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Emerging approaches to water Governance in Urban areas: Lessons from Phnom Penh and Jakarta

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ABSTRACT

A major chunk of the world population does not have access to fresh water for drinking and other purposes. However, the problem of fresh water availability, accessibility and affordability is more acute in cities, especially in developing countries. In urban areas, physical scarcity of water, is of course, an important cause of the problem. But unplanned spatial expansion, mismanagement of resources, governance failure, dilapidated infrastructure and low economic growth are perhaps even more important factors. Thus, water crisis is a governance crisis which requires active engagement of all stakeholders for evolving a coherent policy framework based on the principle of good governance. The paper utilises secondary data to explore the various dimensions of water governance, identifies the primary institutions and highlights the factors responsible for the crisis in water governance. Moreover, the paper will also explore the various aspects of governance which are essential for bringing good governance in water sector and water supply management as well as avoiding governance failures in water sectors or water supply management.

Key Words : Governance, Good governance, Water governance, Governance failure, Effectiveness, Efficiency, Participation, Accountability, Transparency, Non-revenue water

INTRODUCTION

The United Nations General Assembly's resolution of 2010 declared safe drinking water as a human right and pre requisite for human development (Salman, 2012). Identifying the importance of Water for the survival and well-being of mankind, Leonardo da Vinci called it, the driving force of all nature. Ironically, these days, a major chunk of the world's population is living under conditions of water stress, in terms of water availability, accessibility and affordability (UN, 2018). As per estimates, current global per capita availability of fresh water has dropped to 55 per cent of the per capita availability in 1960. This is causing widespread water scarcity which in turn is resulting in consumption of contaminated and poor quality water. Water scarcity has increased dramatically to affect approximately 40 per cent of global population. And around 1.8 billion people are drinking water from contaminated sources. Furthermore, the demand for the fresh water is expected to rise by another 50 per cent by 2030. As a result of this, the shortfall between demand for water, and, availability of water is expected to increase to 40 per cent by 2030 (Anderson and Guppy, 2017).

The problem of fresh water availability, accessibility and affordability is more acute in cities,

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especially in developing world. However, unlike the developed world, the growth of the urban centres in developing countries is accompanied with unplanned spatial expansion, mismanagement of resources, governance failure, dilapidated infrastructure and low economic growth. These factors are the reasons for the lack of or poor provisions of basic amenities like drinking water, safe sanitation and disposal of waste to urban population in general and urban poor in particular (Biswas, 2006). Cities house close to 54 per cent of the global population currently, and this is expected to reach up to 66 per cent by 2050. As per the current trends of rapidly increasing population and growing urban centres, around 2.5 billion more people will be added to global urban population by 2050. Moreover, 13 or more megacities are likely to be added to the 28 megacities existing currently. These megacities will face the problem of severe concentration of population in coming decades (Department of Economic and Social Affairs, 2014). Importantly, most of these new emerging mega cities will be located in Asia and Africa.

The demand of water for drinking and other purposes in urban areas is far beyond the available supply of water because of various reasons like rapid population growth, high depletion of natural resources due to overexploitation, mismanagement, dilapidated infrastructure, outdated technology and shift towards poor governance (Biswas, 2006). However, it is important to note, that Water is a renewable resource unlike other natural resources such as petroleum and gases. This means that, human intervention can improve and resolve the water problems. One can address and ameliorate water problems with the combined use of modern technologies, global coordination, best practices and proper planning. Therefore, one can say that, the existence of water crisis occurs primarily due to poor governance and less because of physical scarcity (Tortajada and Biswas, Future Water Governance: Problems and Perspectives, 2010).

Statement of the problem :

Although the concept of "water governance" is new and still in its evolving stage, this term has quickly come into common use. However, one must point out the ambiguities regarding the concept not just of "water governance", which is yet to be defined in a universally acceptable manner. More specifically, the ethical and political dimensions of the concept of water governance are under deliberation and debate widely. Different practitioners, policy makers and institutions use the term 'water governance' in different ways in different social, cultural, political and economic context (Tortajada, 2010). Thus, there is no single universally agreed definition of water governance. The academicians, policy makers, development practitioners and public administrators are having different understanding of water governance and are talking at cross purposes. As a result it is difficult to improve water governance and design effective policy framework with best governance practices for sustainable water supply management in urban areas.

