&M cost is PKR 5,500,000. The Local Government Department bears the deficit amount. The prevailing pricing structure has no link with consumption and discourages water conservation. Ideally, water prices should reflect the value that users generally place on their consumption. In this way, a proper pricing strategy can be used as a tool not only to recover O&M costs but also to contain water losses and promote conservation. Non-Revenue Water (NRW) in the case of Sindh may exceed 30%.

### **3.7. Operation and Maintenance (O&M)**

One of the significant challenges governments face across the developing world is the high levels of water lost either during transmission (leakages) and theft or losses due to the provision of domestic or commercial unmetered water supply. Reducing the level of NRW can improve treated water availability, access, self-generated cash flows, fairness among consumers, and reduce domestic and commercial wastage. Analysis of global data reveals that high levels of corruption are found to be highly correlated with lower O&M spending, proxied by higher spending on wages and salaries (Tanzi and Davoodi 1998). This can be observed in many aspects of water provision in Pakistan. The gap between the utility revenues and expenses (and thus the amount of government subsidy) is startling: WASA Hyderabad relies on a monthly subsidy worth PKR 43.75 million, on

average. The revenue collected is not sufficient to meet the cost of O&M of the drinking water system, which has led to heavy dependence on government support for its functioning. NRW may be arising due to two main reasons: first, lack of proper maintenance of water infrastructure leads to water leakages; second, the weak governance of water sector agencies may render them unable to measure water delivery properly and stop pilferage.

This situation results in a vicious circle where insufficient funds deteriorate the quality of service delivery in the water sector, which means that users are less willing to pay, leading to fewer funds becoming available for maintenance. Large investments to upgrade the water infrastructure and recovering its maintenance cost from users is a possible option. It may be noted that farmers already pay exorbitant amounts on diesel/electricity pumps for tube-wells as this ensures reliable supplies of water and results in higher productivity. Some interviewees were of the view that neither drinking water provision nor O&M of existing infrastructure is the priority of the Hyderabad Development Authority.

### **3.8. Water Quality**

PCRWR (2010) reports that 77-90% of drinking water sources, publicly and privately supplied, are deemed unfit for human consumption. Shar et al. (2010) collected 96 water samples across Rohri in Sindh. Results showed that nearly all the municipal water samples collected from homes and main reservoirs were contaminated. Water samples in some areas of Hyderabad also revealed dangerously high levels of bacteria and pathogenic organisms (Ali 2012). The surface water in Sindh is getting contaminated rapidly due to pollution in upstream water bodies and Sindh's own dumping of wastewater and solid waste into rivers.

The gist of the issue in the Sindh province is that with rapid urbanisation, the traditional governance structures are unable to operate and maintain the water infrastructure sustainably. Traditional bureaucratic solutions for water supply still dominate Pakistan's water governance landscape. Yet, the scholarship and policy discourse predominantly focus on the same with technological improvements and higher level of public investment. Despite the challenges mentioned above, the discussion of various interventions to improve water governance is rather scarce in Pakistan, which exhibits a lack of innovative strategies to deal with the challenges.

## **4. PARTICIPATION AND PARTNERSHIPS IN DRINKING WATER SUPPLY SCHEMES IN URBAN SINDH**

Various typologies exist in the literature on partnerships. Different organisations present different categorisations. The International Association for Public Participation (IAPP),

for example, presents a spectrum of such partnerships - from informing, consulting, involving, and collaborating to empowering citizens. The most popular and often quoted indisputably is that of Sherry Arnstein's *Ladder of Participation*. From manipulation, informing, consultation to partnerships and delegated power, Arnstein's typology covers the various levels of community involvement in any given project. Ysa (2007) takes a more granular view into types of partnerships: a) Networked Partnerships, b) Market Based Partnerships, and c) Hierarchical Partnerships. Sarzynski (2015) has outlined a similar typology. This is especially relevant in the context of urban collective action in the drinking water sector of urban Sindh. The author identifies six forms of participation from the literature on the subject and uses it to examine climate change adaptation in urban centres in the United States.

An examination of Sindh's drinking water sector, both rural and urban, leads to one key point: traditional or purely government-led models of managing water resources have failed. When this study refers to traditional models in Pakistan, it means purely government-led initiatives.

#### **4.1. Diagnostic of Participation and Partnerships**

##### *4.1.1. No Participation at First Glance*

An initial foray into the local governance context of the selected two cities, Hyderabad and Sukkur, revealed little or no evidence of any participatory schemes or active citizenship in the drinking water sector. There is a tendency towards dependence and expectation of top-down interventions in service delivery.

The sense of self-organisation is rare in urban areas, but some evidence of successful instances were found in rural areas of Sindh adjacent to the selected cities.<sup>1</sup> A local civil society organisation representative working with several communities in the region shared his views:

*The people of these cities believe that it is the responsibility of the government to provide such facilities. The ultra-poor have other priorities; clean drinking water is not on their list of basic necessities.*

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<sup>1</sup> Whereas in Sukkur it is difficult to ascertain rural and urban areas because peri-urban areas, which are 2 or 3 kilometers away from the city's perimeters, are classified as rural in the census, however, in essence have more urban characteristics. It is, therefore, surprising to see participation and citizen engagement only some kilometers away from the city and none or little evidence in the city itself.

