

**ANALYSIS OF INSTITUTIONAL CAPACITY FOR EFFECTIVE WATER
MANAGEMENT: A CASE STUDY OF CDA.**



By

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**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT
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This thesis has been read by me and has been found to be satisfactory regarding content, English usage, format citation, bibliography style, consistency, thus the fulfillment of qualitative requirement of the study. It is ready for submission to the department of Governance and Public Policy, Faculty of Management sciences for internal and external evaluation.

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CERTIFICATE

It is certified that the research work contained in this thesis titled: “Analysis Of Institutional Capacity For Effective Water Management: A Case Study Of CD”, has been carried out and completed by Munazza Sajid under my supervision during this Mphil in Governance and Public Policy at the department of Governance and Public Policy, Faculty of Management Sciences National University of Modern Languages Islamabad.

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DEDICATION

This work is dedicated to my parents. without their patience, understanding, support and most of all love ,the completion of this work would not have been possible.

ABSTARCT

The prudent management of water resources is essential for human and ecosystem well-being. As a result of ever escalating and competing demands, compounded by pollution and climate change-driven impacts, available freshwater resources are becoming increasingly stressed. This is further compounded by poor management practices and the unsustainable extraction of water. Consequently, many parts of the world, particularly urban areas, are facing water shortages. Therefore, water resources management requires a clear understanding of the ongoing challenges and innovative approaches. This Special Issue provides the platform for the dissemination of knowledge and best practices to strengthen the management of our precious water resources into the future. This research fills a considerable gap in the design of capacity building programs by accounting for the independent variables of capacity and commitment within socio-political context. This devised capacity building framework provides a suite of customized interventions which accord with typical implementations behavior of program partners involved in sustainable forms of water management in Islamabad. The framework illustrate a complete new way to approach institutional capacity, one which is guided by socio-political development of a city and indicative of more reflexive modes of urban water governanace. An important conclusion for policy makers and program articulates is that water programs need to incorporate these variables in their design in order to truly build the capacity of their subjects

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Chapter I

1.1 Introduction

Water is necessary for the survival of human being and from the earlier civilizations we can observe that the distribution of water and shortage of water can be seen from the very early ages. Water is also discussed by different authors in various books from the religious perspective e.g. In Hinduism different rivers Ganga, Jumna, and Indus etc are very important. Similarly in Islam water is described as a beginning of life that everything is made-up of water. According to the Indege (2014), capacity building is the cycle of system on the striking highlights of limit building. Capacity building is the way toward changing a nation\'s capacity to adequately execute strategies and projects for economical turn of events. Sustainable development.

Rapidly growing populations in many of the world's semiarid regions intensify competition for increasingly scarce freshwater resources. Growing urban demands, land-use change, and a changing climate will further exacerbate regional vulnerability to water scarcity. The intensification of these trends creates several challenges for the future planning and management of water resources. In 2017, 71% of the global population (5.3 billion people) used a safely managed drinking-water service – that is, one located on premises, available when needed, and free from contamination. 90% of the global population (6.8 billion people) used at least a basic service. A basic service is an improved drinking-water source within a round trip of 30 minutes to collect water. 785 million people lack even a basic drinking-water service, including 144 million people who are dependent on surface water. Globally, at least 2 billion people use a drinking water source contaminated with feces. Contaminated water can transmit diseases such diarrhea, cholera, dysentery, typhoid, and polio. Contaminated drinking water is estimated to cause 485 000 diarrhea deaths each year. By 2025, half of the world's population will be living in water-stressed areas. In least

developed countries, 22% of health care facilities have no water service, 21% no sanitation service, and 22% no waste management service.

Pakistan's water comes from a number of more and more stressed sources, as well as rainfall, glacial runoff, rivers and groundwater. While around sixty per cent of precipitation comes from monsoon rains, a major proportion is distributed throughout winter (December to March) weather patterns. Pakistan's water crisis isn't restricted to increasing scarcity; with poor water quality also motion a significant problem. Each surface and groundwater sources are suffering from the issue. Currently, around fifty six per cent of folks in West Pakistan have access to safe drinking water, whereas thirty per cent of diseases and forty per cent of deaths are linked to unclean water. The divide is additionally stark between rural and urban populations; up to seventy per cent of rural West Pakistan has no access to scrub water. That water is basically left untreated, motion a serious health hazard. Underdeveloped effluent treatment facilities are a key causative issue to Pakistan's poor water quality. Solely Islamabad and metropolis have biological waste treatment facilities, and that they are, at best, only partially functional. Inadequacy of water particularly the potable water has remained a major quandary towards gap new sectors in Islamabad. Yet, resolute by the water shortage, the population of the town is growing at a rate of 5.7 p.c per annum intensifying the water shortage. Present population of 1.757 million is probably going to extend to 4.443 million in 2050. In Islamabad, the most supply of water are, the reservoirs engineered at Simly and Khanpur and few tube wells, as water formation within the capital territory is shallow and scattered. Islamabad face major crunch throughout summer season and pre-monsoons, once water parceling is imposed; folks throught the criticism centers, clamor for water tankers, a briefing that CDA cannot meet adequately.

This research is about to analyze CDA's effectiveness in water management and to suggest how to improve their capacity building. This work will contribute to existing

literature in integrated management of water resources to help understand the effects of water scarcity and provide practical solutions to CDA for managing water efficiently and rapidly.

1.2 Background of the study

According to the Adhikari (2014), due to the certain reasons like increase in population, industrialization, misconduct and less corporation south Asia is slowly heading towards the deficiency of water resources. This specific area of world has the major water resources in the form of Indus, the Ganges and the Brahmaputra. Schlefier (2014) wrote that South Asian states are taking steps for the development and restoration of water resources but it is not that easy due to the certain issues and reasons, because mostly states are SAARC countries and have issues related to water. India is the main countries which have different disputes with Nepal, Pakistan and Bangladesh.

Grindle (1995) wrote that the institutional context of the public sector includes such factors as the rules and procedures set for government operations and public officials, the financial resources government has to carry out its activities, the responsibilities that government assumes for development initiatives, concurrent policies, and structures of formal and informal influence that affect how the public sector functions. This context can constrain or facilitate the accomplishment of particular tasks.

Pakistan water challenges report (2016) wrote Water security is an increasingly important issue that constitutes one of the biggest challenges to Pakistan's development. With a projected population of 263 million in the year 2050, Pakistan needs to put serious thought into how it will provide adequate water for agriculture, industry, and human consumption in the face of rapidly dwindling reserves.

Glover (2007) identified that, now water scarcity is the big issue in Pakistan and the state is not addressing that properly. The policy makers of the state are very capable in

making policies but they don't provide enough details that how these policies should be implemented with the available resources. And in national drinking policy of Pakistan it is clearly mentioned that it is a basic human right to have access to safe drinking water for every citizen and the state is responsible to ensure that every citizen have safe drinking water.

According to UN report on water insecurity (2017), Pakistan is becoming the most stressed country in the region facing water shortage issue. The country will be facing that issue by the year 2040. According to the Pakistan Council of Research in Water Resources, Pakistan may run dry by 2025 if the present conditions continue. They claim that the country touched the 'water stress line' in 1990, and crossed the 'water scarcity line' in 2005, more than a decade ago, and that in relation to the scale of the problem relatively little has been done to improve the use or supply of water.

Similarly Pakistan Council of Research in Water Resources (PCRWR) report national research agenda on water (2016) discussed the same thing that water scarcity is getting worst .by the year 2025 all the areas of Pakistan will face these issues .the report also says that the main issues of water scarcity is mainly the misuse of the water and also the evaporation issue as well as the less dams available for storage of the water.

The water issues starts from the end of the year 1990 and in 2005 scarcity level meets its limits but more than two decade ago that issue starts but any of the government don't make policies to address that issues.

According to the UN Report (2014), the water's scarcity condition is not different in Islamabad also. The well planed national capital with the population of more than one million Islamabad is facing water issue whole year. It is estimated that the population of the

city will rise by 2050 to 4.443 million but there is no policies to resolve the water issue for that long period for the residents of capital city. The resources for the capital city are very less due to the fewer reservoirs. Mostly the whole city water depends on the simly and khanpur dam with some tube wells in the city also which are not enough for the population of one million people.

The collective water production from those resources is eighty four million gallons per day (MGD).which drops to sixty two (MGD) in summer.Thatswhy the whole year the residents face the shortage of water. The scarcity of water is due to the inappropriate usage of resources by the both citizens and the authorities' aswell.The water delivery is always delayed due to the boring system, less storage of water infrastructure and less space in dams to store water resources.

Metropolitan Corporation Islamabad (2018) said at the accessibility aspect, the residents don't have any different choice than taking help from private water tankers to fulfill their needs, specifically in summer when the shortage is on its peak. Moreover, it is not easy for the citizens to afford these water tankers due to the monopoly of prices because a monthly bill of CDA water for house hold is 300 hundred but the price of a single private tanker is 700 to Rs 1000 that last only for 3 days maximum on depending by the needs and size of the family. That all cost the citizens economic burden on the monthly basis especially in summer season.

There are no recent policies related to water by CDA .the only policy CDA owns is the Ghazi Brotha Dam pipeline which is going to provide water to Islamabad but this policy is not in process due to the top management.

1.3 Problem statement

A lot of strategies have been formulated nationally and internationally to reduce the issue of water management. Metropolitan Corporation Islamabad (2017) wrote that Pakistan is a developing country and despite of rapidly infrastructure development in the Capital, still water management is neglected. Since water is used in many ways its proper management is very necessary. Due to private tube welling of underground water, the level of water is going down in Islamabad. This needs to a proper management of CDA. Moreover water which is being provided by CDA is not of satisfactory quality. So the research is investigating water resources are not properly managed due to lack of formulation of CDA`s water restoration and provision policies. According to CDA (2016) Despite from this there are some policies made by the government by there is no progress on those projects. It somehow includes the personal interests of the authority owners. Also the reasons of negligence of that issue by CDA and the future plans offering by CDA for that issue. UNDP (2017) also discussed that because there is no significant works on that issue by the authorities except from that in 2004 the CDA formed a plan to make a pipeline system from Ghazi Brotha dam to Islamabad for the water issue resolution. But there is no progress on this plan yet.

This research is investigating the issues and challenges that hinder in affective water management and the utilization of water resources properly.

1.4 Research Objectives

Main Objective:

To highlight the issues of mismanagement of water resources and effective utilization of water resources

Driving Objectives:

- To determine the capacity of CDA to supply services as assessed with the aid of their clients or provider receivers.
- To determine the relationship between the degree of administrative and political accountability experienced by CDA and the capacity of CDA to deliver water services as assessed by their clients or service receivers
- To determine the level of effect of administrative and political accountability factors on the capacity of their agencies to deliver services as assessed by their clients or service receivers
- To create the awareness about how quality of domestic water supply and effective utilization of the scarce resources can be maintained

1.5 Research Questions

In this research, I am primarily concern with the institutional capacity of providing basic services like water in urban areas. Therefore, this research is main govern by the proposition that to what extent is the institution (CDA) has capacity to manage provision of water in capital city as well as issues of mismanagement of water resources. Beside this, I have four driving research questions. These are following:-

- What is the capacity of CDA to deliver services as assessed by their clients or service receivers?
- What is the relationship between the degree of administrative and political accountability experienced by CDA and the capacity of CDA to deliver water services as assessed by their clients or service receivers?

- How do administrative and political accountability factors affect the capacity of these agencies to deliver services as assessed by their clients or service receivers?
- How quality of domestic water supply and effective utilization of the scarce resources can be maintained?

1.6 Significance of the study

The outcome of this study will create awareness about effective water management .Also it will help CDA water management department to rethink and revise the policies for management of water resources. Water is one of the major sources of life which needs a serious concern. However there are very limited studies related to water resource management. Moreover in a developing and populated country like Pakistan awareness and effectiveness of water management is need of hour.

The study will benefit the Islamabad locals by identifying issues and obstacles they are facing related to water by suggesting how to overcome them. It will also help policy makers to design more effective programs and policies aimed at ensuring proper water provision in the city. It will also give help in literature on water crisis in Pakistan and in general related to that issue.

1.7 Delimitation of the study

This study pertains to the effectiveness of CDA on water management in Islamabad. However this study does not include the effectiveness of CDA in other activities. There are many departments working under CDA but the study is confined only on the CDA's water management.

Moreover, the study area of this research is urban governance. Robert (2016) urban governance refers to how government (local, regional and national) and stakeholders decide how to plan, finance and manage urban areas. It involves a continuous process of negotiation and contestation over the allocation of social and material resources and political power.

1.8 Organization of the study

The whole research will run into five chapters. The first chapter is related to the introduction of the study which brings out the importance of the study and also includes the objectives of the study, scope of the study and delimitation. The chapter two will discuss the topic history, previous reviews on the topic by different authors globally by reviewing literature. Chapter three will be methodology of the study .Chapter four will be analysis and discussions and findings, conclusion and suggestions for further research will be presented in chapter five followed by bibliography and references.

CHAPTER 2

Literature review

The water use consists of agricultural, commercial, family, recreational and environmental activities. Most people of human makes use of require fresh water. An nearly ninety seven% of the water on the planet Is salt water and most effective three percentage is sparkling water; slightly over two thirds of this is frozen in glaciers and polar ice caps .The last unfrozen freshwater is found in particular as Groundwater, with best a small fraction gift above floor or in the air. sparkling water is a renewable aid, but the sector's supply of groundwater is step by step reducing, with depletion taking place most prominently in Asia and North the united states, even though it is still uncertain how a good deal natural renewal balances this usage, and whether ecosystems are threatened.

. Sustainable development is an important topic globally now a day. Water is life. According to the report sustainable water management-local to the global (2015), water Growing pressure on water resources from population and economic growth, climate change, pollution, and other challenges have major impacts on our social, economic, and environmental well-being. Many of our most important aquifers are being over-pumped, causing widespread declines in groundwater levels. Major rivers including the Colorado River in the western United States and the Yellow River in China no longer reach the sea in most years. UNDP (2017) wrote that The California drought is exacerbating the big and developing gap between the state's water use and the to be had water supply. Half of the sector's wetlands were misplaced to improvement. Hassan (2018) conducted a study, according to him; the world's water is more and more turning into degraded in exceptional, threatening the fitness of humans and ecosystems and growing the value of remedy. Some 780 million humans around the globe nonetheless lack access to clean water and lots perish each day for loss of it.

Hajkowicz and Collins (2007), have been reviewed 113 published water management MCA studies from 34 countries. It finds that MCA is being heavily used for water policy evaluation, strategic planning and infrastructure selection. A wide range of MCA methods were being used with the fuzzy set analysis, paired comparison and outranking methods being most common.

Hajkowicz, Collins, (2007) said that multiple standards analysis (MCA) is a framework for rating or scoring the ordinary overall performance of selection alternatives in opposition to a couple of targets. The method has sizeable and growing application in the area of water useful resource control. According to Bennett, Wade, G. A., Armstrong, M. P., (1999) the basic rationale behind the efforts to integrate MCDA into GIS is that the two distinctive areas of research can complement each other.

2.1 South Asia:

According to the Adhikari (2014), South Asia is steadily heading closer to a shortfall of water, which is being exacerbated by using growing population, industrialization, mismanagement, and lack of cooperation. This region hosts principal structures of worldwide watercourses, together with the Indus, the Ganges and the Brahmaputra. Schlefier (2014) wrote that South Asian international locations have taken projects to cooperate in development and control of water assets, however have critical troubles and disputes on this sector. Because of its relevant region in the vicinity and its sharing of borders with most SAARC nations, India is on the centre of water disputes in the region. It has water treaties and problems/disputes with Bangladesh, Nepal and Pakistan.