Rationale of the study :

The world is facing problems related to water scarcity in recent decades, which are expected to deteriorate in future. The conditions of water availability, accessibility and affordability are worst in urban areas. There are a number of reasons for this gloomy picture, ranging from the physical scarcity of water to poor governance of water utilities (UN, 2018). The lack of accessibility and availability to affordable water supply due to poor water governance can also be called "social resources scarcity" in contrast to "natural scarcity" which refers to the physical scarcity of water (Bakker *et al.*, 2008). The proposed study will explore the various dimensions of water governance and important factors which are essential to be considered while drafting the policy framework for

solving the problems posed by urban water scarcity.

Objectives of the paper :

The concept 'water governance' is a broader term and there is no single universally accepted definition of it. Moreover, different scholars have defined the concept in different ways in accordance to their context. Therefore, the objectiveof the paper are:

– To explore the various dimensions of this more important factor of social scarcity of water, to enable policy makers to address the core problems.

– To determine the various principles of water governance and

– To identify good governance practices which can be used for designing policy framework for sustainable water supply and management in urban areas.

METHODOLOGY

The design of the study is descriptive. The study will begin with a look at the concept of governance in general including governance failure and good governance. It will then go on to explore various dimensions of water governance on the basis of existing literature on the same. The study is based on the secondary data and is confined to the period from 2008 to march, 2018. The source of data and exploration was restricted to peer-reviewed articles, and reports of United Nations Organizations and also its other agencies' reports published between the study period – 2008 to March, 2018. However, theoretical papers prior to our study duration have also been included. This study was undertaken by the researchers during the month of February and March, 2018. Moreover, the researchers searched databases which includes JSTORE, EPW, Google Scholar, Researchgate and the International Journal of Water Resources Development. The inclusion criteria for articles, reports and other documents were their focus on governance in general and on urban water governance in particular:

– Based on debate over governance and good governance debate.

– Based on water governance in urban areas.

– Based on the best practices in water management and supply in urban centres.

The exclusion criteria for the same were:

– Papers or reports which were published before 2008.

– Water governance in areas other than urban water supply management

The extensive review of the article and reports was done in four steps:

1. The researcher conducted the searches of different databases by using the key word like governance, good governance, water governance, urbanization and water rights.
2. Titles and abstracts were screened to meet the inclusion criteria.
3. An extensive reading and analysis of selected articles was done.
4. The references of the selected articles were also reviewed to identify other articles not found in the search.

The analysis and interpretation of the findings was done by followings steps.

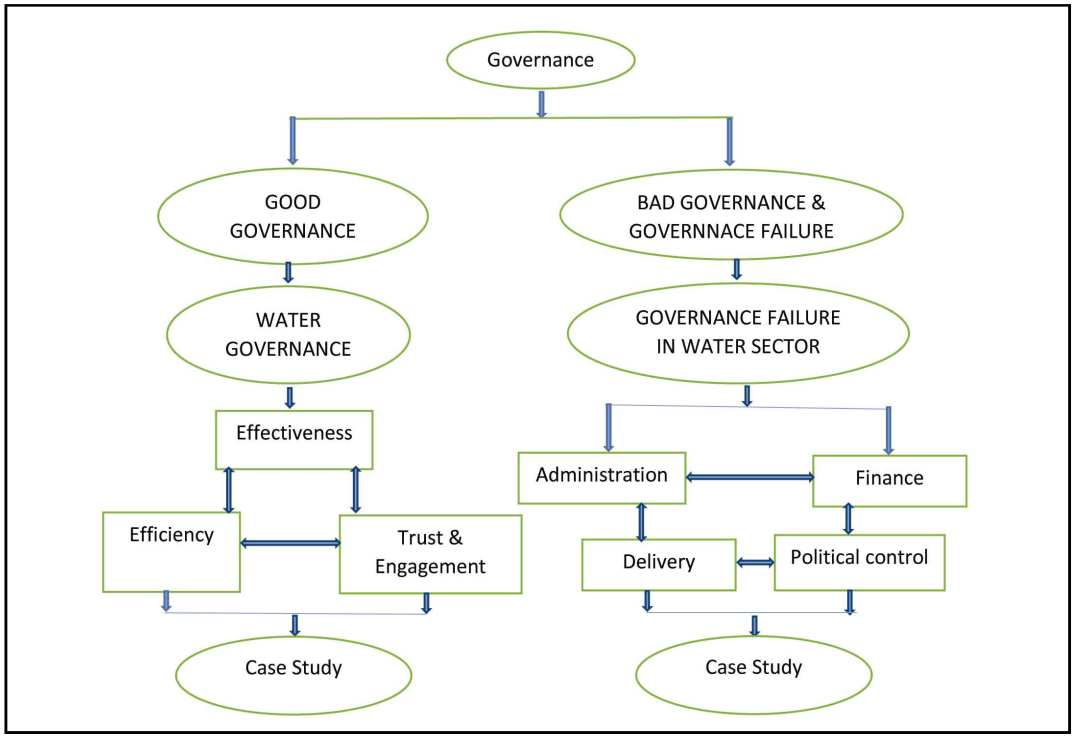
1. First extensive review of selective papers and reports on topics like governance, good governance, governance failures and water governance was done.
2. Second, different aspects and dimensions of governance and good governance were identified and analysed further.
3. Third, the concept of water governance, governance failures in water sector and best