#### 4.1.2. Lack of Willingness to Delegate Power to Local Governments

The sentiment that the government is primarily responsible for the provision of basic services prevails. Self-organisation at a community level or participation with real ownership remains an alien concept, even to politicians. An elected official of Sukkur Municipal Corporation (SMC) believes:

*Participation models are unlikely to be successful in Sukkur due to the fragmentations in society. People are willing to pay when the quality of the service is satisfactory. The public will not own the scheme under the current circumstances. It is primarily the responsibility of the government to provide such services.*

#### 4.1.3. Lack of Community's Ability to Self-Organise

Policymakers often quote that the community is unwilling to take responsibility, and it is not the government who hesitates in delegating. Academics also support this viewpoint to some extent. A professor researching water management in Sindh opined:

*Community participation agendas are a part of Urban Development Strategy for Sukkur and Larkana. P&D Department has worked on and documented some projects involving the local community. However, people are stuck on issues like 'there is no pipe in my street' - they don't think beyond individual schemes.*

#### 4.1.4. Trust Deficit

One of the FGD participants in Hyderabad shared:

*People are aware and can see that there are problems but have become hopeless. Sometimes they gather and protest against a certain issue, the situation becomes better temporarily but then deteriorates after a few days. They don't bother after that and just look for alternatives to maintain their livelihoods and lifestyles.*

Interaction with the state has discouraged or demoralised the community at different levels. A failed or deserted attempt at participation in Sukkur standardises the struggles the community has to face. Consultations with academics at the US-Pakistan Center for Advanced Studies in Water at the Mehran University helped in understanding the context as to why the trust deficit arises in Sindh when it comes to partnerships with governments.

*Farmer Organisations (FOs) tried to improve irrigation management, but due to the social fabric of our villages, FOs were unsuccessful. The main reason being conflict between tribes (khandani maslay). The Sindh village context is such that there is one big 'Vadera' (feudal lord) in charge of small farmers.*

#### *4.1.5. Lack of Community's Willingness vs. Capacity*

Interviews with government officials and state representatives reinforce the idea that there is a lack of willingness from the community to participate in service delivery of issues like water. In line with lessons from other parts of the world where the community holds the State responsible for the provision of basic services, there is more to the puzzle of participation than just willingness. One can also observe a lack of capacity as a critical issue. A student studying water management commented in one of the interviews:

*Most of the time, the government does not engage with the public, but when it does, people do not know how to take part.*

## **5. CASE STUDIES OF PARTNERSHIPS, PARTICIPATION AND COLLECTIVE ACTION**

### **5.1. Tando Soomro Village (near Hyderabad)**

Back in 1988, Tando Soomro Village, located in Tando Allahyar district near Hyderabad city, was just one among many other villages in rural Sindh. Interior Sindh is among those regions of the country that are immersed in abject poverty. Village communities have little economic activity apart from basic agriculture and livestock farming. Given that Tando Soomro is located on the southern side of the River Indus, access to water is precious. In the 1980s, Tando Soomro was attacked by the influential members of a nearby village. The fear of a common threat compelled the people to unite under the leadership of an affluent and educated resident in the village. He formed a group of village elders and educated people as they asked for contributions from each household to organise a village security force. They gathered the funds to build a boundary wall for the village, so outsiders could be deterred from entering and plundering village property. Later, in 1992, this transformed into the 'Tando Soomro Development Organisation.' A Central Committee manages the organisation to date. They organise an annual dinner for all residents to report the status of funds collection and expenditure on various development works. It also builds a sense of ownership. The committee organises all ventures to improve water, health and sanitation, education, sewerage system, electricity and gas supply. They have also invested in floodwater drainage systems, water filtration and playgrounds for children.

The village is so well organised that it does not seem a part of rural Sindh. It has an almost utopian feel to it. Tando Soomro is, therefore, an excellent example of participation and collective action. However, this case of participation has limited scalability as it emerged organically and with the impactful input of a local individual.

The village has established water filtration systems, health vaccination initiatives, street cleanliness measures and computer education for both boys and girls. The village committee collaborates with the public sector departments for shared development of schools, dispensary, and other necessary public services. The villagers also work with the same departments for optimal utilisation of collective assets. A computer laboratory, for example, has been established by the village in one of the public schools. A full-time instructor has been engaged to maintain the laboratory and provide training to young girls and boys in the evening.