India and Bangladesh proportion fifty four rivers, consisting of Meghna, Brahmaputra and the Ganges. In 1996 settlement on Farakka barrage long walking dispute

between two states has completed. But some peoples are not satisfied with the conduct and arrangement of India on the river linking between two states.

The Farakka Barrage difficulty predates the advent of Bangladesh. India initially took the choice in 1951 headed for the construction of the Barrage; the actual structure paintings started in 1961; and ended in 1971. The twenty five mile lengthy feeder inland waterway become concluded in timely 1975 and begins working as of April of the same year. The reason of the building of this dam is to "make sure to Hoogli River will get hold of, however the low flow of the Ganges as possible, as much as 40, cusecs of water sidetracked as of the Ganga". Considering the decision of India's to build Farakka Barrage, absolute Pakistan powerfully against the mission and try hard to get it to prevent. India, via the manner, seeking to ignore Pakistan's objection claiming that the Ganges become no longer an worldwide river.

It should moreover be renowned factor that Pakistan and India, at this factor in point, negotiating the treaty of Indus Water, which got official confirmed in September 1960. but, India denied to switch its function or to rethink about the production of Farakka Barrage. Following its construction in 1971, Bangladesh, too, maintain to elevate the Farakka Barrage issue with India. at some stage in the primary visit to India through top Minister of Bangladesh in February 1971, it was also mentioned, and the Joint verbal exchange issued on February 8, additionally stated it.

it ought to be noted right here that the 2 countries, on this Treaty, agreed to taking joint measures for the development and utilization of water sources. Farakka Barrage may want to create serious issues for Bangladesh. at some stage in the incline time of year, from the first month to fifth of each year, the Ganges glide used to shift as beneath 50 to 55 thousand cusecs. All through this era redirects forty thousand cusecs of feeder channels might

be devastating for Bangladesh, as well as will consequence a severe lack of water. Bangladesh claims that "here is not always sufficient waft inside the Ganges that can be routed thru the Bhagirathi-Hoogli to wash out the Calcutta port and on the similar time maintaining cultivation, natural balance and economic system of the downstream area, specially the Bangladesh's southern area". at some stage in the hello-day of the Indo-Bangladesh friendship, that in 1972-1973, the 2 international locations creates and Bangladesh Joint River fee attempted to get some movement to restriction the break. Progressively, Bangladesh came to know that Farakka Barrage is a fake accomplishment, and isn't possible to cancel it. As a end result, the 2 international locations signed a temporary biased contract in 1975, in which they decided on a system to share water. short-term association as agreed once more in 1982 and 1977. The 2 states also concluded another MoU on the Teesta River in 1985. finally, the 2 states concluded Farakka Barrage Treaty in 1996, with a view to continue to be in effect for 30 years. This agreement has been a long time to clear up the trouble among the 2 international locations. but, there are nonetheless worries about the minimal float assurance for Bangladesh. through this settlement, the 2 international locations soften their previous variations lying on the methods for the expansion of the drift of the Ganges within the desiccated time of year, that is the opinion, Bangladesh "s for the building of garage waterbed upstream of the Ganges River in India and Nepal, and India 's concept for the expansion of canals linking the Brahmaputra with the Ganges. as a outcome, Bangladesh tacitly be given that the building of garage reservoirs within the higher reaches of the Ganges cannot be achievable. India, on its part, to surrender the call for for the growth of the rivers within the vicinity (mainly the Brahmaputra) for use bilaterally. Indian River Linking undertaking complex trouble another among Bangladesh and India is India 's river mission-essential connecting. India has introduced a mission to do the river-linking, to be able to redirect water as of the "neighborhood water excess" to "local water scarcity." The

predominant river basins in the Ganga location, consisting of the Ganga and the basin of Brahmaputra, has been diagnosed as a mild excess and surplus regions, respectively, even as the south and west had been recognized as areas of water deficit. On this undertaking, India intends to divert massive volumes of water from the Ganga region of its (ie of GangaBrahmaputra basin) to the west and south-west. Bangladesh former taken significantly, and feature voiced severe concerns on Indian's area. Bangladesh one-time felt that the response of India continues to be "discouraging to start a communicate to bear fruit on the trouble" and it is predicted that the alternate of presidency in India NDA to the UPA will assist you overview your plan. but, the UPA authorities dipimp in Manmohan Singh not most effective decided to exit beside with the mission except additionally showed beginning on 2014.

India and Nepal

The water resources of Nepal are abundant, with a capacity of 237 billion cubic meters of common annual inner renewable water assets. It also very high potential for hydroelectric energy era, with the ability of eighty three MW electricity. additional than partly technical and monetary ability. ironically, best slightly more than one percentage of the electric capability has thus far been produced in Nepal; and most effective slightly more than 40 percentage of the human beings of Nepal have get right of entry to to power. in addition, Nepal agricultural hub within the southern a part of the united states of america in need of irrigation centers. but, to not have of knowledge, economic capability and technological information, Nepal has to date now not be capable to expand as well as utilize water assets are adequate. alternatively, parts of northeast India desperately desires a huge amount of power; and the fertile Ganges plains, in particular Uttar Pradesh and Bihar, in desperate want of water for irrigation. The rivers flowing from Nepal is the simplest feasible alternative to

irrigate the land. against this sort of historical past, there may be actual capacity and the opportunity to make use of and develop water assets for both Nepal and India. the both international locations have now not concept approximately or act on the development of water resources of Nepal.

Ulema in India also agree that a preceding settlement unequal. SD Muni, one analyst Nepal, stated "there's a few truth inside the allegations of the use of one hand and exploitative of Nepal 's water resources by using Ind he is in what is referred to as a project of mutual gain among the 2 international locations together with Koshi and Gandak mission. it is commonly stated that those projects provide a greater gain to India from Nepal and therefore might include improved designed to make certain an enough benefit to the Nepalese aspect. " further, any other professional, Mr. Ramaswamy R. Iyer, says, "All i will say is that in cooperation India inclination for errors and Nepal affinity to misconceive it appears very sturdy . India has an inclination to make mistakes time and again, and Nepal will be inclined to misinterpret the whole lot India something to do or say, positioned the worst feasible production on Indian actions and statements, and assume an energetic malice to India. From the start of trade of Letters in 1920, Nepal-India water agreement seems to disregard global law, exercise and also a experience of equality and justice prevail. Going thru the Nepal and India preceding water agreements, a person can feels that they're not an settlement between two independent countries on an same center. Despite the fact that Nepal is the top riparian countries, the agreement appears to provide the message that India is able to provide and Nepal on the receiving give up. the subsequent is a concise description of the primary water treaty among India and Nepal.

Pakistan and India

Pakistan and India have a serious argument on the Indus River. Though, they decide the argument by closing the Indus Water contract on September 19, 1960, in the coloration and the arbitration of the arena bank. The settlement has survived predominant wars among both states, and had been a success in issues of water regulation among the 2 international locations. The Indus River emerges close to Mansarovar in Tibet, and about two thousand miles lengthy. Indus river gadget includes 3 major tributaries within the West: Kabul, Swat and Kurram; and 5 important tributaries within the East: Jhelum, Chenab, the Sutlej, Beas and Ravi. Indus River basin region of four hundred fifty thousand square cover miles. Dispute Indus river system started lengthy earlier than the Pakistan's independence. Indus is getting used for watering in view that ancient period.

In 1919, a settlement on using the waters changed into signed between Bahawalpur, Bikaner and Punjab. on the other hand, dispute the river machine, which usually seems as differences between countries between Punjab, Sindh, Bahawalpur and Bikaner, changed into global argument, mainly among the India and the Pakistan. for the reason that both countries do no longer restrict the time has been restricted, the UK Parliaments Act does now not cope with the distribution of water among both states. The financial institution also acts as Administrator of the Indus Basin improvement Fund. the hole of the Indus Water Treaty says that each Governments are equally desirous of accomplishing the usage of the most whole and pleasant than the water gadget of the Indus river ", and identified the need to" enhance and restrictions, in a spirit of goodwill and friendship, the rights and duties of each in terms of the greater approximately water use and make provision for the agreement, in a cooperative spirit, of all the questions which can in the end get up. in line with the Indus Water Treaty, all waters of the eastern Rivers, i.e. the Sutlej, Beas and Ravi, have to be available for unrestricted use of India. Pakistan agreed to no longer permit disruption in

eastern waters Rivers, besides for household and no consumptive. further, all of the waters of the West, that is. Indus, Jhelum and Chenab, must be to be had for unrestricted use of Pakistan; and India will not interfere with their waters, except for family and non-consumptive. but, similarly to home use and non-consumptive, each country is authorized to use water from rivers allotted to another celebration for farming and hydroelectric generation. underneath the agreement, Pakistan and India additionally decided to collaborate inside the production work effort and to substitute of records and different applicable records. additionally they settled to a complete argument agreement method, in which the differences may be resolved by using the Indus Water fee, which consists of commissioners from every party.

Grindle (1995) wrote that the institutional context of the general public area consists of such factors because the policies and techniques set for authorities operations and public officers, the economic sources government has to perform its activities, the obligations that authorities assumes for improvement projects, concurrent regulations, and structures of formal and casual impact that affect how the public region capabilities. This context can constrain or facilitate the accomplishment of particular duties.

2.2 Pakistan:

Pakistan water challenges report(2016) wrote Water security is an increasingly more crucial problem that constitutes considered one of the largest demanding situations to Pakistan's improvement. With a projected populace of 263 million within the 12 months 2050, Pakistan wishes to place extreme notion into how it'll offer good enough water for agriculture, enterprise, and human consumption inside the face of rapidly dwindling reserves.

Glover (2007) identified that presently water scarcity is the most important problem in Pakistan and the authorities are not paying extreme concentration on this issue.

The policy makers of the state are very capable in making policies but they don't provide enough details that how those policies should be implemented with the available resources. And in national drinking policy of Pakistan it is clearly mentioned that it is a basic human right to have access to safe drinking water for every citizen and the state is responsible to ensure that every citizen have safe drinking water.

Consistent with UN record on water insecurity (2017), Pakistan is becoming the most pressured country within the vicinity facing water shortage issue. The united states of america may be dealing with that trouble by way of the 12 months 2040. consistent with the Pakistan Council of studies in Water resources, Pakistan may additionally run dry via 2025 if the existing situations retain. They claim that the usa touched the 'water strain line' in 1990, and crossed the 'water scarcity line' in 2005, greater than a decade ago, and that during relation to the scale of the hassle relatively little has been achieved to improve the use or supply of water.

Similarly Pakistan Council of Research in Water Resources (PCRWR) report national research agenda on water (2016)discussed the same thing that water scarcity is getting worst .by the year 2025 all the areas of Pakistan will face these issues .the report also says that the main issues of water scarcity is mainly the misuse of the water and also the evaporation issue as well as the less dams available for storage of the water.

The water issues starts from the end of the year 1990 and in 2005 scarcity level meets its limits but more than two decade ago that issue starts but any of the government don't make policies to address that issue.

As mentioned by the United nations, UN global Water development document ', the real full growth sustainable water sources of two,961 cubic meters in line with capita in 2000.

History and recent developments

From the prior decade of the cutting-edge records of Pakistan, in the largest cities and their city improvement Authority Water and Sanitation Authority (WASAs) is accountable for the delivery and cleanliness of water. In villages as well as in towns water deliver centers build and work by way of local governments via their the public health Engineering branch (PHEDs). This becomes to begin with achieved without the participation of local governments and groups in administrative. However, in 1992 the capital authorities released the Social motion map, which emphasizes consumer contribution, fitness merchandising and the technology's use in water provision and sanitation. A transfer obligation then take location within the area in the 2001 nearby authorities Ordinance (LGO) .three tiers of neighborhood had been created under LGO:

- 120 District
- 500 Tehsils
- Approximately 5,000 local governing body set up by the Union Council of Pakistan

accountability for water deliver and sanitation technically passed over to drag the Municipal administration), the lowest form of government in Pakistan are these (TMAS) and the PHED should be combined with the branch of regional authorities and these workforce should be delegated to the level of TMA. But, decentralization has no longer been carried out throughout the province. [38] In 2008, it become mentioned that PHEDs still active within the creation of water supply, operation and renovation, especially in regions where the scheme in a couple of Tehsil. In such cases, PHEDs normally broaden supply-pushed scheme with little or no participation TMAS. Further, ongoing devolution are extraordinary from one another over the province. In step with a record of 2003, PHED stay absolutely practical in

the province of Balochistan and in Punjab province, and local authorities powers meresentralisasi.

National Sanitation Policy 2006

The national Sanitation policy (NSP), accepted by means of the federal authorities in 2006, promotes the idea of grassroots community-based general sanitation (CLTS) in communities with less than 1,000 population. In larger communities, NSP promotes "element sharing version", in which sewage and wastewater treatment facilities are provided via the general public within the case of the disposal of the neighborhood government advanced isn't accessible. The motive is the harmless clearance of the feces. For cities/tehsils, 100% sanitation coverage in tehsil/towns, cleanest towns and tehsils, commercial regions and groups, the central government should provide encouragements for the execution of these policies in the form of funds and appreciations.

National Drinking Water Policy 2009

In 2009's September the authorities accepted the state Water drinking coverage which objectives to offer secure ingesting water to the whole population of Pakistan in 2025, along with the negative and prone, at an low-priced cost. An ultimate goal is a clearer separation between provider regulation and provision features. The proper to water for consuming precedence over all other makes use of, together with commercial or farming water utilize. ladies are known as a first-rate actor of domestic water components, and their active participation within the region sought. according with the LGO, the document highlights the duty of nearby governments to provide consuming water. The coverage is expected to be reviewed and updated every 5 years to take a look at the execution and effectiveness and to adjust to the converting scenario inside the use of a.

Clean Drinking Water for All Program

Easy consumption Water for All program / smooth Water scheme ambitions to enhance the fine of drinking water through constructing water remedy centers.

The USA\$ 8.2 million smooth Water plan, which turned into permitted in 2004, affords for the building of a water sanitization plant 445 to two,000 gallons according to hourly basis in Pakistan's all tehsils. The organization of surroundings for to "give practical help to provinces by using putting in numerous plant life in locations selected by using turnkey and then put up it to the neighborhood municipalities." The vegetation will be established in "municipal locations", which collectively among the restricted potential of the plant propose that pure water will no longer be used to supply the network, however as a substitute for the distribution of bottled water. a lot large US \$ 168 million ingesting Water for All program objectives on providing a purification plant for every Pakistan Union Council. Plant is predicted to be maintained over the next 3-12 months settlement. it's far envisioned that the refinery will serve 2-20% of the population of each Council, which on common has 20,000 population. in this program, the status quo of 6,0.5 purification plant with a potential of 500, 1,000 and two thousand gallons per sixty minutes is deliberate .the USAID signed a contract in January 2009 with the department of unique initiative for to give assistance to the system keeping in mind that people in forty countries will gain from it which are approximately 31 million Pakistanis with the amount of \$17.9 million. To put refinery in Punjab German business gained a contract beneath that program KSB and Siemens.

This system generated criticism whilst it changed into revealed that insufficient development can pressure to stop all plans. In addition, there have been proclamation of warfare of hobby by means of positive folks who, no matter occupying the very best government offices, has fashioned a private enterprise gained a contract for the installation of recognition this

authorities. Taking, Punjab authorities has expressed critical objections to the mission and has even been counseled that it be stopped till right making plans and siting of the plant can take region.

Some of progressive cleaning ways had been examined in Pakistan. This includes infrastructure sanitation participatory projects - consisting of the Orangi Pilot undertaking inside city jhuggee inside the Eighties and Lodhran Pilot challenge in countryside regions when you consider that 1999 - in addition to the collective.

Since 2003 implementation of Total Sanitation (CLTS) projects.