practices of water governance based on good governance were analysed.

4. Finally, the findings were interpreted on the basis of analysis of data and discussed in this study.

RESULTS AND DISCUSSION

A United Nation General Assembly resolution in 2010 declared safe drinking water as a human right and prerequisite for the human survival and development. Yet, a large section of the global population is still living without access to safe, adequate and affordable water supply (Satapathy, 2014). And, the conditions of water supply and management in urban areas are even worse because of the exploding population density, expansion of urban spaces without proper planning, the growth in informal settlements, lack of basic infrastructure, overexploitation of water resources and shift towards poorer governance practices in water sector (UN, 2018). However, proper water management for ensuring continuous and sustainable water supply is a complex and tedious task that requires active engagement of all stakeholders and quality infrastructure for both water supply and waste water management. It is necessary for the urban water utilities and water consumers to jointly evolve a coherent water policy that ensure the coordination and cooperation across the sectors and stakeholders. The principles of good governance can provide the conceptual understanding for building conceptual framework of water governance for ensuring sustainable water supply to all in more effective, efficient and transparent manners (Flack, 1971). Below given pictorial representation gives the synoptic view of the paper's structure and used concepts.



Governance and good governance :

The World Bank report of 1999 is considered as the watershed moment in the development of

the term 'governance'. Governance has enabled policy makers to also consider socio-political factors for policy formation in addition to the economic factors. Thus, governance is multifaceted in nature. Most of the definitions of governance are based on the normative assumptions about the ways of decision making and implementation process. However recent ideas on governance link it to management of the resources, organization of the individuals and groups in to formal or informal institutions, organizations or bodies through social, economic, political and administrative mechanism (Ali, 2015).

Governance is a broad term which comprises a range of institutions and inter and intra relationships between them. Many analysts sometimes use the term 'governance' as a synonym of the term 'government'. Katsamunska differentiates between the two and argues that the term government is limited to the managerial and technocratic work while governance refers to the government plus something else like public policies, institutions, economic relationships, social values, norms and participation of non-government organizations or civil society. Thus, governance can be defined as a mechanism to steer the society (Katsamunska, 2016). Stoker also argued that the recent developments, have helped to distinguish the concept of Governance from Government. Nowadays, the term Governance refers to changing new conditions and new evolving methods of governing society. Stoker defined good governance as changes and development in the style of governance where in addition to government, there is a considerable expansion in the participation of the private sector and civil society. Effectively the boundary line between public and private sector gets blurred or becomes permeable thin (Garry, 1998).

Fukuyama defined governance as an organizational process whose quality can be measured through four approaches viz. procedural measures, outcome measures, capacity measures and autonomy measures. Fukuyama argued that mixed approach of capacity and autonomy measures is considered as best practice under good governance (Fukuyama, 2013). The previous experiences show that skilled, efficient and competent bureaucracy is given maximum autonomy in comparison to corrupt and inefficient bureaucracy. Thus, both capacity and autonomy are positively co-related but autonomy and mandates are inversely related[1] . One needs to be cautious as both high and low numbers of the mandates are bad in governance[2] . Finally, good governance is the outcome of the interaction and interrelationship between the capacity and autonomy of the bureaucracy (Fukuyama, 2013).

There is no universally agreed definition of good governance but a number of definitions of good governance have some of the common perimeters and elements. On the basis of these commonality, the good governance is defined as the governing process which is participatory, accountable, consensus oriented, effective and efficient, equitable, inclusive and responsive to the needs of people. At the same time, it must respect the rule of law and human rights of the people. However, prefix good in good governance is not static but dynamic and contextual (Ali, 2015).