### **5.2. Union Council Shamsabad, Sukkur**

Some neighbourhoods of Union Council (UC) Shamsabad, located in Sukkur city, have been without water supply for years. Connections exist, but there is no water. People either purchase water from vendors or bring it from the river. Citizens have even tried to engage with SMC to request only four hours a week of dirty water supply, but this basic demand could not be met. After some years of struggling for water supply for domestic use, the residents of UC-6, led by a local resident who also happens to be a government official, began to lobby with the District Commissioner to help provide a new water scheme for UC-6. They spoke to officials at the PHED and shared with them the estimates community members had made for the new scheme. It was a mere PKR 2.25 million benefitting at least 5,000 households. This cost included a small room and a tube-well along the canal going towards the High Court and a two-inch pipe covering 1.5 km from the tube-well to Shamsabad. Several times a small group of citizens went to the District Commissioner office to help expedite matters. They tried to negotiate that the community can pitch in a proportion of the funds needed and the government can cover the rest. Nevertheless, both PHED and DC raised concerns regarding technical feasibility and objected to plans for the scheme. However, no suggestions or efforts to help overcome these problems were made by the government. Eventually, bureaucratic delays exhausted the efforts of the citizens who had limited time resource to continue lobbying aggressively. This example hints at the propensity of the community to self-organise and reach many levels of involved processes. The government seems to be mainly responsible for quelling this spirit of participation and willingness to partner for social development.

### **5.3. Willingness of Chambers of Commerce and Industries in Hyderabad and Sukkur**

Interviews with the top leadership of the Sukkur Chambers of Commerce and Industry confirmed a rigorous willingness and thorough awareness of the need for the business community to partner with other stakeholders in the city to take ownership of city problems. The members shared that there had been countless discussions at the Chambers on the need for water sanitation and standard service delivery. The Chamber has

approached various organisations in-charge and has offered a platform to unite planning departments and have discussions involving multiple stakeholders:

*Sukkur is a small city, and we believe that our input should be there in water schemes. We should know and take part in the nitty-gritties, like where will the pipes be laid, what is the timeline for the construction of a water scheme, etc.*

They have previously participated in improving the living standards of the city. A Traffic Plan was developed and pursued by the Chambers on major intersections and was quite successfully implemented. There are fewer gridlocks now. They had to create maps and educate the police, but now the traffic system is improved, and cars are not stuck in long queues, especially at rush hours like closure time for schools. This shows that Chambers of Commerce can potentially make substantial differences in the city, which reaps collective gains.

Interaction with the senior members of the Hyderabad Chamber of Commerce revealed their willingness to collaborate and cooperate with WASA Hyderabad to address water woes in the city. Some members were willing to enter into the PPP framework for the O&M of water infrastructure in the city. However, the members showed concern about the lack of any consultation by the water authorities on the investment, maintenance plans, and strategies.

#### **5.4. Sodo Sarwari Village (near Sukkur)**

Sodo Sarwari is a village a few miles away from Sukkur. The Rohri canal, from where the village gets water for drinking purpose, becomes dry for a couple of months every year. The government has installed tube-wells and a rudimentary water cleaning system, but the tube-wells stop working during the dry season, causing supply deficiency for irrigation and drinking purposes. The villagers, recognising this pattern and how it affects their livelihood, approached the government to develop a scheme to drill a hole in the ground to access groundwater reserves near the canal bank. The incentive behind this was to ensure a consistent water supply when the canal was dry. However, the government showed no willingness to assist the villagers in this venture. The villagers then started a campaign to raise funds for this exercise and for the installation of a tube- well to utilise the groundwater. The cost was estimated at PKR 250,000. In retrospect, one can safely say that it would have cost much more had it been determined by the government. Nevertheless, villagers did everything prudently and also provided a labour force for O&M. The ‘Sarwari Social Welfare Organization’ played a crucial role in mobilising the community. Villagers successfully raised the money needed for boring; and tube-wells from the government schemes were already available. Thus, the partnership between the village and the government resulted in an all-year water supply.



The village already had a history of collective action. They established a *Madrasa* (religious) school in 1992 through self-help, and later an NGO donated funds for the construction of an additional two rooms. The community initially provided teachers' salaries, and then later the government adopted this school. The village also keeps the streets clean through collective action and public messages. The villagers are willing to contribute to partnerships for improving water quality if the government cooperates with them.

### **5.5. WASA Hyderabad Bill Outsourcing**

WASA Hyderabad outsourced its bill distribution and recovery to a private firm in an attempt to improve the bill recovery rate. WASA had 5,000 commercial users and the commercial rate is charged only to water-based industries. The department was facing a few issues at the time. First of all, bill recovery was extremely low, and many household members complained that they did not even receive the water bill. Some investigation into possible reasons revealed that WASA staff had not even been delivering water bills to consumers.

After the tendering process, a firm from Karachi was contracted to deliver the bills to Hyderabad's residents. The contract, signed in April 2017, included the distribution of bills to consumers and software development to keep track of paid and unpaid bills. The first step was to conduct a survey. The firm started with Qasimabad and hired people from Karachi to interview locals from Hyderabad. Fights and conflicts broke out between the two sides due to cultural differences. Further, the previously employed (and now sacked distributors) started to rebel and bother the newly hired ones. As a result, the company had to hire some of the old distributors. However, vigilant monitoring by the firm reduced the problem of corrupt distributors to some extent. The company had to face some resistance and rebellion from the residents of Hyderabad, although the same company also operated in Karachi, it did not face such issues there.