Orangi Pilot Project

A less-earnings unofficial arrangement Orangi is which is placed in Karachi and the region of the achievement stories of consumer participation. The Orangi Pilot task (OPP) becomes started by way of a Nongovernmental organization underneath Dr. Akhtar Hameed Khan in 1980 with a purpose to recover deprived sanitary situation via price sanitation application with energetic consumer contribution. a primary characteristic of the challenge is part-sharing model. first thing is the obligation of the network, who acquire technological support. Society to expand and construct main family sanitary latrines, sewer and community sewer collector. they're connected to the primary sewer and remedy plant, which forms the second one factor and build with public funds. OPP could be extremely a success and regarding one hundred,000 families have evolved their own hygiene gadget in Orangi. The task became simulated with the aid of CBOs and NGOs in different cities in Pakistan. Issue distribution version driven underneath the 2006 country wide Sanitation coverage.

Lodhran Pilot Project

Stimulated through using the OPP, the direct challenge seemed in Lodhran district in 1999. This undertaking follows the short value version of network-owned countryside hygiene is base taking place a inclusive method. Lodhran Pilot project (LPP) In 2004, obtained a provider of us \$ 1.1 million Japan Fund managed through the world bank Social improvement (JSDF) to amplify the version in Southern Punjab's hundred villages. Below the supply, TMAS get hold of practical help regarding community personal partnerships, education and ability construction and conversation.

Community-based total sanitation (CLTS)

the idea of network-led overall sanitation (CLTS) become initially presented as a pilot project in 2003 in Khyber pakhtoon khawa Province in Mardan district with the aid of UNICEF together with NGOs, nearby IRSP (incorporated regional help software) In Pakistan. a chief intention of this concept is to build a loose villages unlock excretion thru behavioral alternate within the entire society, no longer to construct facilities for family sanitation. in view that then, CLTS has increase unexpectedly throughout the country and become a major characteristic of the countrywide hygiene coverage, which affords a financial reward for the end result set. development companies started to attach their investment and incentives for smoking fame The Open defecation. for exemplar, Khushal Pakistan Fund has allotted about US \$ 2 hundred million for public infrastructure initiatives in a loose society defecation.

Similarly, some companies consisting of Plan Pakistan and Water aid have included CLTS within the strategy and their initiatives. CLTS challenge is active in 4 areas of Pakistan in 2007. NGOs implement CLTS in about 20 districts in 2008. at the same time, extra than a hundred thirty excretion open villages by now exists in Pakistan.

Fee CLTS pilot in 9 villages display that unlock defecation closed, but human beings old ungraded latrines and hygienic made a huge attempt to improve or update broken latrines.

Efficiency utilities

Here may be modest trustworthy quantitative data to be had at the overall performance of Pakistan's water and drain utilities, together with taking place the performance of them. The Asian development financial institution (ADB) to prepare a statement consists of information intended for the towns of, Karachi Rawalpindi and Lahore. Moreover, facts as of 6 essential cities had been suggested all through the workshop in 2005 in Karachi. Starting during 2005, the first organized act for water and drain utilities standard in Pakistan started with the aid of the Sanitation program of Water and the world bank as a part of a local task turned into also mentioned India and Bangladesh. eight participating utilities, which includes 5 WASAs in Punjab in addition to the application of Islamabad ,Peshawar and Karachi. mission guideline originate that the facts is not sufficiently trustworthy and guidelines are "mainly on the exterior driven from inspired inside" and so as to governmental tradition application is "often measured to recognize act dimension, responsibility to clients and to the administration, and the end result of higher provider."

Common indicator

Non-profit water

the distribute of non-profit water (NPW), water created but no longer payable for numerous motives together with leakage and unlawful associations, varies among in Multan approximately 25% and in Gujranwala an probable 75%. It's far hard to appropriately degree NRW, since patron rare metering. Intended for instance, in Punjab best three percent of the relations of the 5 biggest ignitions comprise working parameters and are being study.

because proven in chart three, administrators of main towns of Pakistan mentioned NRW share during the workshop in 2005, starting as of forty to fifty percent.

There are not settlements on the suitable stage of professionals NRW. But, country and Tynan suggest high-quality exercise objectives of 23% in developing nations.

Labor productivity

No figures are up to date and suitable for labor productiveness, calculated in staff in keeping with thousand associations. on the other hand, the department of power and Water to underperform in the main cities within the USA. ADB determined an average of 5.6 personnel in keeping with thousand associations in Karachi. In Rawalpindi and Lahore, manual labor productiveness recommended a decrease increase of nine.five and 12.7 employees in keeping with thousand connections, respectively. At a workshop in 2005, among 6 and 27 personnel in line with thousand connections in fundamental cities stated (see desk three). Tynan and kingdom recommend first-class practice objectives of 5 personnel in step with thousand connections in developing international locations. but it should be stated that the same for NRW, the goal is a proposal from the author, which isn't always set as a aim the official satisfactory practices amongst professionals.

A 2010 record via the Water and Sanitation application notes that "employment coverage manager PNS restriction the application of using the personnel they want, they cannot supply them proper incentives, and on-the-process guidance seems to be restricted by using the majority money owed."

Financial aspect

Rates and recovery costs

for the reason that of the small costs, deprived series effectiveness and extra staff, a lot of city utility does now not cover the fees for operation and renovation. in line with an worldwide survey carried out in 2012, water costs in Karachi changed into a number of the 20 lowest water prices within the international with pattern of three hundred and ten cities. Consistent with this study, housing water costs in Karachi is US \$ 0.09 consistent with m3 to fifteen m3 per month intake. charges had been raised by way of 67% September 2011, to pay the strength tariff increase stimulating with the software of water . This makes to the 3rd-maximum growth in water rates in the international in 2011. As mentioned by the board of sewerage and water Karachi, after the raise in uncounted consumption water fees it was one hundred and eleven rupees (approximately US \$ 1.17) for a a hundred square backyard, in step with america \$ 0, 08 in step with m3. For larger residing flat rates are a good deal higher. The metered fare, however, is seventy one rupees in step with 1,000 gallons, similar to approximately US \$ 0.sixteen in step with m3.

in many towns and towns, in particular smaller ones, town water deliver subsidy for tariff revenue isn't always enough to cowl the value. country wide consuming Water coverage 2009 did not point out the fee of recovery, whilst the draft coverage calls for multiplied fee restoration. Rawalpindi newly appointed dealing with Director in 2006 regularized illegal relations, accumulated amount outstanding and thus growth 53-86 percentage value healing. these utilities are now capable of give all the salaries and force bills from their personal income.

Investment and financing

The area is surprisingly dependent on the inner and outside funding. Water and electricity ministry said in 2002 that during current existence, forty nine percent of the entire latest investment in the water area has been funded by peripheral grants and 43% via the

authorities. MTRF admit so as to through zero.25% of the overall GDP, Pakistani investment inside the water area and insufficient sanitation and offer US \$ 2 billion (one hundred twenty billion rupees) or US million \$ 404 in step with time for the arena from 2005 to 2010 , 1/2 from that must be compensated by method of the governments of provinces and federal, as well as the production and analysis of the delivery of water projects in city and countryside regions and the used water treatment plant within the regional capital. The opposite partially is predictable to be delivered by using the personal area and consisting of water delivery structures, drain water and used water remedy while measurement of a brand latest accommodation societies in cities .

External cooperation

The management received a large sufficient outside help to get better water sanitation and supply via a loan as of the Asian improvement financial institution (ADB) and the world bank, in addition to presents from us and the Japan. In accumulation, NGOs without delay give support.

Asian Development Bank

Development funding program (considering the fact that 2009) Punjab towns. In 2009July the Asian improvement bank (ADB) authorized a mortgage for an unidentified quantity of assist "investment software Punjab city development" aimed toward "development of urban surroundings and public health for approximately 6 million humans in a few eleven towns medium large than Punjab province ".

Sindh cities development investment application (considering the fact that 2008). In 2008 December, ADB permitted a credit of \$ three hundred million for the Sindh cities development asset application, which pursuits to enhance the water supply, waste water and

waste control transportation in extra than 20 secondary towns in Sindh province, with over 60 hundred thousand population. Loan, within the figure of multi financing facility (MFF), also will help city sector reforms - including the established order of nearby authorities-owned urban offerings - and capacity constructing. the primary segment of the thirty eight million dollars from 2009 to 2012 goals the lower Sindh towns of Larkana , Khairpur, New Sukkur, Shikarpur Rohri and Sukkur.

Water deliver and hygiene of Punjab community quarter undertaking from 2003 to 2007. ADB is too financing the Sanitation of water in Punjab and supply quarter mission Society with 50 million USA dollars, that is lively within areas of rural Punjab in every districts of the Punjab region from 2003 in anticipation of the quit of 2007. With the end result, about two. Five million other human beings in seven hundred and seventy eight villages had been given by water deliver and facilities of hygiene, according to the ADB "at complete price recuperation". Network-primarily based companies to keep and perform the scheme and price the customers. Tehsil municipal administration reinforced and received training. similarly, people receive guidance in cleanliness practices and health and the development of latrines. The scheme additionally installed a courting among the beneficiaries and microfinance establishments, which has disbursed about US \$ four million to approximately 15,000 debtors in 617 communities.

Japan

(Due to the fact 2010) water provision in Islamabad. JICA approves four billion yen for getting better the water provision in KPK- Abbottabad through floor water improvement provision to metropolis which has to this point relied solely on floor water in year 2010. This challenge does no longer have a sanitation issue. In 2008 and 2010, has accredited grants in the quantity of five. Amount of 19 billion yen provided for the water delivery in Faisalabad in

Punjab. Much like the venture in Abbotabad city, direct to develop a bulk water deliver, on this discipline is also placed near the Canal, Jhang department Canal. The plan made on a preceding undertaking to enhance the water supply network within the city.

For Lahore Sanitation, JICA has provided a grant in the quantity of two forty four billion yen to improve sanitation and drainage in Lahore underneath the 2 projects.

In 1994, the Japan financial institution for international Cooperation (JBIC) authorized a mortgage of thirteen hundred billion yen for Water improvement venture in Karachi. JICA also supported plan for water deliver and delivery of sewerage services in Karachi, completing very last draft of 2008.

Water in Islamabad and Rawalpindi (1989-2000): In 1989, JBIC has authorized two loans to help the Metropolitan Water venture two bulk control of water from Khanpur Dam and Simly Dam for an amount of 18.268 billion Yen. Khanpur assignment, was completed among 1994 and 2000, which aims was to enhance the delivery of raw water to twin cities from Khanpur Dam. Ex-put up assessment of the assignment in 2002 considered that "the effect of the venture is not necessarily high". The magnitude of water supplied was 41% of what changed into deliberate, and there have been "problems with the executive agency (Capital development Authority) as scarcity, weak institutions, and shortage of lively efforts." A survey of Japan in 2008, concluded that at the state of affairs and discovered that "there's no definite improvements have been made". The total sum spent US \$ 109 million (12 442 million yen) among other things, water sanitization plant with a capacity of 281 000 m³ in line per day, water centers and water storage facilities were built.

United States of America

USAID approved a letter of perceptiveness with "The Ministry of unique Initiative" In January 2009, in the support of safe Water for drinking for All software with the amount of 18 million USA dollars, anticipates so as to greater than thirty one million Pakistanis in forty counties will take advantage commencing it.

The World Bank

Local government of Punjab offerings development task from 2006 to 2012. The arena financial institution gives the amount of fifty million USA dollars mortgage headed for the enhancement of community offerings in Punjab. This challenge is executed by means of the government of Punjab province, by means of about 1/2 of the resources could be sanitation and supply of water.

The arena financial institution accepted some other US \$ one hundred fifty million mortgage for towns in province Punjab, yet again by a sizeable portion committed to sanitation and supply of water in year 2012.

Karachi Water beneath the 2nd plan, financial institution of the world gives the aid of ninety two million to improve sanitation and water supply insurance in the city of Karachi and headed for enhance the operations, organization and economic feasibility of the Water and Sewerage Board Karachi (KWSB). The undertaking commenced in 1993 and to deliver water from the Indus River to supply to construct a pumping stations, canal and water waste water management centers. In less resources regions, tiny sewers bore have been selected constructed. KWSB equipped performance is probable to growth during the practical help by using the arena reservoir and the growth in the cost reduction measures, including discount of water wastage.

The arena financial institution gives 137 million dollars for countryside Water Sanitation and supply task that used to be energetic from the year 1991 to year 2000 inside the country of Pakistan's personal government of Azad Jammu and Kashmir. The main goal of this project is to enhance the productiveness and rural health and decrease poverty and deprivation. Additives of the task encompass the creation and analysis of water deliver and institutional strengthening and schooling sanitation schemes, latrine creation substances observed by way of schooling and advertising of fitness, water sanitation and resources observe and guide the non-public region.

Non-governmental organizations

International NGOs additionally help for the growth to ingest water delivery and purification in Pakistan. For instance, Water support from the United Kingdom have installation a rain water series mission within the area of Thar wasteland plus inspired management within the metropolis of Gujranwala in province of Punjab for provision of pure water for 2,500 humans in slums, moreover it enables for containing health training in colleges.

Islamabad's Perspective:

According to the UN record (2014), the state of affairs of water scarcity isn't any particular even in Islamabad. The federal capital and the simplest planned city with a population of extra than million. Islamabad has long been dealing with a task of water scarcity every twelve months. The metropolis's populace is predicted to increase to four.443 million thru 2050 however but no lengthy-term plan for the delivery of water to its residents is seen. As the water table in the federal territory is scattered and shallow, the town's vital assets of water are water bodies constructed at Simly and Khanpur dams and some tube wells.

A monthly cumulative water production from those assets is 80 4 million gallons consistent with day (MGD), which drops proper down to 62MGD in summer time earlier than pre-

monsoon. common call for is 176MGD, on the same time as water scarcity of 106MGD confronts most of the time of the 12 months. Availability of water is particularly hindered month-to-month because of excessive pumping of groundwater, inadequate water infrastructure and horrible storage capacity due month monthly sedimentation of dams.

Metropolitan Politian organization Islamabad (2018) said on the accessibility element, the citizens have no exclusive choice than calling for water tankers to meet their dreams, particularly inside the summer time while the dearth is at its peak. moreover, affordability of these water tankers is another venture month-to-month because of monopoly of pricing via personal water tanker associations. as an instance, the Capital development Authority (CDA) charges a bill of Rs300 for a mean family. then again, one water tank fees Rs700-Rs1,000 that lasts for 2-3 days depending at the needs and length of a own family. consequently, residents go through an additional financial pressure on their costs because of an inadequate water deliver

There are no recent guidelines associated with water by way of CDA .the handiest coverage CDA owns is the Ghazi Brotha Dam pipeline which is going to provide water to Islamabad however this policy isn't always in method due to the top management.

2.3 Introduction of the case: CDA

CDA Capital development Authority is a public advantage business enterprise chargeable for offering municipal services in Islamabad Capital Territory (CDA,2018). The CDA was set up on 14 June 1960 by means of govt order entitled Pakistan Capital regulation. As of 2016, maximum of CDA's municipal offerings and departments have been transferred to the newly created Islamabad Metropolitan business enterprise, although CDA is still in charge of estate management, challenge execution and quarter developments.Yahya Khan changed into particular its first Chairman, while he changed into a Lieutenant general. The basic duties and

services of CDA are Act as Regulatory Authority , preservation and work as a Developer and Planner.

In step with Metropolitan business enterprise of Islamabad (2018) The water distribution system is under CDA however the paintings of provision of water is doing by the Metropolitan organization of Islamabad. Basically CDA don't give them the authority however the water management is below Metropolitan Company of Islamabad. Metropolitan agency Islamabad (MCI) is the municipal authority that governs Islamabad Capital Territory in Pakistan. The company is headed via the mayor of Islamabad, and its government branch consists of 77 elected nearby government participants; comprising 50 union council chairmen and 27 reserved seat holders. The IMC currently has eleven,000 employees and turned into created due to the bifurcation of Capital improvement Authority (CDA), with most people of municipal services shifting to the brand new body. IMC's responsibilities consist of city planning, avenue preservation, surroundings manage, constructing manipulates, water deliver, sanitation, and different services. MCI has been established underneath ICT local authorities Act (2015). MCI is headed by Mayor and contains of Chairman and others.