Water Governance :

Water governance is also a new concept which is still in its evolving stage. As in the case of governance, there is no universally accepted definition of water governance as well. The concept of water governance is built around the concept of "good governance". Different practitioners,

1. The autonomy is defined as the manners in which political principles issue mandate to bureaucrats who act as their agent.

2. The high number of mandates constrain the autonomy while low numbers put less accountability.

policy makers and institutions use the term 'water governance' in different ways in different social, cultural, political and economic context. The ethical and political dimensions of the concept remain a matter of debate. However, one can identify, Water governance, in broad general terms, as the process which involves social, political, economic, and administrative institutions or organizations, for managing and developing water resources. In its simplest form, it explores the organization and working of institutional structures and regulatory processes for addressing societal concerns for water. Water governance goes beyond formal institutions to recognise the importance of informal institutions and investigate their role. While it looks at the natural limitations like water scarcity and financial constraints, it also gives due consideration to socio-cultural values while making decision with regard to water allocation and management (Tortajada, 2010).

Water is connected with different sectors, people and institutions, spread across the geographical and temporal scale with multiple stakeholders and decision-makers. Due to this intrinsic nature, the Water sector is highly fragmented with multiple-levels of decision making. It therefore requires careful and skilful coordination across multiple sectors and institutions. As a result, water governance places significant emphasis on coherent policy prescription, decentralization of authority and well designed and context specific regulatory framework (Tortajada, 2010).

The processes and practices under the water governance are based on the principles of good governance viz. efficiency, effectiveness, accountability, transparency, socially informed decision-making, and respect for human rights, legitimacy, and inclusiveness and particularly on rule of law. moreover, Based on good governance, the Organization for Economic Co-operation and Development (OECD) has identified the core principles of water governance, as effectiveness, efficiency and trust and engagement (OECD, 2018).

Effectiveness :

Effectiveness refers to the role of governance in setting clear and sustainable water policy goals for all stakeholders and their smooth implementation with the goals of time bound realization. The effectiveness in water governance can be ensured by adopting principles and practices such as capacity building of water utilities, staffs and consumers; policy coherence; clear roles and responsibilities of involved stakeholders; appropriate scales within the basin system.

Efficiency :

Efficiency in water governance helps in providing the maximum benefits of sustainable water management and welfare at minimum possible cost to society. Efficiency in water sector can be ensured by adopting certain practices based on principles like sharing of data and information across the stakeholders, sustainable financing, effective regulatory framework and innovative governance practices.

Trust and engagement :

The trust and engagement dimension of the water governance refers to the role of governance in building trust among different stakeholders and in building public confidence by ensuring inclusiveness of all on the general governance principles of democracy, fairness and legitimacy. The trust and engagement in water governance is the outcome using the above general principles to develop specific water governance principles, such as monitoring and evaluation of water utilities and their staff's work, stakeholders' engagement, trade-offs across the users, rural and urban areas, and generation, and finally integrity and transparency in decision making and functioning of

utilities.

Water is a capital intensive sector. When run by the private sector, it is prone to market failure.[3] However, in most developing countries, the water sector exists as a monopoly, owned and operated by the State. When run by the State, incompetent, ineffective and vague regulatory framework may also lead to state failure.[4] Both the market failure and the state failure lead to the situation called governance failure (Bakker *et al.*, 2008). This problem of governance failure will be explored further in the later part of the paper.

Given the high demand for coordination across the sectors and institutions, water governance emphasizes the importance of greater decentralization of responsibility to local level. Additionally, due to its fragmented nature the Water sector, requires coherent policy prescription and well-designed regulatory framework based on decentralization, efficiency and accountability. Furthermore, Water governance is a highly context specific process, where social and cultural values, which vary from society to society, play a very important role in water governance. Hence, water policies must be adapted and tailored in accordance to the local context (Tortajada and Biswas, Future Water Governance: Problems and Perspectives, 2010).

Case study for good Governance in water supply management :

As mentioned above, the problems of water supply management are context specific and vary from place to place. As a result, there is no single set of best practices of governance which can be employed blindly everywhere irrespective of contexts. However, there are some common constraints such as water scarcity, high economic constraints, management constraints and environmental cost which are some of the common problems of water supply in most cities across the globe (Tortajada and Biswas, Future Water Governance: Problems and Perspectives, 2010). Unlike the crisis-ridden water utilities, in some other developing countries', Phnom Penh Water Supply Authority (PPWSA), has improved to become a role model due to its good governance in water supply and management (Chan, 2009). We will discuss some of the common water constraints faced, and the good practices adopted, by the PPWSA to overcome these constraints.