The company was paid PKR 7.5 per bill for bills returned. Also, a percentage of the collection was paid by WASA. Before outsourcing, WASA was able to collect 30% of water charges. The company is offered  $x\%$  of the current recovery for  $(30+x)\%$  collected, i.e., if the company collects 31% of water charges, WASA pays them 1% of the current collection; if they collect 32%, WASA pays 2% of water charges. On average, the company was able to distribute 130,000 bills and collect 28,000 bills. Before billing was outsourced, WASA was collecting, on average, 15,000 bills, so recovery almost doubled after the company was hired. Initially, the results were quite disappointing as the company faced challenges in collecting bills from a different city with unique dynamics. However, after a year of operations, performance improved manifold. WASA signed a three-year contract with the company - it took one year for the company to establish their

setup and resolve the issues caused by resistance from the citizens. WASA had previously experimented with the idea of outsourced billing. They engaged a courier company to deliver bills. The courier company charged double of what the private contracting firms charged but were effective at sorting untraceable individuals. Due to severe land/property conflicts, WASA has not yet pursued or tried to tackle the problem of bills being delivered to the wrong individuals.

### **5.6. Reverse Osmosis (RO) Plants in Hyderabad and Sukkur**

RO plants have been installed by various government agencies and charity organisations in many cities in Pakistan, including Hyderabad and Sukkur. People can fill bottles and cans free of charge from these plants. Most of the time, the organisation that sponsors the installation of plants also provides O&M expenditures for a few months and then expect citizens to contribute. Physical verification revealed the poor condition of RO plants in Hyderabad and Sukkur. According to the survey, 31 RO plants exist in Hyderabad, out of which 6 plants were closed/not functional. According to the information received from the people living around the filtration plants in Hyderabad, almost 13 out of 31 RO plants were being maintained regularly. Most of the remaining RO plants were poorly maintained, and they were not filtering water properly for drinking. Furthermore, for Sukkur, there are a total of 18 filtration plants, out of which only three plants were adequately maintained. The remaining plants were not being monitored or receiving appropriate O&M expenditures, because of which water, if and when provided, is not safe to drink.

According to the Supreme Court's report published in 2017, 'Hyderabad's overall analytical data show that out of 33 samples, 28 (85%) were found unsafe for drinking purpose, while only 5 (15%) samples were found fit for human consumption for analysed parameters under prescribed standards.' Whereas, for Sukkur, 'Overall analytical data of samples collected shows that out of 40 samples, 33 (82%) were found unsafe for drinking purposes, while 7 (18%) samples were found safe for human consumption for analysed parameters under prescribed standards' (Supreme Court 2017, p. 95).

The lack of ownership of such assets may be considered the main hurdle in the effective utilisation and maintenance of these assets. Many such assets are installed without financial contribution and engagement of beneficiaries, which leads to lack of ownership and low preference for their maintenance.

### **5.7. Tando Agha Community in Hyderabad and Water Pipes**

In Tando Agha neighbourhood of Hyderabad, some households were facing continuous problems regarding water supply due to the poor condition of pipelines. They were looking to the government for support to repair the pipes. After receiving a poor response

from the government agencies, the community came together and decided to resolve the problem themselves instead of waiting for the Government to respond. 13 households facing the issue contributed around PKR 6,000 each to repair the corroded pipelines and managed to do so utilising their own funds.

### **5.8. Potential of PPPs in Hyderabad**

WASA Hyderabad showed an interest in installing solar electricity supply at its pumping and water filtration stations in Latifabad. The officials informed that electricity load shedding was a severe problem which interrupts the smooth supply of water to citizens. They believe that the private sector can invest to replace the energy guzzler pumps installed a few decades ago, and WASA could invest in solar electricity to provide a smooth supply of water to citizens. Currently, these stations have high electricity cost and even so cannot provide a steady supply of water. Subject to approval by the board, WASA officials were willing to initiate a first of its kind public private partnership project for the pumping station in Latifabad.

## **6. LESSONS LEARNED FROM PARTICIPATORY CASES**

The study finds that there is a willingness to participate at the community level in different pockets of opportunities. Yet, there is inertia within local governments and fear in the local community of engaging with the bureaucracy because such interactions often fail to bear fruit and result instead in a waste of people's time. The discourse on partnerships does have a consensus to varying degrees in which there is the involvement of different actors. Arnstein's *Ladder of Participation* or IAPP's *Spectrum of Participation*, along with other typologies of this sort, show that the community can be involved in different ways and at various levels in the governance of their locality, including development issues. There is evidence of these variations in the drinking water sector in urban Sindh.

Some of the cases of partnerships studied during the data collection are modelled into Sarzynski's typology in Table 1. The boundaries among some of the cases are somewhat blurred. However, this framework is helpful in understanding the nature of different water sector initiatives in and around Hyderabad and Sukkur. The number of cases is limited, so findings cannot be generalised, but these cases do provide some lessons about the success and failure of partnership initiatives in the water sector.