According to CDA (2018) CDA have six goals which are:

- **To establish and maintain a safe, healthy learning environment,**
- **To advance physical and intellectual competence,**
- **To support social and emotional development and to provide positive guidance,**
- **To establish positive and productive relationships with families,**
- **To ensure a well-run, purposeful program responsive to participant needs,**
- **To maintain a commitment to professionalism.**

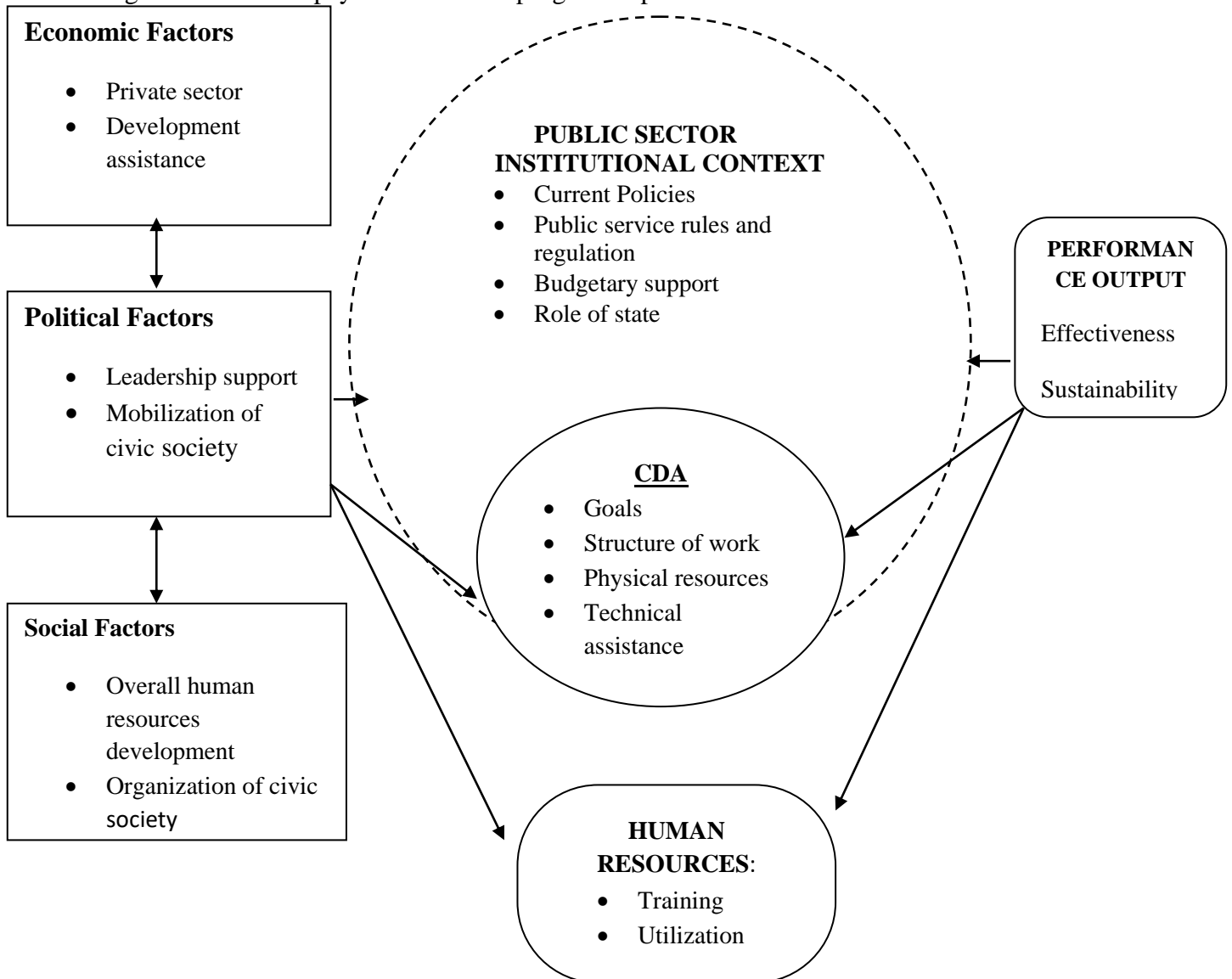
Rules and regulations:

Consistent with the CDA by using laws(2011),There are some regulations and rules which are addressing the department of CDA water control .these certain policies are the Islamabad legal guidelines,ICT zoning regulations 2005,Islamabad residential area 1993, ICT Municipal via legal guidelines 1968,SOP for management for sanitation services in Islamabad 2008,ICT zoning rules 1992,Islamabad fire prevention and existence protection guidelines 2010,employees law 1992 and cabinet division notification regarding belongings tax and water prices.

CHAPTER 3

3.1 Conceptual Framework

The conceptual framework of that study is adopted from a model by Grindle and Hilderbrand (1995), capability building is to enhance public region performances is therefore an crucial attention of development initiative. powerful public region performance is greater often driven via robust organizational cultures, suitable management practices ,and effective communication community than it's miles by means of guidelines and regulations. the idea underlying many potential building tasks can also attention on interventions that don't generate the best payoff in terms of progressed performance.



3.2 Issues and challenges:

3.2.1 Social Factors:

According to Khalid(2018),the dearth of water infrastructure is obtrusive. In a rustic in which the “environment isn't a part of the political time table”, there are “almost no treatment plant life”, warns Imran Khalid, a researcher on the Sustainable improvement policy Institute.

“Those who can have enough money it purchase bottles of water, but what about people who cannot?” he says.

Ahmed (2017) said that Pakistan has been blessed through nature with sufficient surface and groundwater resources. Industrialization, urbanization, and rapid population increase have located huge stress on water assets. Water has a critical position in our life strategies together with growth and development. It performs tremendous function in our every discipline of life. because of technological tendencies, consuming water may incorporate diverse impurities, which might be of physical, biological, and chemical nature. The maximum dangerous impurity is of biological nature, which causes human health troubles or purpose death.

According to Rabia (2015), twin cities are facing water problems due to the environmental modifications that are going on now an afternoon due to the lack of water in both towns water table and less rain fall.

3.2.2 Economical Factors:

There are not many studies to be had within the literature concerning monetary challenges of water scarcity but few humans have highlighted that issue.

in line with the SDO of metropolitan water control branch Islamabad there's fewer budgets associated with the supply of water. The authorities don't have enough assets to meet that trouble.

Similarly in keeping with Hussain (2016), Human development file 2006, developing countries should spend 1 per cent in their GDP on water and sanitation at the same time as in Pakistan this ratio is handiest 0.1 according to cent (in 2014)

3.2.3 Political Factors:

According to the Niaz (2018), there are many political factors involved in already made regulations. The primary is within the modern-day programs which are not being fulfilled through the MCI (Metropolitan employer of Islamabad) from which the Ghazi Brotha pipeline is the maximum vital project that is neglecting with the aid of the government. the second trouble is that the authorities has lack of interest within the contemporary rules.

Yasir (2015), whilst water is essential for lifestyles, and livelihood in agriculture and enterprise, the authorities is neglecting water quarter and allocating large budgetary sources to roads and highways including initiatives like metro buses. there is a need to set the priorities proper as a way to shop the us of a from floods and droughts in future.

The outcomes of the study confirmed that each non climatic and climatic factors have an effect on water device making it especially inclined. while any water aid is already pressurized through a number of of factors, then any small trade like water withdrawal, waste discharge or the climate exchange can have an effect on the resource system. Vulnerability acts as a barrier to sustainable improvement. therefore, the regionalization of the assessment to rationally utilize and expand water resources and making plans for the amelioration of the vulnerability reputes is of practical importance.

3.3 . Methodology:

This chapter is about the research paradigms which are selected for the research. This chapter includes the methodology for the research with the research design and also discussed the research questions and the outcomes of the study. The chapter also include the methodology adopted and data analysis techniques administered for this study.

3.4 . Research design:

Research design is the course of an entire research process in a systematic way (Creswell,2014).

3.5 . Qualitative Approach:

The first purpose of the study is to seek the challenges and issues people of Islamabad are facing in water provision. Moreover the study also explores the issues and challenges CDA is facing in the water provision. To answer these question, qualitative approach is suitable for these issues. According to Yin (2013) a qualitative approach is suitable for qualitative problems.

3.5.1. Data collection:

This study has chosen CDA to seek answers for the research questions raised in chapter one. The tools selected for data collection were developed after in profundity review of literature on CDA water management.

3.5.2. Qualitative Approach Sampling Techniques:

In term of the study's sampling technique will be based on willed technique of sampling because the random sampling technique is not appropriate for that study. The researcher drew the sample from the selected population based on her own judgment.

3.5.3. Collection of Primary data:

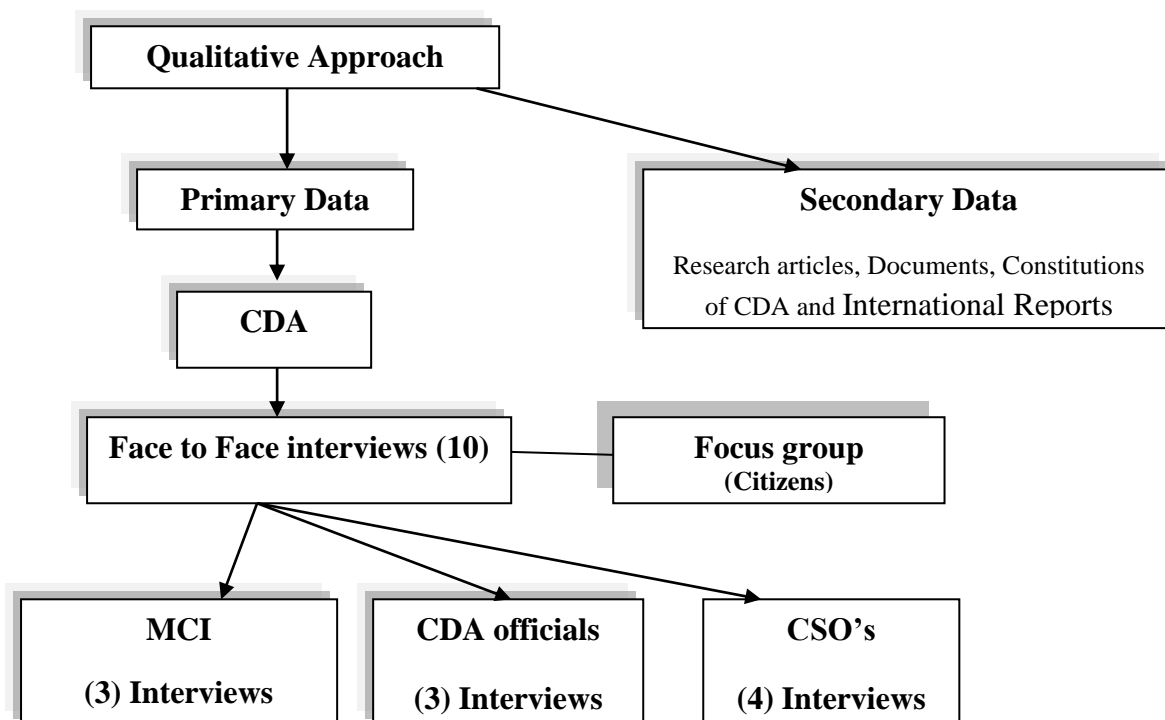
The collection of primary data will be conducted during in person interviews. The interview question will be open ended and after the data collection, triangulation of data would be undertaken to interpret the information.

Ten interviews will be conducted from different key informants from CDA. Three interviews will be taken from metropolitan corporation Islamabad members and the three from the CDA members and the four from CSO's.

A focus group will also be conducted from the citizens for their perspective on water issue in Islamabad. The selection of people for this focus group will be purposive.

3.5.4. Collection of Secondary data:

In this study, collection of secondary data included the reviews of research articles, papers, constitutions of CDA and international reports. The research has analyzed all these materials. The analyzed data were interpreted in the data analysis chapter along with other findings.



A complete overview of the entire Qualitative Approach

3.5.4. Data analysis:

For the current research, qualitative approach will be adopted. Data will be analyzed through Thematic Analysis, a six-phased approach, suggested by (Braun & Clarke, 2006).

1. Getting Familiar with Data	4. Review themes
2. Creating initial codes	5. Define themes
3. Search for themes	6. Write Up

Chapter 4

Findings and Discussion

according to the college of Southern California 2010, the reason of the discussion is to interpret and describe the significance of your findings in light of what become already known approximately the research hassle being investigated and to give an explanation for any new expertise or insights that emerged due to your observe of the problem. The authentic research question changed into to find out the issues and demanding situations of CDA associated with water provision. The goal was to create a clean and simple understanding that what issues and demanding situations the company is dealing with within the well timed and higher provider provision via using thematic analysis.

4.1 Doing thematic analysis:

Thematic analysis is the system of figuring out patterns or themes inside qualitative information. Braun & Clarke (2006) endorse that it is the primary qualitative method that must be discovered as ‘..it offers middle talents in order to be useful for engaging in many different kinds of evaluation’ (p.78). A similarly benefit, in particular from the perspective of studying and coaching, is that it's miles a technique instead of a technique (Braun & Clarke 2006; Clarke & Braun, 2013). which means that, unlike many qualitative methodologies, it isn't always tied to a specific epistemological or theoretical perspective. This makes it a very bendy technique, a big gain given the variety of labor in learning and coaching.

there are many exceptional approaches to method thematic analysis (e.g. Alhojailan, 2012; Boyatzis,1998; Javadi & Zarea, 2016). however, this variety method there is additionally some confusion approximately the nature of thematic evaluation, which includes how it's miles awesome from a qualitative content material analysis1 (Vaismoradi, Turunen & Bonda,

2013). In this situation, we observe Braun & Clarke's (2006) 6-step framework. This is arguably the most influential method, inside the social sciences at least, likely as it gives such a clean and usable framework for doing thematic analysis. The intention of a thematic evaluation is to become aware of themes, i.e. styles inside the information which can be important or interesting, and use these issues to cope with the research or say something about a trouble. That is an awful lot extra than clearly summarizing the records; a good thematic evaluation interprets and makes sense of it. A commonplace pitfall is to apply the main interview questions as the topics (Clarke & Braun, 2013). Usually, this reflects the reality that the statistics have been summarized and organized, rather than analyzed.

Step 1: Familiarity with the data:

First step in every qualitative study is analyzing, and re-analyzing the data record. This step is discovered to be adapted with the complete statistics (i.e. all of the interviews). Preliminary comments are ready and timely impressions had been written down.

Information about Data:

The information is entirely number one. The evaluation is founded on a takeout (about 15 minutes) for particular interview. General 10 interviews are conducted so this will become the interviewed data of 2:30 hours.

Demographics of respondents:

Standard respondent's age is round 40 years. Every respondent has been associated with CDA and MCI which consists 10 officials seven from MCI and three from CDA.

Step 2: Generate initial codes:

In this phase, data was organized in a significant and methodical way. Coding reduces lots of data into small chunks of significance. All text isn't coded. But, an open coding technique is

accomplished as pre-set codes had been not specific, but codes had been developed and changed beside with the procedure of the coding.