Water Scarcity :

Water scarcity is one of the major challenge for urban water supply. Most of the water sources which can be developed cost effectively have been exhausted or are about to get exhausted. The new sources of water have both spatial as well as temporal cost resulting in high economic cost. The only practical option with administrative bodies is to re-capture, purify and re-use the waste water through sewerage treatment (Biswas, 2006). The Phnom Penh Water Service Authority (PPWSA) is creating an extensive network of sewerage and drainage system to recapture waste water. Moreover, it has also installed many water treatment plants to treat sewage and process the treated water for domestic use (Tortajada and Biswas, Water Supply of Phnom Penh: An Example of Good Governance, 2010).

3. Market failures are prone to happen when the water supply network is operated by private companies. The reasons for market failures are: imperfect competition, unintended externalities, information gap between regulator companies.

4. When ownership and control of water systems lie in the hands of state, and it does not operate it effectively due to rent seeking behaviour of employees, unintended consequences, poacher-gamekeeper problems and regulatory capture., the resulting drop in performance, is termed as state failure.

Financial constraints :

The highly capital intensive Water sector demands high financial investment for developing and maintaining new water sources, water infrastructure and has a high operational cost. Most of the developing countries do not have financial resources to invest in water sector due to their fragile economic conditions. The problem is further exacerbated by the high amount of the non-revenue water due to leakages in infrastructure, illegal connections, corruption, unrealistic tariff structure, inefficient billing and inadequate bill collections (Bakker *et al.*, 2008). The PPWSA has improved it billing system by developing a complete and up to date consumer data base which helps it to plan effective and consumer responsive policies. The PPWSA revived its tariff structures in a way that can cover the operational, managerial and maintenance cost without the interference of government. Moreover, it has installed the electronic meters at all the delivery points for effective billing for volumetric cost. The water supply network is divided into different zones and teams of officials patrol these zones to check leakages and the Non-Revenue Water (Chan, 2009).

Management constraints :

As mentioned earlier, most developing countries, the water sector is organized as a State monopoly with highly ineffective regulatory framework. Moreover, Water and water pricing is also a highly political issue. As a result, many times, the water utilities indulge in populist and cost ineffective pricing policies through the use of high subsidies, unrealistic tariff structures and nepotism in recruitment. Thus, most of the water utilities in developing countries are plagued with autonomy constraints, political interference in decision making especially in recruitment, poor management and incompetency of the staff (Bakker *et al.*, 2008). However, PPWSA has been successful in overcoming these constraints. The government of Cambodia gave maximum possible autonomy to PPWSA. The PPWSA first rationalised its staff structures and recruited highly talented and competent young employees. They were trained on the principles of "educating, motivating and discipline". They are given high salaries with incentives on the basis achievements. There are also provisions of penalties for misconduct and under-performance. The utilities also involve local community representation for decision making by the management, service delivery and policy formation (Chan, 2009).

Water for Poor: some lessons for Phnom Penh :

PPWSA generated surplus revenue on the back of its success with regards to high collection of bills and low non-revenue water. The PPWSA provided water to poor at subsidised rates in different slabs according to the level of poverty. The identification of the poor was done by the committee of PPWSA after consultation with local authorities. PPWSA also adopted the method of using instalments for paying monthly bills and connection fee. The PPWSA built rapport with the community by involving local communities and due its consumer-responsive water policies. They also developed a sense of involvement and ownership among employees through the use of performance-based incentives. It is due to these reasons, that the PPWSA, unlike other water utilities in developing countries, has been able to significantly improve its efficiency, productivity and has developed a wide and satisfied consumer base.

Bad Governance and Governance Failures :

The concept of Good Governance was developed and rose to prominence in the 1990s under the patronage and guidance of the World Bank and other Bretton Wood's institutions. The core

concern of Good Governance was to improve the functioning of governments in developing nations and bring the effectiveness and efficiency in government processes. The primary principle for ensuring good governance, was the replacement of the authoritarian regimes by democratically elected regimes, which are efficient, responsive, accountable, legitimised and participatory. Moreover, such regimes respect human rights, build pluralistic society, operate through the principles of rule of law and ensure access to institutions of justice (Aly, 2013). The absence of the above mentioned principles or characteristics in governance lead to the situation which is called as bad governance (Coker and George-Genyi, 2014).