**Table 1: Typology for Participation**

| Type of Participation             | Sindh Water Supply Schemes Case Studies                                                                                                   | Brief Description                                                                                                                                                                         |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Traditional Government-led</b> | Water schemes in the Annual Development Plan (ADP)                                                                                        | Public sector funded schemes are identified and designed either by political office holders or bureaucrats.                                                                               |
| <b>Non-governmental Planning</b>  | United Nations Children Emergency Fund (UNICEF) Financial Support for Water Sector Plan of Hyderabad City                                 | UNICEF has recently provided financial support to WASA Hyderabad for developing a comprehensive water safety plan for the city (Advertisement for the consultants appears in Appendix IV) |
| <b>Inclusive Planning</b>         | Willingness of Hyderabad and Sukkur Chambers of Commerce and Industry to participate in the planning of drinking water sector improvement | The business community showed keen interest in collaborating with water authorities.                                                                                                      |
| <b>Partnerships</b>               | WASA Hyderabad's bill outsourcing to private vendors                                                                                      | WASA Hyderabad has outsourced the recovery of water bills. Recovery has shown tremendous improvement.                                                                                     |
| <b>Non-governmental Provision</b> | RO Plants in Hyderabad and Sukkur                                                                                                         | Many NGOs (charity organisations) have installed RO plants in both cities without taking any contribution or charges from the local people or government.                                 |
| <b>Co-production</b>              | 1. Sodo Sarwari, Near Sukkur<br>2. Tando Soomro Model village<br>3. Tando Agha<br>4. Union Council Shamsabad, Sukkur                      | These cases were jointly designed by both the local community and government stakeholders.                                                                                                |

*Source:* Authors' own.

## 6.1. History of Collective Efforts

An in-depth review of the cases showed that partnerships and collective action take place based on the previous history of the local community. Small steps of collective action give confidence to agents to plan the next round of efforts. Thus, it shows that success creates success. Villagers of Tando Soomro informed that they initially started working together to protect the village from dacoits and thieves. The collective action to raise the village's security force, boundary wall and other protection measures, gave the villagers confidence to embark on social development initiatives in the education sector, water, and sanitation and health. Similarly, Sodo Sarwari village had a history of building schools through a collective effort and later agreed to raise funds to contribute to tube-wells'

installation. Thus, collective action and participation cannot be implanted in a vacuum. Instead, it needs a history of small and marginal efforts that can ultimately culminate into broader coalitions and platforms. The critical lesson is to encourage even small steps toward collective action. It is often the case that a few initiatives of public participation happen in isolation or through external directions and hence, they fail to sustain. The actors involved in such isolated cases are not coordinating their efforts and so it becomes difficult to build on good initiatives from the past.

## **6.2. Continuous Iterations**

Partnerships, civic capacity and collective action require constant iterations. Generally, agents refrain from undertaking new or augmented activities after failure and weaknesses in the initial rounds of partnership initiatives. Rather than giving up after the first few trials, failures and deficiencies should be analysed to develop iterative adjustments. WASA Hyderabad's outsourcing of water billing is a prime example in this regard. The first round did not bring fruit as envisaged, but it provided lessons to undertake changes in the second round. In the case of UC Shamsabad, after the failure of the first attempt, the community did not try to come up with a different plan, and hence their efforts of collective action could not generate the required momentum. Residents of Village Tando Soomro have been iterating their development and partnership model over time, and it has now evolved into mature collective action. Thus, it is advisable to pursue incremental improvements in policy frameworks and initiatives with proper adaptation based on the complex nature of interplay of different actors (Ang 2016).

## **6.3. Willingness of the Public Sector**

It is of utmost importance for the public sector to show some willingness to promote collective action and partnerships. A senior official of the Government of Sindh, responsible for overseeing the development of water schemes across the province, opined that only government could manage the problems in the water sector, whereas community involvement cannot prove to be helpful in this regard. With such an attitude, partnership with the private sector simply cannot culminate. However, this attitude also varies from person to person within the public sector. Sansom (2006) explains that collaboration and facilitation can take a variety of forms that include scaling up and signing Memorandums of Understanding (MoUs) between public sector agencies and non-state providers. There have been some replications of the Orangi Pilot Project (OPP) type approaches in Pakistan, and Sansom (2006) notes that a key element of these projects is component sharing or co-production. For instance, for low-cost sewerage provision, the community group provides its own lane sewer, and the utility provides the large sewers. Without the willingness of both stakeholders, a meaningful partnership is unlikely to foster.

The management of WASA has shown keen interest in exploring options for outsourcing some of its pumping stations, especially those that face severe power cuts. With some private investment, solar energy can be installed for these pumping stations so that they continue to pump water during electricity loadshedding. However, it is essential to appreciate that the willingness of officials of the public sector varies and it plays a vital role in pursuing partnerships and collective action. The frequent transfers and postings of officials add to the complexity in this regard. Interviews and FGDs revealed that views on the effectiveness and practicality of collective action were diverse, yet there was consensus on the fact that the public sector is unwilling to take such initiatives.