Process of Coding: to begin with, written and recorded audio records of each interview is ordered in step with every interview query, then each section of a answer which appeared to me applicable, exciting and label that precise discussion question is transcribed in the course of system of coding. Following carrying out transcribing all codes of each interview question of every respondent, codes had been in comparison and changed. This all technique is finished to begin with by way of hand by using papers and pen and then highlighting main points later on word is used to make tables for the coding. The each interview’s question original codes are given in the table below:

<p>Q1. What are the factors which effects CDA’s water management in Islamabad?</p> <p>Codes:</p> <p>According to me water leakage is one of the major causes that hinder effective water management.</p> <p>Fund are not adequate</p> <p>There is shortage of water which influences effective water management</p> <p>There is demand/supply issue. Supply is less whereas demand is high.</p> <p>Theft of water is also becoming the</p>	<p>Q2. Do you think that CDA’s water management is influenced by the external environment?</p> <p>Codes:</p> <p>No, CDA water management is not influenced by the external environment.</p> <p>I don’t think so that any kind of external environment influences CDA</p> <p>External stakeholder such as media does shape behavior of officials.</p> <p>Sometimes Due to change of government institutional policies also tend to change</p>	<p>Q3. Is CDA giving adequate training to their employees for better and efficient performance to deal with management of water related issues? If yes, what kind of training is provided?</p> <p>Codes:</p> <p>Adequate Training is not provided to the officials.</p> <p>Formal training is not given however we do provide informal guidance to our subordinates.</p> <p>Seminars are arranged for training.</p> <p>Technical assistance is provided to old employees by new comers.</p>
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<p>issue for us</p> <p>Scarcity of water. 60 mgd is available while required is 130 mgd</p> <p>Outdated equipment is an important factor.</p>	<p>External environment does not affect water management to much extent.</p> <p>Natural disasters also prove to be harmful for effective water management.</p> <p>Clients as external actors do provoke officials for effective water management.</p>	<p>Timely sessions are arranged for workers by the officials (engineers).</p> <p>No proper and timely training is provided.</p> <p>Training is provided but it is biased.</p>
<p>Q4. To what extent national programs on water management are properly implanted?</p> <p>Codes:</p> <p>It is properly implemented.</p> <p>Programs and policies are implemented by the institutions however it is difficult to ensure compliance on citizens' end.</p> <p>Technical issues.</p> <p>External factors affect.</p> <p>The implementation does not strictly follow the programs. Some officials do bring flexibility and amendments as need requires.</p> <p>Partly implemented.</p> <p>Implementation is ensured.</p>	<p>Q5. Is private sector NGO's supporting for better water management?</p> <p>Codes:</p> <p>NGOs are supporting such as salani welfare.</p> <p>No.</p> <p>Yes, certain organizations do come and support.</p> <p>To some extent.</p> <p>Institution itself manages all water related affairs.</p> <p>NGOs are somehow supporting.</p> <p>NGOs help in terms of providing different projects or funds.</p>	<p>Q6. Is technical assistance provided to CDA officials for efficient performance enough?</p> <p>Codes:</p> <p>Technical assistance used to be provided in the start but not now.</p> <p>Technical assistance is provided in terms of training, informal guidance and arranges seminars.</p> <p>Not properly provided.</p> <p>Training is provided at higher level but not lower workers.</p> <p>Not provided on regular basis.</p> <p>We hire already trained officials.</p> <p>Of course on timely basis.</p>

<p>Q7. What is your opinion about the timeliness of service in CDA?</p> <p>Do always keep promise, showing the desire to help if customers face problems?</p> <p>Codes:</p> <p>Timeliness is followed.</p> <p>Timely services are provided to the client.</p> <p>Sometimes delays occur due to some technical issues.</p> <p>Timely services are provided but still citizens are not satisfied.</p> <p>We are compelled to provide timely services by our higher authorities as well as citizens.</p> <p>We are trying our best to provide timely services.</p>	<p>Q8. How do you assure meeting the needs of customers? How do you measure their satisfaction from your services? Have you conducted customers' survey in last three years?</p> <p>Codes:</p> <p>Clients themselves tell us about effectiveness of service delivery.</p> <p>We have made portals where customers or client give suggestions.</p> <p>No survey has been conducted since last three years.</p> <p>We have no policy of getting feedback.</p> <p>Client gives us applications if there as an issue.</p> <p>NGOs also help us in identifying if there is any issue.</p> <p>Clients give feedback on online portal.</p>	<p>Q9. To whom CDA office is responsible?</p> <p>Codes:</p> <p>Responsible to mayor.</p> <p>Of course, MCI is responsible to mayor's office.</p> <p>Previously we were working under CDA but now we are responsible to mayor.</p> <p>We are directly responsible to mayor but we are also interlinked with CDA.</p>
<p>Q10. Does your institution have a</p>	<p>Q11. Are there any other</p>	<p>Q12. What innovations are in</p>

<p>written water policy regarding service in your office? If yes, whether the policy has been implemented? If not, why?</p> <p>Codes:</p> <p>Yes we do have written policy which is followed by water management.</p> <p>We have certain set of rules for provision of water.</p> <p>Policy is properly formulated but not implemented.</p> <p>We have existing policies as well as new policies are also being formed.</p> <p>MCI has its policy for water management.</p> <p>We have policies but they need amendments.</p> <p>We have policies but we don't have funds to implement those policies.</p>	<p>agencies (public or private) that provide the same services provided by your office? Does the presence or absence of these institutions affect the way in this office?</p> <p>Codes:</p> <p>There are No agencies that provide same services.</p> <p>Only CDA and MCI is responsible for water management.</p> <p>Certain organizations do help and support CDA and MCI but do not solely responsible for water management.</p> <p>Some NGOs and private organization provide us projects of water management.</p> <p>MCI with collaboration with CDA provides water to citizens in ICT.</p> <p>Other than MCI water supply people have boring system in their homes.</p>	<p>place for effective water management since last three years regarding administration, procedures or technology?</p> <p>Codes:</p> <p>No innovations have been brought as such however changing of pumps for water supply land with the help of USAID.</p> <p>Old methods are being used.</p> <p>There are certain projects that tend to bring innovation.</p> <p>Technical assistance is being provided to the official in order to be adapting with new methods.</p> <p>Training is provided for introducing new process and methods.</p> <p>No major innovations have been brought.</p> <p>We are working with old methods.</p>
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Step 3: Searching of themes:

According to Braun & Clark (2006) a theme is defined as “a sample that captures something vital or interesting about the facts and/or research query”. They argued that , there are no difficult and fast tactics about how a subject matter is recognized and advanced. In easy terms, a theme is built by its importance. those subject matters have been predominately descriptive, i.e. they described styles inside the statistics relevant to the research query. desk 2 shows all the initial issues that are recognized, in conjunction with the codes which are linked with them. maximum codes are associated with one theme despite the fact that a few are associated with more than one (these are highlighted inside the desk under).

<p>Q1. What are the factors which effects CDA’s water management in Islamabad?</p> <p>Codes:</p> <p>According to me water leakage is one of the major causes that hinder effective water management.</p> <p>Fund are not adequate</p> <p>There is shortage of water which influences effective water</p>	<p>Q2. Do you think that CDA’s water management is influenced by the external environment?</p> <p>Codes:</p> <p>No, CDA water management is notinfluenced by the external environment.</p> <p>I don’t think so that any kind of external environment influences CDA</p>	<p>Q3. Is CDA giving adequate training to their employees for better and efficient performance to deal with management of water related issues? If yes, what kind of training is provided?</p> <p>Codes:</p> <p>Adequate Training is not provided to the officials.</p> <p>Formal training is not given</p>
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<p>management</p> <p>There is demand/supply issue.</p> <p>Supply is less whereas demand is high.</p> <p>Theft of water is also becoming the issue for us</p> <p>Scarcity of water. 60 Mgd is available while required is 130 Mgd.</p> <p>Outdated equipment is an important factor.</p>	<p>External stakeholder such as media does shape behavior of officials.</p> <p>Sometimes Due to change of government institutional policies also tend to change</p> <p>External environment does not affect water management to much extent.</p> <p>Natural disasters also prove to be harmful for effective water management.</p> <p>Clients as external actors do provoke officials for effective water management.</p>	<p>however we do provide informal guidance to our subordinates.</p> <p>Seminars are not properly arranged for training.</p> <p>Technical assistance is only provided to only specific segment.</p> <p>Timely sessions are not arranged for workers by the officials (engineers).</p> <p>No proper and timely training is provided.</p> <p>Training is provided but it is biased.</p>
<p>Q4. To what extent national programs on water management are properly implanted?</p> <p>Codes:</p> <p>It is properly implemented.</p> <p>Programs and policies are implemented by the institutions however it is difficult to ensure compliance on citizens' end.</p> <p>Technical issues.</p> <p>External factors affect.</p> <p>The implementation does</p>	<p>Q5. Is private sector NGO's supporting for better water management?</p> <p>Codes:</p> <p>NGOs are supporting such as salani welfare.</p> <p>No.</p> <p>Yes, certain organizations do come and support.</p> <p>To some extent.</p> <p>Institution itself manages all water</p>	<p>Q6. Is technical assistance provided to CDA officials for efficient performance enough?</p> <p>Codes:</p> <p>Technical assistance used to be provided in the start but not now.</p> <p>Technical assistance is provided in terms of training, informal guidance and arranges seminars.</p> <p>Not properly provided.</p> <p>Training is provided at higher level but not lower workers.</p>

<p>not strictly follow the programs. Some officials do bring flexibility and amendments as need requires.</p> <p>Partly implemented.</p> <p>Implementation is ensured.</p>	<p>related affairs.</p> <p>NGOs are somehow supporting.</p> <p>NGOs help in terms of providing different projects or funds.</p>	<p>Not provided on regular basis.</p> <p>We hire already trained officials.</p> <p>Of course on timely basis.</p>
<p>Q7. What is your opinion about the timeliness of service in CDA? Do always keep promise, showing the desire to help if customers face problems?</p> <p>Codes:</p> <p>Timeliness is followed.</p> <p>Timely services are provided to the client.</p> <p>Sometimes delays occur due to some technical issues.</p> <p>Timely services are provided but still citizens are not satisfied.</p> <p>We are compelled to provide timely services by our higher authorities as well as citizens.</p> <p>We are trying our best to provide timely services.</p>	<p>Q8. How do you assure meeting the needs of customers? How do you measure their satisfaction from your services? Have you conducted customers' survey in last three years?</p> <p>Codes:</p> <p>Clients themselves tell us about effectiveness of service delivery.</p> <p>We have made portals where customers or client give suggestions.</p> <p>No survey has been conducted since last three years.</p> <p>We have no policy of getting feedback.</p> <p>Clients give us applications if there as an issue.</p>	<p>Q9. To whom CDA office is responsible?</p> <p>Codes:</p> <p>Responsible to mayor.</p> <p>Of course, MCI is responsible to mayor's office.</p> <p>Previously we were working under CDA but now we are responsible to mayor.</p> <p>We are directly responsible to mayor but we are also interlinked with CDA.</p>

	<p>NGOs also help us in identifying if there is any issue.</p> <p>Clients give feedback on online portal.</p>	
<p>Q10. Does your institution have a written water policy regarding service in your office? If yes, whether the policy has been implemented? If not, why?</p> <p>Codes:</p> <p>Yes we do have written policy which is followed by water management.</p> <p>We have certain set of rules for provision of water.we ensure compliance as well.</p> <p>Policy is properly formulated but not implemented.</p> <p>We have existing policies as well as new policies are also being formed.</p> <p>MCI has its policy for water management.</p> <p>We have policies but they need</p>	<p>Q11. Are there any other agencies (public or private) that provide the same services provided by your office? Does the presence or absence of these institutions affect the way in this office?</p> <p>Codes:</p> <p>There are No agencies that provide same services.</p> <p>Only CDA and MCI are responsible for water management.</p> <p>Certain organizations do help and support CDA and MCI but do not solely responsible for water management.</p> <p>Some NGOs and private organization provide us projects of water management.</p> <p>MCI with collaboration with CDA provides water to citizens in ICT.</p> <p>Other than MCI water supply</p>	<p>Q12. What innovations are in place for effective water management since last three years regarding administration, procedures or technology?</p> <p>Codes:</p> <p>No innovations have been brought as such however changing of pumps for water supply land with the help of USAID.</p> <p>Old methods are being used.</p> <p>There are certain projects that tend to bring innovation.</p> <p>Technical assistance is being provided to the official in order to be adapting with new methods.</p> <p>Training is provided for introducing new process and methods.</p> <p>No major innovations have been brought.</p>

<p>amendments.</p> <p>We have policies but we don't have funds to implement those policies.</p>	<p>people have boring system in their homes.</p>	<p>We are working with old methods.</p>
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Step 4 & 5:

Review and define themes:

in the course of this step preliminary themes are reviewed, modified and advanced that had been recognized in preceding step. all of the facts that is pertinent to every subject matter is amassed. this is carried out most effective with the 'reduce and paste' function in phrase dealing out package. to start with, every code is inspect carefully and diagnosed all the ones codes which actually fit collectively into a theme. as an instance, I had numerous codes that associated with elements affecting water management and i've collated these into an preliminary topic such "education and technical help" and so on. further, all of the codes were prepared into broader issues and sub issues that appeared to be something massive for the main subject matter or/and sub theme. After finishing this, the topics associated with every huge studies question, irrespective of the interview query, become recognized. The theme related to every question is separated. Shuffling and repetition of issues is also made according to the relevance. records related to each subject is cautiously read that whether or not the information virtually did guide it. This step is to think about whether the subject matters paintings within the context of the entire records set, in different words to recall how the topics work both within a unmarried interview and across all the interviews.

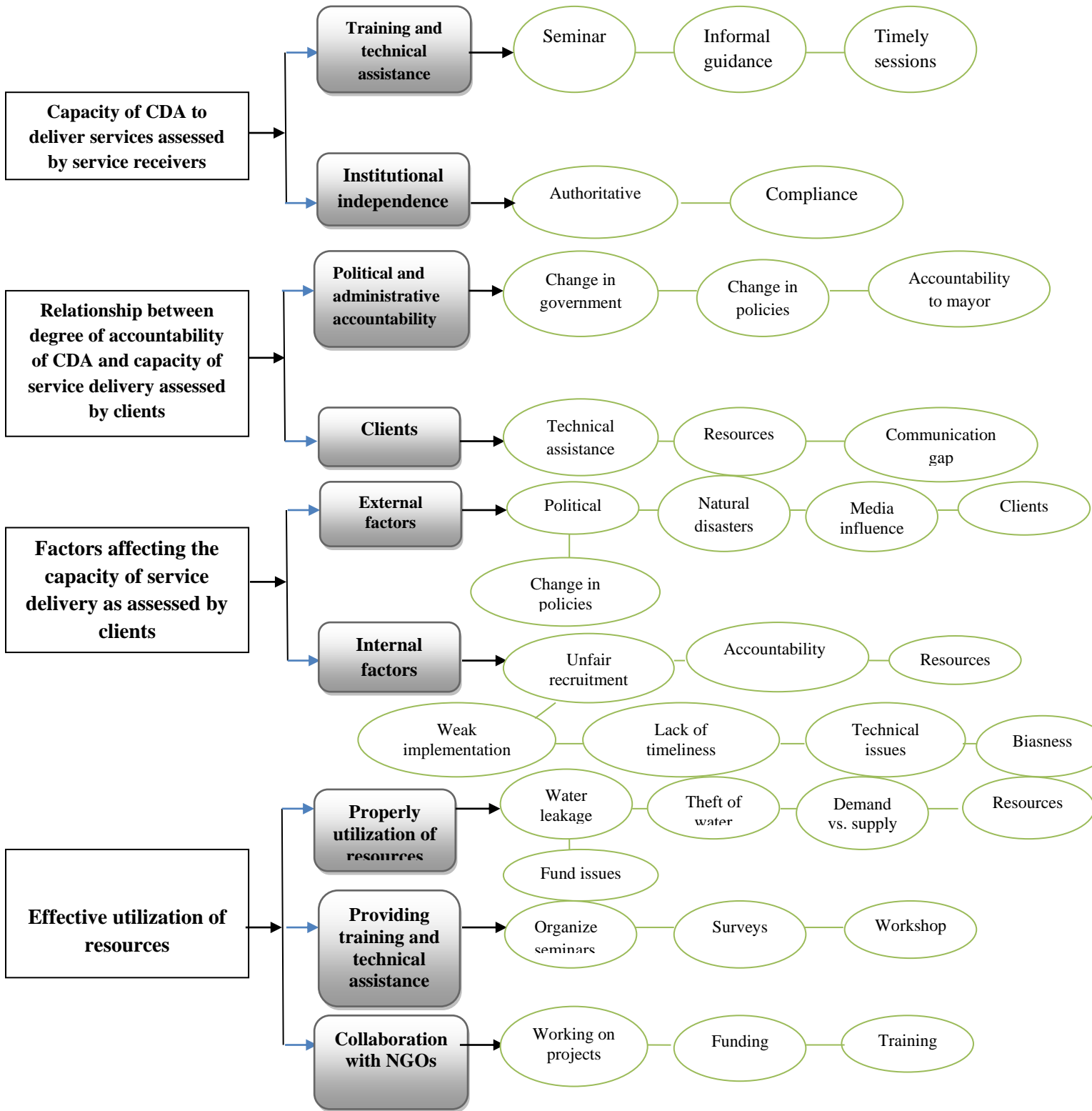
themes are selected on the idea of following matters:

- subject matters that provide experience.
- subject that facts helps
- Overlapping and separate subject matters
- subject matters beneath subject (Sub-issues)

- additional topics inside the records

For reviewing issues first i have said the research questions and then consistent with every question the relevant subject matters and sub themes are defined below each query, am mentioned.