Bad governance is, thus, referred to as the inability of the public institutions to properly manage the public affairs and resources. Bad governance becomes more visible or pronounced when governments fail to address the needs of society. Bad governance is a pointer towards institutional and leadership failure (Bakker *et al.*, 2008). Wael Omran argues that cumulative effects of various factors such as acute corruption, absence of accountability, lack of institutional control, predatory nexus between politics and capital, lack of transparency, absence of rule of law, low public sector wages, precedents set by politicians, deplorable conditions of bureaucracy and poor administration of justice led to the failure of governance in Egypt (Aly, 2013).

A failed state is characterised by the lack of good governance and the existence of bad governance. Therefore, it is essential for successful state to adopt good governance for addressing the needs of its subjects. Moreover, both bad governance and state failure presuppose each other (Jessop, 1998). The good governance is prerequisite condition for sustaining the legitimacy of the state and its absence is marked by bad governance, high poverty, corruption, crimes and weakening of legitimacy (Suleiman, 2015). State failure is a most acute situation where state is incapable of providing basic services or goods to its subjects due to extreme poverty and conflict. However, there are other kind of failures like governance failure. B.G. Peters discussed two types of governance failures namely Governance-1 and governance-2. Governance-1 failures pertains to political leaderships and refers to inability of the political leadership to provide systematic direction to society due to lack of coordination and capacity. On the other hand, Governance-2 failure refers to implementation failure. It is associated with structure and organization of the bureaucracy and refers to the incapability of the bureaucracy to implement the policy in its complete form (Peters, 2015).

Governance failure in Water Sector :

Governance failure in water sector is defined as failure of institutional dimensions of water management and decision making process in the process of addressing the water needs of the poor and in creating disincentives for water utilities to connect poor with water supply networks or disincentives for the poor to connect with water supply network (Bakker, 2010). The concept of water governance failure requires analysis of institutions and processes across four dimensions: administration, delivery (technological aspects), financial sustainability and political control (UNCHS, 2003).

Administration :

The administrative dimension of water governance emphasises the importance of developing efficacy, effectiveness and transparency in the administration of water utilities irrespective of the ownership status.

Delivery :

The delivery dimension of water governance, highlights the importance of developing technical competence of water utilities in ensuring the supply of regular and high-quality water. Moreover, it also comprises the wider aspect of efficient management of water production and supply networks.

Financial sustainability :

Financial sustainability of water utility is ensured through the adoption of viable, sustainable and cost effective economic policies and tariff rates and in the elimination of wastages and losses. This includes the reduction of non-revenue water through technical improvement, plugging the leakages and disconnecting illegal connection to bring about financial sustainability.

Political control :

Water is highly political and sensitive issues. High political control with undue interference in the water utilities may cause inefficiency in its functioning and financial stability as politicians tend to announce popular sops for short term electoral gains. At the other hand, high autonomy to water utility, less interference, high coordination and financial support would enhance the capacity of water utility.

The concept also points to the fact of institutional biases against poor and elite controls over decision making process, despite some pro-poor policies, as the political reasons behind governance failure. The concept does not apply to only the water supply utility or the service providers[5] but it also pertains to the poor whose ability to connect with the water supply network is undermined by various social, political and economic factors[6] (Bakker *et al.*, 2008).

Case study for Bad Governance or Governance Failure in Water Supply Management:

Jakarta, the capital of Indonesia, is the biggest city of the country. It has grown into a modern city equipped with modern infrastructure, luxury hotels and restaurants, malls, industrial parks, commercial hubs and educational institutes. However, the development of Jakarta has been inequitable, as a number of people do not have access to basic amenities, like quality water supply, safe sanitations and waste water disposal. The problems of lack of access to safe water supply in Jakarta is due to governance failures in the water sector. The decision making process and institutional dimensions of water utilities creates disincentives for both water utilities and poor to not connect with the water supply infrastructure. A synoptic analysis of water supply system in Jakarta will be done, to understand another case of water governance failure.