#### **6.4. Presence of a Social Entrepreneur or Champion**

The most crucial factor behind the success of partnerships and collective actions appears to be the presence of a social entrepreneur and/or a change agent who can intelligently and dedicatedly garner the support of the community. He/she also has to deal with the public sector iteratively. In the case of Tando Soomro, a local landlord appeared to be a crucial agent to spark collective action. The villagers informed that he did not use collective action or the community's support for his personal gains and did not ask any villager to vote for the political leader supported by him. This is a common phenomenon in rural politics that the landlords (or the notables) generally garner the support of villagers for political gain. But in the case of Tando Soomro, the leader of collective action did not pursue such goals. The social entrepreneur or change agent may or may not be the one who contributes the largest share in terms of finances. In the case of Tando Soomro, the social entrepreneur or change agent is the landlord and the wealthiest person, but in the case of Sodo Sarwari, the same role was being played by the headmaster of the local school.

#### **6.5. Effective Communication and Transparency by Community Planners**

Communication plays a vital role in promoting partnerships and collective action. During discussions with WASA Hyderabad, it was found that the officials were not even aware of the Public-Private Partnership (PPP) Framework of the Government of Sindh. So, they informed them that they were reluctant to initiate PPPs or other similar initiatives except for the recent outsourcing of billing. Village Tando Soomro's particular focus on transparency of expenditures and other budgetary matters has proven to be the most effective partnership tool. Similarly, when it comes to engaging different stakeholders, effective messages can help. During discussions with Hyderabad and Sukkur Chambers of Commerce, the research team shared the situation of the water sector based on the study's preliminary results, and they immediately responded to collaborate with the water

authorities to fix these problems. Some of the businessmen were willing to contribute to the water sector financially, while others were willing to pursue PPPs.

### **6.6. Contextual Design of Partnership Initiatives**

There is a common perception that community partnership initiatives are generally not sustainable in Pakistan. However, the study has found that such initiatives often fail due to poor design. Many NGOs have installed RO plants in Hyderabad, Sukkur and other cities in Sindh and Pakistan. Most NGOs give donations or charities (raised from either personal contributions or other national/international donors) to install such plants in various neighbourhoods. They provide total upfront cost and running expenditures for some time, and generally assume that the community will take care of maintenance and other expenses after the expiry of support by the sponsoring NGO. The research team found many dysfunctional RO plants disbanded after the expiry of financial support of NGOs who provided support for their installations. Indeed, this may be considered a design failure. The design of initiatives and the details of operations of such projects should be finalised collaboratively by state and community actors. There is a need to engage communities from the very beginning of such initiatives. The community's ownership can only be ensured through their contribution and input at the beginning of the project.

### **6.7. Strategy for Social Mobilisation**

The strategy for social mobilisation is a critical element in the success of community participation initiatives. An official of a consulting firm involved in social mobilisation in various projects expressed that community mobilisers need to spend sufficient time with the local communities for understanding the local culture, demography and other power dynamics. Consultation with the community should not be a one-time event. It should be a carefully crafted process. One of the officials of the Government of Sindh, heading an irrigation-related initiative, informed that the performance of FOs varied based on the initial support provided to them in terms of explaining and preparing them for the role they were supposed to undertake. This study does not have any evidence to substantiate this perspective. However, it appears intuitive and is supported by international literature as well. FO performances and the experience of farmer participation in the Indian states of Maharashtra and Chhattisgarh, for example, have been entirely different from each other. In the former, locals have been made to participate for 15 years, and legislation on participatory irrigation management is yet to be passed wherein the local farmers are likely to have an input in the bill itself. In Maharashtra, the experience of community participation is exemplary. On the other hand, in Chhattisgarh, the experience has been the complete opposite as the approach was bottom-down and more focus was given to legislation rather than truly mobilising the local community (Pant 2008).

A community member of Tando Agha informed that most of the households in that street were from the same tribe and one of the elders of the community convinced the members to undertake this initiative. The elder was well aware of the financial constraints of the community and accordingly convinced the community members to do this despite their financial limitations. He informed them that it would be beneficial for them in the long run.

## **7. POLICY RECOMMENDATIONS**

Appropriate pricing of water remains one of the major loopholes in the effective and efficient governance of water. In Sindh (and across Pakistan), users of water pay a very small portion of the bill, creating an unwarranted burden for the taxpayer. There is a need for a comprehensive and integrated water policy to tackle issues in this sector across the province. There are severe flaws in designing and developing water supply schemes, especially in terms of needs assessment. The study highlights the need for improving public investment management of water supply schemes in order to enhance value for money and improve quality of water for the citizens of Sindh. Currently, in cities like Hyderabad and Sukkur, increasing population poses a threat to existing infrastructure. There is a need to pay adequate attention to infrastructure maintenance. Currently, the focus is mainly towards creating more infrastructure instead of apportioning appropriate funding for the upkeep of existing water supply schemes.