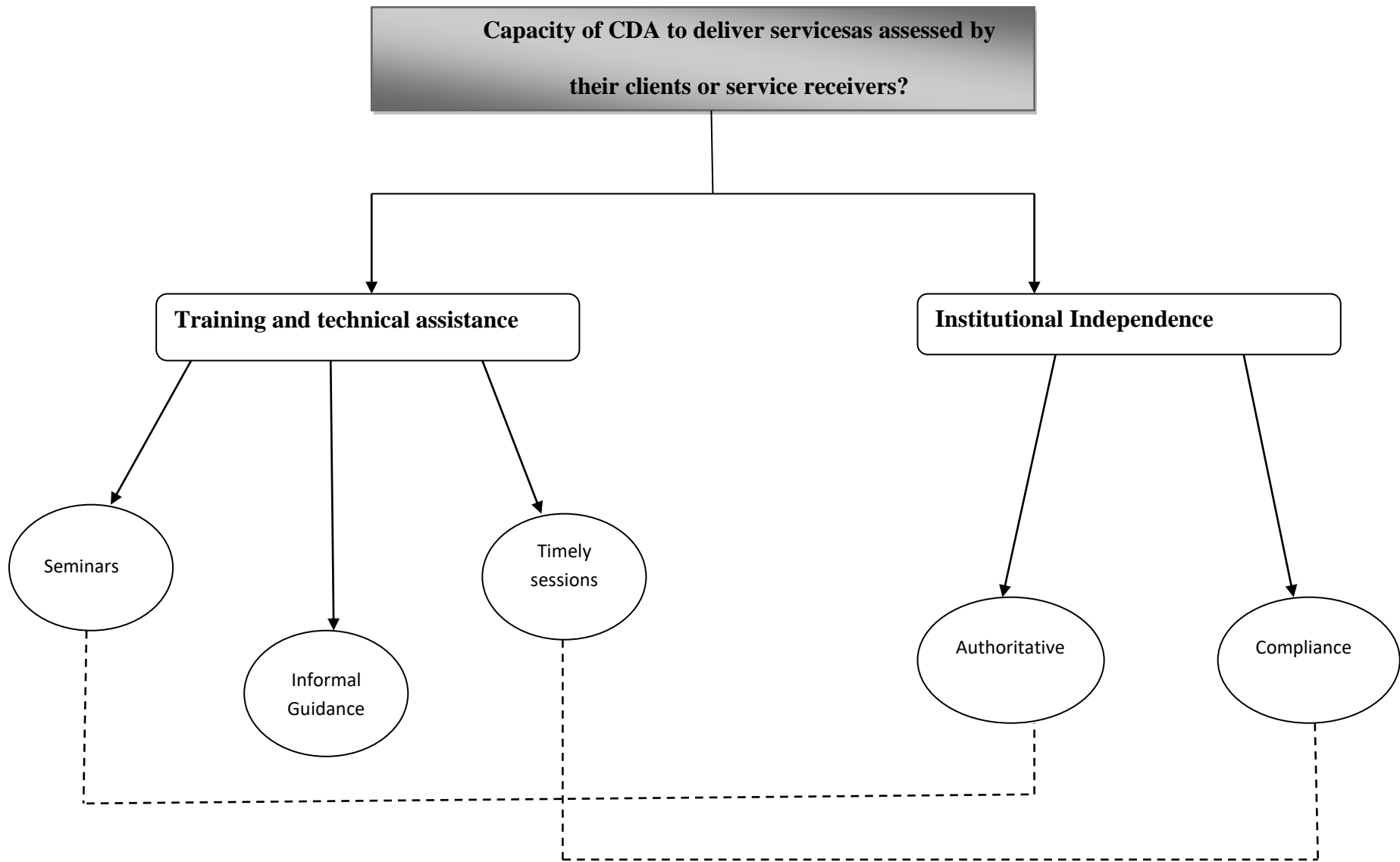
Consolidate Thematic Map



Q.1. what is the capacity of CDA to deliver services as assessed by their clients or service receivers?

The opening research question of the research is to pact with the issues or worldwide factors that affect water management. According to responses by means of the interviewees, two essential themes are evolved: *training and technical assistance and institutional independence*. Under the main theme “*training and technical assistance*” there are three further sub themes: “*seminars, informal guidance, and timely sessions*”. Similarly, under the second main theme, “*institutional independence*” there is two sub themes: *authoritative and compliance*. *These kinds of subject matters and sub themes and their related codes are cited within the table underneath:*

<p>Theme: Training and Technical assistance</p> <p>Codes:</p> <p>Sub theme 1: Seminars</p> <p>Seminars are not properly arranged for training.</p> <p>Adequate Training is not provided to the officials.</p> <p>Formal training is not given however we do provide informal guidance to our subordinates.</p> <p>Technical assistance is only provided to only specific segment.</p> <p>Sub theme 2: Informal Guidance</p> <p>Formal training is not given however we do provide informal guidance to our subordinates.</p> <p>Technical assistance is provided in terms of training, informal guidance and arranges seminars.</p> <p>Sub theme 3: Timely Sessions</p> <p>Timely sessions are not arranged for workers by the officials (engineers).</p> <p>No proper and timely training is provided.</p> <p>Of course on timely basis.</p>	<p>Theme: Institutional Independence</p> <p>Codes:</p> <p>Sub theme 1: Authoritative</p> <p>Responsible to mayor.</p> <p>Of course, MCI is responsible to mayor's office.</p> <p>Previously we were working under CDA but now we are responsible to mayor.</p> <p>We are directly responsible to mayor but we are also interlinked with CDA.</p> <p>Sub theme 2: Compliance</p> <p>Yes we do have written policy which is followed by water management.</p> <p>We have certain set of rules for provision of water. We ensures compliance as well.</p> <p>Policy is properly formulated but not implemented.</p>
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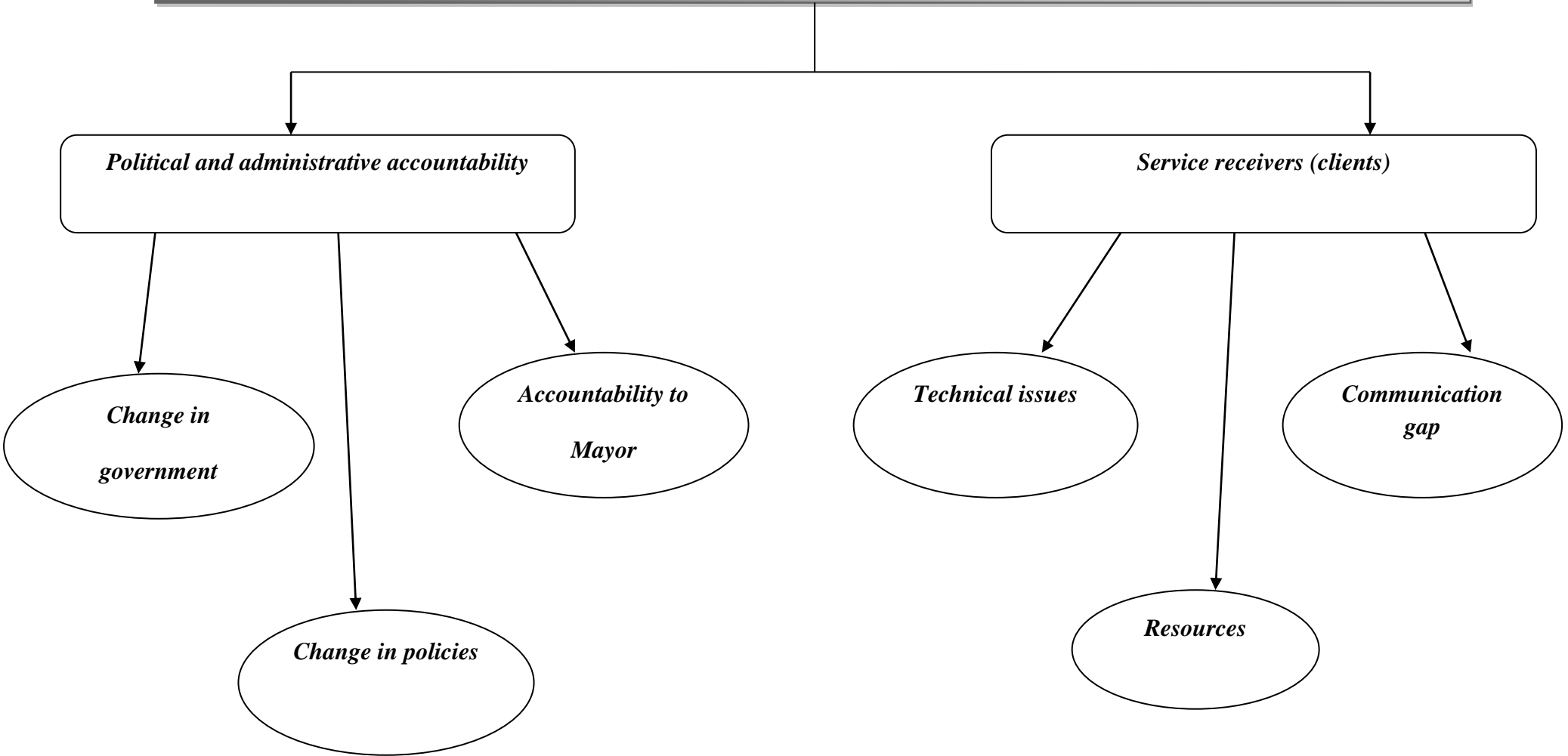
RQ 2 What is the relationship between the degree of administrative and political accountability experienced by CDA and the capacity of CDA to deliver water services as assessed by their clients or service receivers?

The second question is aimed Political and administrative accountability and the capacitycapacity of CDA to deliver water services as assessed by their clients or service receivers which are affecting the performance of these agencies in their service provision by their service receivers. By viewing the responses, two main themes are developed: “*Political and administrative accountability and Service receivers (clients)*”. Under the main theme, “*Political and administrative accountability*”, there are three sub themes:*change in government, change in policies, and accountability to Mayor*. Similarly, there are three subthemes under the main theme “*Service receivers (clients),*” *Technical issues, Resources Communication gap*. All major issues and sub topics and their related codes are defined within the desk under:-

<p>Main theme: Political and administrative accountability</p> <p>Sub theme I: change in government</p> <p>Sometimes Due to change of government External factors affect</p> <p>Sub theme II: change in policies</p> <p>Sometimes Due to change of government institutional policies also tend to change</p>	<p>Main theme: Service receivers (clients)</p> <p>Sub theme I: Technical issues</p> <p>Outdated equipment is an important factor</p> <p>Old methods are being used</p> <p>There are certain projects that tend to bring innovation</p> <p>Sub theme II: Resources</p>
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<p><i>Sub theme III: accountability to Mayor</i></p> <p><i>Of course, MCI is responsible to mayor's office and we are directly responsible to mayor"</i></p>	<p><i>60 mgd is available while required is 130 mgd There is shortage of water which influences effective water management</i></p> <p><i>According to me water leakage is one of the major causes that hinder effective water management</i></p> <p><i>Sub theme III: Communication gap</i></p> <p><i>Client gives us applications if there as an issue</i></p> <p><i>Clients give feedback on online portal</i></p>
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what is the relationship between the degree of administrative and political accountability experienced by CDA and the capacity of CDA to deliver water services as assessed by their clients or service receivers?



Q: 3.how do administrative and political accountability factors affect the capacity of these agencies to deliver services as assessed by their clients or service receivers?

The third question is aimed to identify the internal and external factors which are affecting the performance of these agencies in their service provision by their service receivers. By viewing the responses, two main themes are developed: *influence of external factor and influence of internal factors*. Under the main theme, “*influence of external factor*”, there are five sub themes: *political influence, media influence, and change in policies, natural disasters and clients (influence of clients)*. Similarly, there are seven subthemes under the main theme “*influence of internal factors*”: *unfair recruitment, accountability, biasness, inappropriate utilization of resources, weak implementation, lack of timeliness and technical issues*. All predominant subject matters and sub subject matters and their associated codes are defined within the table underneath:-