Jakarta Water Supply Network: An "Elite Archipelago" :

The population of Jakarta has witnessed a huge jump in numbers in recent years and there has been a rapid spatial expansion of the city, but the water supply network has not grown and is restricted to only some pockets of the city. Though the water utilities have successfully increased

5. The governance failure on the part of the water utilities occurs due to poor decision making and their inability to address the needs of the poor due to no provision for universal access of consumers to basic services, political disenfranchisement, poor culture of governance, economic disincentives for connecting poor with water supply network.

6. Some of the factors which are hindrances for poor to get included under formal water supply networks are: tenure system, socio-cultural belief, lack of skills, availability of another sources and poverty.

the production capacity, the additionally produced capacity is utilised for industrial purposes. Thus, shortage of water supply is not the only reason for the supply of water to poor in Jakarta but it is due to governance failure. Poor are not given priority in terms of urban water supply and distribution. Although, water scarcity still exists in cities it is not the primary problem.

Land use policy and Water Supply Networks :

The urban development planners of Jakarta planned the expansion of the city in East-West directions for avoiding urban expansion into irrigated agricultural land. Despite this planning, objective, in reality the city expanded in North-South directions as well. However, the PAM Jaya's (water utility of Jakarta) water supply network is restricted in only officially planning zones. As a result most of the new urban areas of Jakarta do not have access to piped high-quality water supply.

Poor Management :

The third reason for the water governance failure in the Jakarta is the poor management of water utilities. The water utilities in Indonesia are mostly controlled by the local government authority where appointment to the senior posts are made by the political influence instead of technical requirement. Moreover, employment in the water utility is considered low in terms of respects and social status due to low salaries and low educational status. All these factors have a negative impact on the morale of the employees. Political interference in the decision making process in matters regarding setting water tariffs, creating water distributional networks and other administrative process have had an adverse impact on the efficiency and productivity of the water utilities. Moreover, there is no representative from the user groups on the Board of Supervisors which can act as counterforce to political or elite influence on the decision making process.

A discriminatory business model :

The business model adopted by PAM Jaya was discriminatory and flawed in nature which provide water services on the basis of likelihood of cost recovery. It has restricted its water supply network in area which are off-limits in terms of geographical distance, informal settlements inhabited by the poor, illiterate and mafias. In short, PAM Jaya policies cater to needs of serviceable areas where chances of cost recovery are high.

Governance Failure pertaining to the poor households :

There are several disincentives like high connection fee, transaction cost, high block tariffs, low density of water supply network, quality of water, tenure and residency networks and other bureaucratic hurdles which push poor households to rely of informal water supply or private vendors who are flexible, easily accessible, with low transaction and zero bureaucratic hurdles. Many times especially in summer, water availability becomes an issue for poor households as the water supply through formal networks is low. Thus, water supply from private vendors become the reliable sources for poor households.

Conclusion :

Water sector in urban areas is plagued with a number of problems which are the outcome of ongoing changes at international, national and regional levels due to factors like information exchange, liberal trade policies, technological advances, higher level of education, changing socio-political dynamics, environmental degradation and increasing demand for decentralization or devolution of

power to local level. Therefore, policy makers, academicians, development practitioners and public administrators must take a relook at the water sector, to get rid of poor governance practices, improve poor and dilapidated infrastructure, upgrade incompetent staff in water utilities, minimise political interference, replace outdated technology, practice information sharing, and encourage participation of locals in decision making (Tortajada and Biswas, Future Water Governance: Problems and Perspectives, 2010).

United Nations Development Programme's Sustainable Development goals- 2030 set goals for all the countries to ensure fresh drinking water and safe sanitation facilities for all the people on Earth and make all cities safe, resilient, sustainable and inclusive for all by 2030. Achievement of these goals seems to be a very difficult task, if we continue to follow same traditional approach to governance of water utilities in urban area. On the other hand, it is very much possible to achieve these goals, if the approach is changed, and one adopts the emerging innovative water governance practices which have successfully addressed the problems in this sector, as we saw in the Phnom Penh Water Supply case. Water is highly fragmented sector which demands co-operation and coordination across the sectors, institutions and groups. Besides this, water governance is context specific process because different groups in society attach social, cultural and economic values to water differently. Therefore, the best practice of water management should be customised in accordance to context. Moreover, the water policies must be coherent, responsive, economically viable, socially informed and formed through effective participation of all the involved stakeholders. The primary lessons which have emerged is to involve all the stakeholders, coordinate across various groups; to consider the cultural and social factors of the various groups and customise solutions depending on the different needs of these groups.

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