Participatory approaches in governance can be used to harness action from the community in designing, planning and overseeing water service delivery. When used effectively, such models can help inform policymakers, improve knowledge about existing infrastructure, enhance access to information and reduce corruption. For Sindh, several models can be pursued - PPPs, engagement of community organisations, and outsourcing of ancillary services such as outsourcing of bill recovery by WASA Hyderabad. Bhalwal's CPP and Karachi's OPP may provide important lessons for developing and operating water supply schemes in semi-urban and rural areas. The federal, provincial and local governments should play a role in monitoring water quality, and sufficient role should be given to water authorities as well as other environmental agencies for monitoring water quality and ensuring transparency of service delivery. Further research is needed to analyse equity issues in the water sector around regional and sectoral disparities in Sindh.



## 8. CONCLUSION

The paper concludes that water supplied to households through taps is almost uniformly poor across Sindh, especially in Hyderabad and Sukkur, and identifies and elaborates several case studies of collective action in the drinking water sector of urban Sindh. Sarzynski (2015)'s typology of citizen participation in the case of climate change adaptation was adopted to categorise the case studies of collective action. These fit into the last three rungs of Sarzynski's *Participation Ladder*, signifying medium to high levels of participation.

The study found that partnership models in the form of co-production (Tando Soomro and Sodo Sarvari for instance) performed relatively better in terms of community ownership and engagement. However, it was also observed that collective action was a trial-and-error process, and societies that had climbed the learning curve of community engagement were much more likely to progress. The Tando Soomro model of participation was built on years and years of trial and error. Mutual trust between various actors is a key feature of successful participatory service delivery models. As explained in Table 1, not all participatory schemes are successful. Moreover, partnerships such as WASA Hyderabad's bill outsourcing model show that involving the private sector in operational tasks of the government may reap large benefits. Findings show that NGO involvement can lead to success as well as failure. Failures were observed in cases where the handover of maintenance was not clear while successes were observed in cases such as Sodo Sarvari where one time involvement by the NGO was the need (construction of two rooms in the *madrassa*).

A history of collective efforts such as that observed in Sodo Sarvari and Tando Soomro gives confidence to all stakeholders – the organisers, public sector and the community at large. Continuous iterations can help evolve small projects into a mature and compelling culture of collective action. Willingness of public sector officials to experiment with new ideas can create space for public participation and the presence of a social entrepreneur or champion also seems to play an important role. Another important aspect is transparency of the community leaders. Just like governments, community leaders can quickly lose the faith of the people if they are not kept informed about the planning process. Equally pertinent is that social mobilisation takes place strategically, so organisers need to spend sufficient time understanding the constraints and the needs of the community in question.

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## APPENDICES

### Appendix I: Individual Interviews and KIIs (Karachi, Hyderabad and Sukkur)

| City      | Respondents                                                                     |
|-----------|---------------------------------------------------------------------------------|
| Karachi   | Officials from P& D Sindh                                                       |
|           | Senior Official of Local Government department Sindh along with other officials |
|           | Senior Official from PHED                                                       |
|           | Senior official from Research and Training Wing, P&D                            |
|           | Senior official from Hisaar Foundation                                          |
|           | Officials from Planning, P&D, Karachi                                           |
|           | Officials from Sindh Irrigation Development Authority                           |
|           | Senior Official from Planning and Development Department, GoS                   |
|           | Politician                                                                      |
| Hyderabad | Senior officials from MUET                                                      |
|           | Senior officials from WASA Hyderabad                                            |
|           | District management official                                                    |
|           | Officials from non-profit organisation                                          |
|           | Official from non-profit organisation                                           |
|           | Director Finance, WASA Hyderabad                                                |
|           | Chambers of Commerce, Hyderabad                                                 |
|           | Officials from SMC                                                              |
| Sukkur    | Official from SMC                                                               |
|           | Official from non-profit organisation                                           |
|           | District management official                                                    |
|           | Politicians                                                                     |
|           | Official from non-profit organisation                                           |
|           | Official from North Sindh Urban Services Corporation (NSUSC)                    |
|           | Officials from Chambers of Commerce, Sukkur                                     |
|           | Officials from SMC                                                              |

## **Appendix II: Study Questionnaire**

The following questions were asked during the Individual Interviews and KIIs with stakeholders:

- What kind of water supply schemes are there in Sindh, and why do you think water supply schemes in Hyderabad and/or Sukkur have failed?
- How does a water supply scheme get approval?
- How does the provincial government monitor and what is the organisational structure for water resource management?
- What in your opinion are the key areas of improvement to improve the management issues or governance gaps within the LG (Local Government) department or in the state machinery?
- How can we involve the community in the O&M process?
- Why do water supply schemes not sustain?
- Can participation in the water sector improve the governance?
- How can water governance be improved?
- What are the main issues in the water sector?
- Why has WASA been unable to provide access to clean drinking water?
- What is the number of users under WASA system?
- What is average recovery rate?
- What are the systematic failures in water supply governance?
- What are water charges? Do you think there should be pricing of water? Do you think water pricing is a solution?
- What are the fundamental weaknesses in the current structure of WASA?
- What is the current structure and what are the challenges in water governance?
- What can be done to improve the current issues?
- Can CCBs work?
- Describe some partial solutions.
- Do governance structures support water access and quality?
- Why has the provision of clean drinking water not been possible in urban Sindh?
- What is the allocation of water distribution network in the annual plan?
- What is the quality of water in Sindh? How does it compare to the quality of water in the North of Pakistan?
- What is your experience in working with international donors?
- Do you think there is potential for participation of the local communities in Hyderabad and Sukkur?
- What do you think is the way forward in improving access and better quality of drinking water?