<p>Theme: Influence of external factor</p> <p>Codes:</p> <p>Sub theme 1: Political influence</p> <p>If a country’s political situation changes the policies of effective water provision also got affected</p>	<p>Theme: Influence of internal factor</p> <p>Codes:</p> <p>Sub theme 1:Unfair recruitment</p> <p>there is no proper way to select better persons</p>
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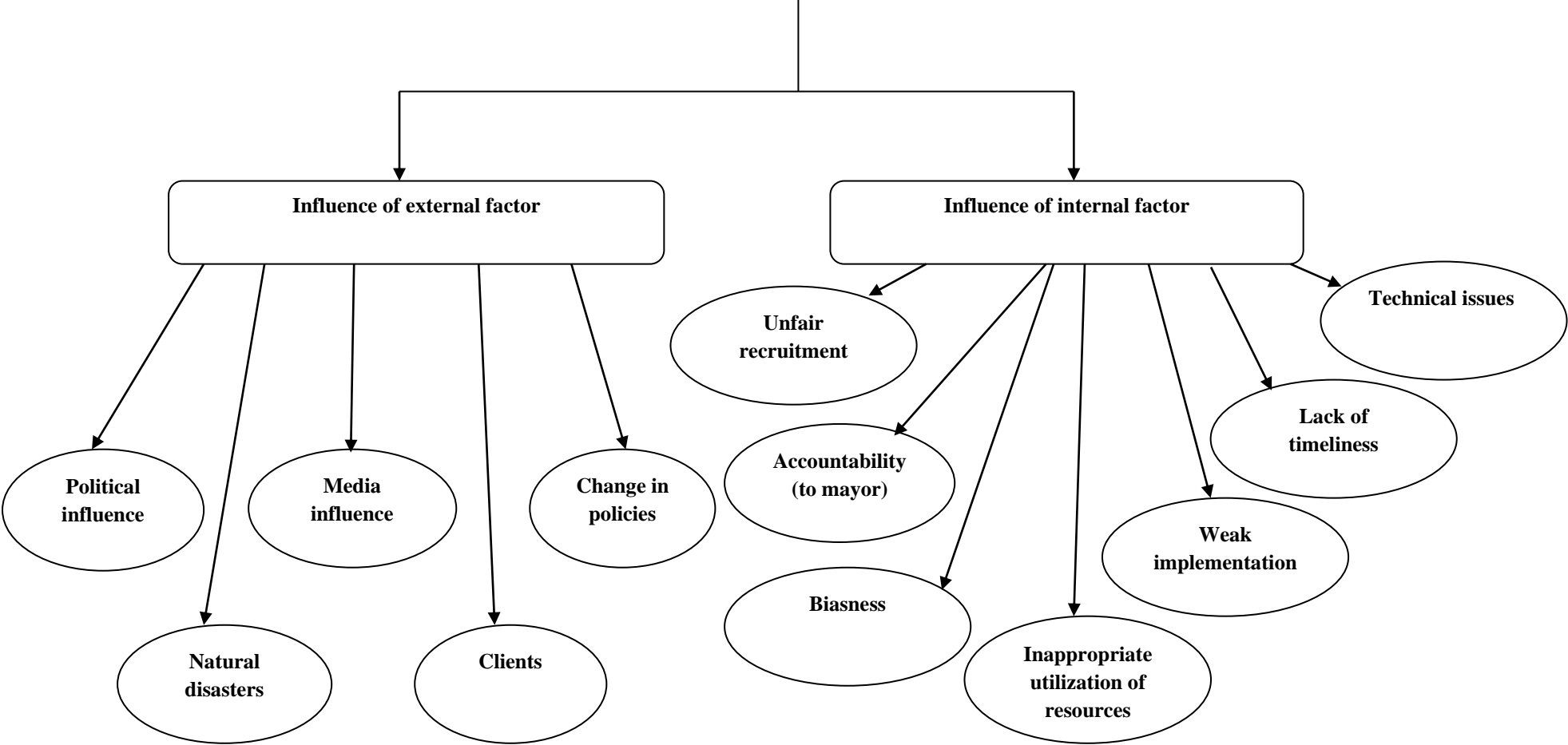
<p>Sub theme 2: Media influence</p> <p>external stakeholder such as media does shape behavior of officials</p> <p>Sub theme 3: Change in policies</p> <p>We have policies but they need amendments</p> <p>We have policies but we don't have funds to implement those policies</p> <p>Sub theme 4: Natural disasters</p> <p>natural disasters also prove to be harmful for effective water management</p>	<p>no proper check and balance on the employees</p> <p>Sub theme 2:Accountability(to mayor)</p> <p>we are responsible to the mayor</p> <p>Of course, MCI is responsible to mayor's office</p> <p>And we are directly responsible to mayor</p> <p>Sub theme 3:Biasness</p> <p>There is biasness in the organization</p>
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<p>Sub theme 5: Clients(influence of clients)</p> <p>Sometimes delays occur due to some technical issues</p> <p>Similarly another commented that Timely services are provided but still citizens are not satisfied</p>	<p>Sub theme 4:Inappropriate utilization of resources</p> <p>Water leakage is one of the major causes that hinder effective water management</p> <p>Theft of water is also becoming the issue for us Old methods are being used</p> <p>People have boring system in their homes</p> <p>Sub theme 5:Weak implementation</p> <p>“Policy is properly formulated but not implemented”.</p> <p>“</p>
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	<p>We have policies but they need amendments”. “</p> <p>We have policies but we don't have funds to implement those policies</p> <p>Sub theme 6:Lack of timeliness</p> <p>We are trying our best to provide timely services</p> <p>Timely services are provided but still citizens are not satisfied</p> <p>Sub theme 7:Technical issues</p> <p>Sometimes delays occur due to some technical issues</p>
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How do administrative and political accountability factors affect the capacity of these agencies to deliver services as assessed by their clients or service receivers?



Q: 4 How quality of domestic water supply and effective utilization of the scarce resources can be maintained?

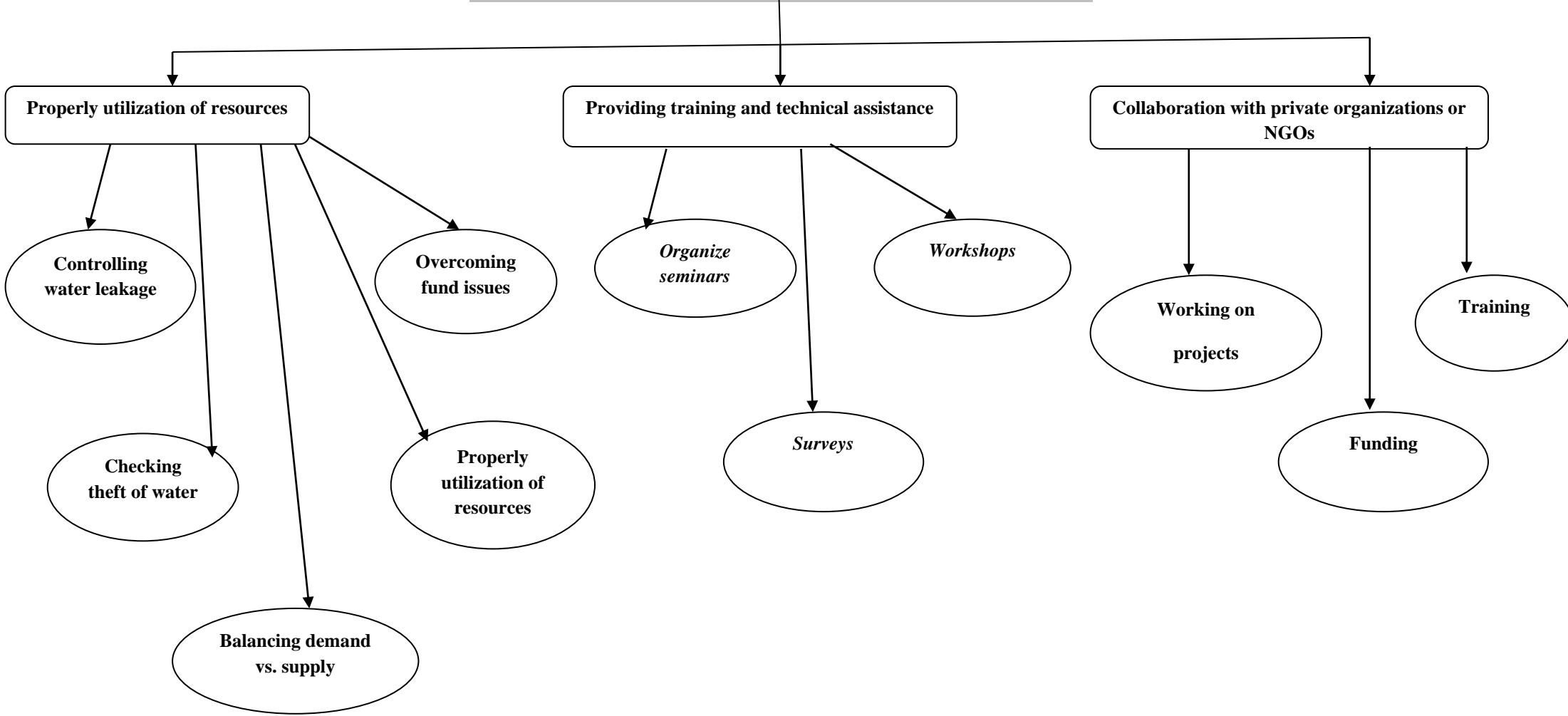
The fourth question is to find out that the way to preserve the effective supply and utilization of scarce resources. By reviewing the responses, three main themes are developed: *properly utilization of resources, providing training and technical assistance and collaboration with private organizations*. Under the first main theme, “*properly utilization of resources*”, there are five sub themes: *controlling water leakage, overcoming fund issues, checking theft of water, properly utilization of scarce resources and balancing demand vs. supply*. Similarly, there are three subthemes under the second main theme “*providing training and technical assistance*”: *organize seminars, workshops and surveys*. Under the third main theme, “*collaboration with private organizations or NGOs.*”, there are three further sub theme *working on projects, funding and training*: All main themes and sub themes and their related codes are described in table below:-

<p>Theme: Properly utilization of resources</p> <p>Codes:</p> <p>Sub theme 1: Controlling water leakage</p> <p>water leakage is one of the major causes that hinder effective water management</p>	<p>Theme: Providing training and technical assistance</p> <p>Codes:</p> <p>Sub theme 1:Organize seminars</p> <p><i>Seminars are not properly arranged for training</i></p> <p>Sub theme 2:Workshops</p> <p><i>Timely sessions are not arranged for workers by the officials</i></p>	<p>Theme: Collaboration with private organizations or NGOs</p> <p>Codes:</p> <p>Sub theme 1: Working on projects</p> <p>Some NGOs and private organization provide us projects of water management</p> <p>Certain organizations do help and</p>
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<p>We are working with old methods</p> <p>Sub theme 2: Overcoming fund issues</p> <p>We have policies but we don't have funds to implement those policies</p> <p>Sub theme 3: Checking theft of water</p> <p><i>Theft of water is also becoming the issue for us</i></p> <p>Sub theme 4: Properly utilization of resources</p> <p><i>There is shortage of water which influences effective water management</i></p> <p><i>Scarcity of water. 60 mgd is available while required is 130 mgd</i></p> <p>Sub theme 5: Balancing demand vs. supply</p> <p><i>There is demand/supply issue.</i></p>	<p><i>(engineers)</i></p> <p>Sub theme 3: Surveys</p> <p><i>No survey has been conducted since last three years</i></p> <p><i>We have no policy of getting feedback</i></p>	<p>support CDA and MCI but do not solely responsible</p> <p>Sub theme 2: Funding</p> <p>NGOs are somehow supporting</p> <p>NGOs help in terms of providing different projects or funds</p> <p>Sub theme 3: Training</p> <p>Yes, certain organizations do come and support". "Not provided on regular basis</p>
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<i>Supply is less whereas demand is high</i>		
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How quality of domestic water supply and effective utilization of the scarce resources can be maintained?



STEP 6: Write Up

Q.1. what is the capacity of CDA to deliver services as assessed by their clients or service receivers?

MAIN THEME: Training and technical assistance:

even though the definition of technical help frequently varies, a common function is the switch of data and equipment from one entity to any other with a purpose to deal with an diagnosed want for trade (Wesley & Buysse, 1996). Technical help is, in essence, a process for growing innovative, cost-powerful approaches to offer targeted aid to an organisation, gadget or character to: • check gaps, barriers, and desires and identify capacity responses to deal with those issues; • develop a strategic plan for long-term trade; or • Create an progressive approach to an emerging complicated issue. (Blase, 2009) (countrywide Technical assistance middle, 2000). According to the respondents, training and technical assistance is very necessary for CDAs management. They argued that training is being provided to the employees in the form of seminars, informal guidance and timely sessions (sub themes). According (Hurst, 2012) to Technical assistance is a broad term that encompasses many different forms of support. As a mechanism for transferring information, it can include (1) traditional approaches, (2) technology-based approaches, and (3) or other hybrid approaches. according to the respondents employees are important belongings of any organisation. The energetic function they play in the direction of CDA's fulfillment cannot be underestimated. As a result, equipping these unique assets thru powerful training becomes imperative with a purpose to maximize the process performance. additionally function them to take on the demanding situations of the nowadays's

competitive enterprise climate. even though giant studies has been performed in the vicinity of Human studies control, the identical can not be stated on employee education specially because it issues developing international locations. keeping in view the significance of training and technical help, it has been defined in terms of the subsequent sub topics:

Sub theme I: Seminars:

According to Fitzgerald (2002), a seminar is a form of instructional preparation, both at an academic organization or presented through a business or expert organisation. It has the function of bringing collectively small corporations for routine meetings, focusing on every occasion on a few precise subject, wherein all and sundry gift is requested to take part. Respondents claimed that there is no proper or adequate training provided to the employees. One of the respondent commented that “Seminars are not properly arranged for training”. Similarly, another respondent said “Technical assistance is only provided to only specific segment”. It can be inferred that either seminars for training is not adequate or if it is then it is biased. According to Nassazi (2013) the employee who receives the necessary training is more able to perform in their job. The training will give the employee a more information in their duties within their role, and in flip build their self belief. moreover, a training seminar allows you to reinforce the ones competencies that every employee desires to improve. Seidel (2019) also argued that employees can contribute to the achievement of the organisation when they may be skilled to carry out their jobs consistent with corporation’s requirements. schooling, which is critical for control as well as group of workers, usually consists of numerous classes onsite or at a specific region at some point of orientation. but respondents claimed that CDA placed much less recognition on in-depth training considering it as an unnecessary cost and assume new employees

to research at the task from supervisors and older employees. but, this type of schooling is regularly inadequate and creates issues for the powerful control.

Sub theme II: Informal Guidance

The term informal studying become added inside the 1950s with the aid of Malcolm Knowles in his pioneer paintings on informal grownup education. seeing that then, many authors have written about casual getting to know and offered their particular attitude on the that means of the term. informal learning presents a trustworthy evaluation to formal getting to know and indicates extra flexibility for grownup beginners. As such, informal instruction is recognized as equally effective as more formal methods. However, in informal instruction, there is no proper set up for giving instructions. It can be in the form of peer discussion in friendly and relaxed manner rather than serious. Moreover it can be at workplace or outside of workplace. Majority of the responses showed that there is adequate level of informal guidance among employees. Such as, a respondent commented that "*Formal training is not given however we do provide informal guidance to our subordinates*". Literature guided that in the last few decades, the place of work has been increasingly identified as a legitimate environment for learning new competencies and understanding, which in turn enables workers to take part extra effectively in ever-converting paintings environments. inside the workplace, there's the capacity for continuous mastering to occur no longer simplest via formal learning projects which can be associated with schooling, however also through casual getting to know possibilities which can be embedded within everyday work sports (Le Clus, 2011). Billett (1996) proposed that adjustments inside the contemporary place of business constitute the significance of places of work as good sized web sites for informal mastering. therefore, mastering has grow to be essential on many organizational agendas. despite the fact that specific

writings approximately informal getting to know did now not emerge till the Eighties, traits of informal mastering can be traced back to the early writings of Lindeman (1926), Dewey (1938) and Knowles (1970) who recommended that person newbies end up aware of their mastering stories through self-path. Writings through Watkins and Marsick (1992), Marsick and Volpe (1999) and Bell and Dale (1999) taken into consideration the relationship among the learner and the environment and stated that an awful lot of the learning taking place within the place of work befell via interaction with others. moreover, tons of the gaining knowledge of that takes place within the place of business happens as a ed81d2c1d705861968d8963ac974ba36 of other ordinary activities and is often haphazard or unsystematic. casual gaining knowledge of is represented by way of a variety of techniques inclusive of communication, social interaction, teamwork and mentoring. casual studying involves interplay among human beings and isn't limited to a predefined body of knowledge.

Sub Theme III: Timely session

According to respondents, the importance of timely and effective implementation of training and communication does not seem to be a prime consideration. A respondent commented, “Timely sessions are not arranged for workers by the officials (engineers)”. However, literature guided that timely training is important tool for effective learning. Such as, Dochy (2009) argued that once the company desires are set the training branch fixes a time table (from training needs analysis, training, to post-education opinions and methods) those are decided at the strategy planning stage or throughout training improvement process itself. additionally things together with duration of the company training program, while need to it's held? (morning, afternoon and/or evening), how an awful lot time to be spent on reinforcement of studying or evaluation?Hellier (2013) also argued that information how much time

will be spent on critiques is necessary, due to reasons. firstly, positive strategies to assess reinforcement and training are time-consuming. Secondly, if the critiques become unsatisfactory, then the personnel could want to be re-skilled. In each situations, the time as a way to be taken ought to be factored in. he in addition stated that all these measures contribute to a well-timed training which when accompanied methodically helps to set up a mastering tradition within the company. In the example we have taken, the training development crew ought to speak (with those being trained) about the weaknesses that they need to address.