**Appendix III: Field Survey of Filtration Plant Questionnaire**

|                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>*Name of Water Supply Scheme: _____</p> <p>*Union Council: _____</p> <p>*City: _____</p> <p>*Capacity: _____</p> <p>Questions:</p> <p>1. Is this scheme functional?</p> <p>2. Do you use this source for drinking water?</p> <p>If no, which source do you use for drinking purpose?</p> <ul style="list-style-type: none"><li>• Private supplier</li><li>• Home treated water</li><li>• Ground water</li></ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Appendix IV: Advertisement for Consultants

|  <b>WATER AND SANITATION AGENCY (WASA)<br/>HYDERABAD DEVELOPMENT AUTHORITY (HDA)</b><br><b>REQUEST FOR PROPOSAL (RFP)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Sealed Technical and Financial proposals and Bidding documents are invited from reputed, renowned and experienced firms/companies for the below mentioned services on offer rate basis:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |                                                                              |
| Tender No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Bidding Procedure                                                                                                                                                                                                                                                                                                                                                                               | Bidding Documents Collection                                                        |                       | Proposal Submission Date/Time                                                                                                                                                                                                                                                                                                                    | Proposal Opening Date/Time                                                                           | Bid Security                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                 | First Date of Issuance                                                              | Last Date of Issuance |                                                                                                                                                                                                                                                                                                                                                  | Opening                                                                                              |                                                                              |
| WASA/DF C/12-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Least cost selection method                                                                                                                                                                                                                                                                                                                                                                     | 18/12/2018                                                                          | 02/01/2019            | 02/01/2019 till 01:00 PM                                                                                                                                                                                                                                                                                                                         | 02/01/2019 AT 02:00 pm after technically qualified bidders only Financial will be opened at 03:00 pm | 5% of the bid offer by the bidder                                            |
| S.No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Scope of Work                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |                       | Eligibility Criteria                                                                                                                                                                                                                                                                                                                             |                                                                                                      |                                                                              |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | WASA, Hyderabad intends to development of a comprehensive Water Safety Plan for the water supply distribution system used for Hyderabad city under the activity, SN-W-2.1.5 of rolling work plan 2018-2022. In the above context, UNICEF provided financial and technical support to WASA-Hyderabad. UNICEF has provided funds for institutional strengthening of water & sanitation provision. |                                                                                     |                       | i. NTN/Registration Certificate from SRB<br>ii. SRB/Registration Certificate from SRB<br>iii. Three years' experience and other technical criteria as mentioned in Bid Document<br>iv. Financial Capacity as mentioned in Bid Document                                                                                                           |                                                                                                      |                                                                              |
| Documents Collection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |                       | Bidding Procedure                                                                                                                                                                                                                                                                                                                                |                                                                                                      |                                                                              |
| Bid Document can be collected on submission of a written request on company's letterhead with Pay Order of Rs. 3,000/- (non-refundable) in favour of WASA HDA during the aforementioned dates between working hours from the following address:<br><b>Managing Director<br/>Water and Sanitation Agency (WASA)<br/>Hyderabad Development Authority (HDA)<br/>Hyderabad. Phone: 022-9200106</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |                       | For "least cost selection method Rule 72(1)", the bid shall comprise a single package containing two separate envelopes. Each envelope shall contain separately the Financial Proposal and the Technical Proposal. The envelope shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion. |                                                                                                      |                                                                              |
| <b>Note:</b> <ul style="list-style-type: none"> <li>Bidder must submit an amount of 5% with bid as Bid Security in the form of Pay Order/Demand Draft in favour of MD WASA, HDA, Hyderabad. The original Pay Order/Demand Draft should be attached with Financial Proposal and the photocopy of same shall be attached with the technical proposal.</li> <li>Bidders are requested to submit all relevant documents with the bid.</li> <li>Those bidders whose bids confirm to technical specifications &amp; requirements including terms &amp; conditions of the contract shall be eligible for award of contract.</li> <li>Information given, if found incomplete/false at any stage, will result in immediate rejection of bid.</li> <li>WASA may ask any further information and detail at any time during evaluation/complaint Redressal period if required.</li> <li>Late submission of bids will not be entertained.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                     |                       |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |                                                                              |
| INF-KRY: 4348/18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |  |                       |                                                                                                                                                                                                                                                               |                                                                                                      | <b>Managing Director<br/>Water And Sanitation Agency<br/>HDA - Hyderabad</b> |