MAIN THEME: Institutional Independence:

Cromwell (even as all companies are difficulty to regulation, the difference among an independent and a based agency is described by way of the degree of governmental control over the entity. independent and based groups often share comparable desires and use similar means to obtain the ones ends. however a dependent organization's financial making plans and selections should be authorized by a government business enterprise, whilst an unbiased organisation does not require permission. but, the amount of law imposed on many unbiased companies can also make it difficult to differentiate it from established agencies. According to the respondents, for CDA's water management, metropolitan organization is responsible which works under Mayor's office. They argue that institutional independence is very necessary for effective running of the affairs.

Sub theme I: Authoritative

Authoritative management style is one of the first six management styles introduced by psychologist Daniel Goleman in his theory of emotional intelligence. Authoritative organization, according to Goleman, are those who can

articulate a vision, and mobilize people toward that vision. He further argued that those who are working under an authoritative leader understand the importance of what they do and why. They also clearly know the standards and rewards for success. Responses of the respondents showed that CDA's metropolitan organization is an authoritative body having a set of rules and regulations which is directly responsible to the Mayor. A respondent commented that "*We are directly responsible to the mayor but we are also interlinked with CDA*". Richman (2015) argued that the authoritativeness of an organization may be useful in a few instances, as an example, whilst selections should be made rapidly without counselling with an expansive accumulation of stakeholders. Moreover, some obligations require strong authority to get things fulfilled hastily and proficiently. In a dictatorial administrative center, the leader commonly maintains a close watch on the employee's work. This takes out the propensity for professionals to "slack off", which may additionally show up with extra indulgent management styles. The final results may be increased profitability and tempo, as those who fall behind are right now recognized and handled. Additionally, satisfaction may enhance as a result of one's work continually being closely scrutinized. Time squandering and the need to waste property is also frequently faded.

Sub theme II: Compliance

Morato (2018) stated that compliance is ready conforming to the rule, a positive specification, a policy, well-known or law inside the place of job as an instance, compliance constitutes a set of strategies used to make sure that a crew is capable of upholding certain guidelines that make up the company they belong to. A foresaid sub theme (Authoritativeness) is closely linked with compliance. The higher the authority the greater the compliance can be ensured. Majority of the responses showed that CDA has an adequate authority and has policies formulated but there compliance is

weak and are not properly implemented. According to the respondent, “*Policy is properly formulated but not implemented*”. Finding also suggested that compliance is so important because it forms a part of your organization’s duties with respect to the community it belongs to while building trust. Moreover, no matter how well policy has been made, it will be worthless if it is not followed by compliance. Edmunds (2018) argued that the significance of compliance is extra glaring as troubles turn out to be more complex when business grows with accelerated duties regarding employees, covering hiring, firing, discrimination, harassment, protection, wages, payroll and benefits. The maximum apparent result of compliance is that it decreases your risk of fines, penalties, work stoppages, court cases or a shutdown of an organisation.

R Q no 2 what is the relationship between the degree of administrative and political accountability experienced by CDA and the capacity of CDA to deliver water services as assessed by their clients or service receivers?

Main theme: Political and administrative accountability

The concept of accountability holds government and society together like glue (Hodge and Coghill , 2007). accountability is one of the hallmarks of modern and democratic governments. In governments that aren't accountable on the subject of their actions, errors and selections to the people, democracy remains inside the maxim (Bovens, 2005). The know-how of duty may be modified from converting enjoy (Gibbon, 2012). The agencies have been created as hand-fabricated from human with the intention to acquire valuable results, results that require lots of human activities; those outcomes are exclusive due to the nature of the agencies and the values that remember. because in many present day societies value of public area corporations is offering offerings to citizens, as a result, accountability to residents has been

considered by means of senior managers of these corporations. therefore, responsibility in the public sector can be taken into consideration a need of democratic systems. with out accountability of presidency companies, the essence of democracy cannot be accomplished (Sarker& Hassan, 2010). forms of responsibility inside the public region can be categorised into four categories: political, prison, organizational and professional. Political accountability; in this sort of duty, managers respond to the requirements of the political government, i.e. the electorates, as well as different hobby businesses and political establishments; in different words, political responsibility is the governance of owners of businesses on performance of managers (Campbell ,1993, 112). Organizational duty; refers to governance within an enterprise. on this type of responsibility that's primarily based on advanced and inferior relationships, managers display the overall performance of personnel who regularly have little strength. Direct governance and periodic assessment of overall performance, are clean examples of organizational responsibility.

In this case study CDA is also accountable both political and administrative way like other government institution but not in proper or effective way. According to some respondents they said that we are accountable to Mayor of Islamabad and some said we are accountable to the government directly. These are some points which got highlighted from their conversations are that change in government and policies effect them a lot.

Sub theme I: change in government

Like other organizations CDA and MCI is also accountable to political system on their service provision but not in a strict manner .because there are political instability in the state that's why mostly governments are getting replaced without completing

there tenure. And when a new government takes charge they have to look after from the start and that's why not even a single government has proper check and balance on that organization. According to a respondent," *Sometimes Due to change of government*", "*External factors affect*". It shows that accountability is a part of system but not getting conducted properly that's why the organization is relaxed and there is delay in service provision.

Sub theme II: change in policies

As a government change the policies also got changed because the new government brings its own policies .that's why the old policies not got checked by the new government .it has two types of effects on the service provision which are waste of resources and waste of time as well as not proper and timely service provision also. According to a respondent,"*Sometimes Due to change of government institutional policies also tend to change*". Policies change also affects the accountability and proper service provision.

Sub theme III: accountability to Mayor

MCI is responsible to give feedback to the mayor of Islamabad .According to respondents "we are responsible to the mayor", "Of course, MCI is responsible to mayor's office", "and we are directly responsible to mayor". It shows that MCI is accountable to mayor of Islamabad which means that the organization has not freedom to take steps for the betterment of service provision as well as for organization own itself. It also effects the proper provision of resources to the service receiver properly and timely.

Main theme: Service receivers (clients)

Clients are the most important factor in any organization whose needs should be met. Because every organization works for their clients and if the service receiver is satisfied then the organization will have profit as well as good reputation also. In case of CDA the total services are provided to the clients directly by the organization and in that case there should be proper interaction between both of them. But in that case the organization is somehow being failed in service provision and also getting feedback as well.

Sub theme I: Technical issues

Technical issues are very much in that case because the organization is following old methods that's why the receivers always face issues. In technical issues there are old machinery and system is being used and also the pipelines are also pretty old and got broken time to time that's why most of the water got leaked. There is some new machinery also getting introduced but the technical training lacks that's why that can't be used properly. The staff is mostly the old staff and they don't know how to use new equipment properly it also causes delay in timely service delivery. According to the respondents, "Outdated equipment is an important factor", "Old methods are being used", "There are certain projects that tend to bring innovation", it shows there are certain issues that need to be addressed. There should be innovation in technology and also organize workshops for the workers on the use of these equipments.

Sub theme II: Resources

Resources are the key point in delivering services. If there are not resources the whole organization can't work and can't deliver services. Resources should be enough for the receivers. But in that case the resources are less and the demand is more. The resources are less due to some reasons which can be leakage, old pipelines, shortage

of rain water restoration due to less dams etc. According to the respondents Scarcity of water, " 60 mgd is available while required is 130 mgd ", "There is shortage of water which influences effective water management", " According to me water leakage is one of the major causes that hinder effective water management". That shows that the resources are not enough due to these reasons and these issues should be addressed timely for the better service provision.

Sub theme III: Communication gap

The major issue which the receivers highlight is the communication gap between the organization and the people. Because there is not any official way to communicate with organization. According to the respondents, " Client gives us applications if there as an issue", " Clients give feedback on online portal". This clearly shows that the clients are suffering and they are complaining by themselves but the organization does not have their own ways to get information from the clients. There should be more portals online and door to door surveys should be conducted so that the organization can be aware of people issues and try to resolve them to make sure the timely service provision.

RQ 3. How do administrative and political accountability factors affect the capacity of these agencies to deliver services as assessed by their clients or service receivers?

Main theme: Influence of external factor:

According to Gleeson (2019), due to alarming increase in population and rapid industrialization, drinking water quality is being deteriorated day by day in Pakistan. He named them as external factors and classified external factors in four types, economic, political, social and technological. External factors are the factors

which are affecting an organization from the outside and under no control of the organizations mostly. The organizations have to make adjustments in their plans to deal with the type of factors to adopt them. There are numerous criteria's considered as external elements. They are mostly divided into two categories: Macro factors and Micro factors. In micro factors there are six factors:

- Customers,
- Input or suppliers
- Competitors
- Public
- Marketing and media
- Talent

Similarly in macro factors there are five more factors mentioned as:

- Economic factors,
- Political /legal factors,
- Technological factors,
- Social factors
- Natural factors.

The same internal factors which affect an organizations performance can also affect externally also. Due to that we can say that both external and internal factors affect an organization performance equally. It can place positive and negative effects on the performance and service provision of an organization. Keeping in view the significance of internal and external factors influencing an organization, as well as on the basis of responses identifying external factors as determinants of the performance

of CDA, it has been taken as a main theme of the study; Under the main theme, “influence of external factor”, there are five sub themes: political influence, media influence, and change in policies, natural disasters and clients (influence of clients).

Sub theme I: Political influence

Political influence is one of the major reasons in any countries policies Implementations. Similarly for any organization a country’s political situation do effects. According to a respondent, “*If a country’s political situation changes the policies of effective water provision also got affected.*” It implies that, because when a new government got into power it will dismissed the old government policies in mostly cases. Due to that it cost the organization in both physical and financial ways. When a new project of water management and provision got approved the authorities starts works on that to make it accomplished in the given time period. And for that purpose they also make sure to use financial resources as given them by authorities to make that project completed. Pakistan’s political system always has a past in which mostly governments did not complete their whole tenure due to different circumstances. And it also causes the policies in the sense of their fulfillment. Because when a new government emerges it changes or stops whole policies made by previous governments. Except from that there are some rules and regulations the government which plays an intellectual role in the fulfillment of any project by an organization. These laws and rules are formed by specific committees under the supervision of higher authorities. And these are made under deliberation of respected people. These laws can affect both positively and negatively. If the rules are in the favor of policy it will be rewarded with more funds and technology which make that policy effective. According to respondents. Technological factors are also important in the improvement of business of any organization. If an organization uses new

technology it will improve the services provision of that organization. With the new technology there will be more awareness of that technology among the workers for that purpose training of employees is also very necessary. And if the policy goes against the organization it will affect it negatively. Due to that in most cases it got suspended as well. And that's not in the favor of both service provider and receiver equally. Thus political influence, being one of the external factors, plays major role in setting the priorities of a governmental organization.

Sub theme II: Media influence

According to F. Parveen (2016), media has significant impact on any organization's performance. Social media is more powerful recently. Social media impact a company, complements customer service, relationship constructing, value discount (advertising, communicate, and customer service), advanced logo visibility, corporation picture and competitive role. In addition, in keeping with a respondent, "outside stakeholder together with media does shape conduct of officials." Social media has had a tremendous impact on corporations. Structures which include Twitter, YouTube and Facebook are used to no longer simply promote manufacturers and put it up for sale new products but are also effective media that offer customer support and solve disputes. At the same time as a small commercial enterprise owner does no longer usually need to rent a separate social media crew, some body of workers contributors should be adept in deciding on and using one or greater systems. Similarly, these group numbers will need to be flexible sufficient to balance off-line work responsibilities with obligations associated with the 24/7 nature of on-line lifestyle (Petersen, 2019). Social media enables open communication, which enables organizations to understand purchaser desires and motivates them to respond proactively and successfully to those needs. For any generation to be successful and to

have an effect on organizational overall performance, it must be well adopted with the aid of companies. With growing and giant usage of social media, interest inside the factors that contribute to a success organizational integration of social media has additionally extended. while preceding research has investigated technology adoption in lots of contexts and has diagnosed numerous factors that lead to various technology utilization, social media is in contrast to every other IT innovations or net-based totally structures. Social media is a greater open and public-orientated device, which has both blessings and downsides, however the volume to which social media blessings businesses remains not clean. therefore, the authors of this observe explored the technological, organizational, and environmental elements that would have an effect on the adoption of social media in organizations, and tested the blessings of introducing social media into organizations (Tajudeen, F. P., Jaafar, N. I., & Ainin, S. 2018). Thus, keeping in view the significance of media influence as an important factor in evaluating the performance of CDA towards water management, based on literature as well as answers of respondents, it has been taken as sub theme.

Sub theme III: Change in policies

According to a responses of the study, one of the gap in effective water management of CDA is abrupt changes in policies. Such as, a respondent commented that “*We have policies but they need amendments.*” Another respondent identified that, “*We have policies but we don't have funds to implement those policies.*” It is seen that every policy has various loopholes, thus an effective policy is very necessary for effectively running of any sector of an organization such as water management. Governments establish many guidelines and policies that guide corporations. some rules, like minimum salary, are mandatory, at the same time as other guidelines might also have an impact on your business indirectly. organizations need to be flexible

enough to reply to changing guidelines and regulations. this is authentic not handiest on the national level but more domestically as well, as states and municipalities have their very own units of rules. certainly, there are also international treaties which could have an effect on the manner organizations do commercial enterprise (Williams, 2019).

Sub theme IV:Natural disasters

Natural disasters are catastrophic events that result from processes that occur without human intervention (Harrison, 2018). Natural disasters are one of the main and powerful forms of external factors because we can't change them but we can change policies according to them. According to a respondent, "*natural disasters also prove to be harmful for effective water management.*" Natural disasters are unexpected forms of external factors. Mostly the earthquakes, coastal hurricane, wind and low line areas like flood, natural disease (corona virus), mountain volcanoes eruption, climate change, population growth, wars and technical innovation. The occurrence and intensity of natural disaster vary from country to country. Natural disasters put significant impact on a country's business and economy. The main effects are supply chain disruption, communication barriers, damaged buildings, loss of equipment and personals and loss of clientele. Natural disasters can have a life changing impact on people life (sharieff, 2018). Similarly due to natural disasters the physical loss of utensils of service provision occurs and due to that service provision can be delayed or stop. For example if the pipelines of water provision got break due to a hurricane or earthquake the provision of water will be stopped. The second effect natural disasters do mainly can be communication barrier between organization and receivers. Because if they both don't interacts there should be no information that the service is given properly or not. Feedback is very necessary in any service provision betterment. The

third main effect is loss of buildings and loss of personals in which if there is not proper platform to operate an organization or persons to run that organization it will obviously affects the service provision. natural disasters lead to the loss of shoppers as well due to the fact people circulate away from the affected area. it's far worth noting that the ones who continue to be often spend their money on rebuilding their houses and organizations. which means precise institutions which includes leisure spots will see a drop in the quantity of shoppers visiting them. damaged items also are another effect of corporations. based totally at the above text from the literature in addition to responses, CDA's overall performance closer to water management is not just affected by human incapacities, but also by means of natural factors.

Sub theme V:Clients (influence of clients)

The most fundamental factor is to satisfy the needs of customers. According to a respondent, *"Sometimes delays occur due to some technical issues."* Similarly another commented that *"Timely services are provided but still citizens are not satisfied"*. It is obvious that if an organization is providing services to customers than their feedback is most important also. Customers vary from person to person in terms of their needs and demand and also what they exactly want. If any organization figure out that what its customers want than it will be beneficial for both organization and customer in sense of needs fulfillment and business growth.

Influence of internal factor:

According to El-Gohary (2012), the internal factors determine how the organization moves forward, both as a self-contained organizational entity and in response to its external environment. Why does an organization exist? what's its reason? Answering these essential questions describes an business enterprise's venture. A a success

employer has a clear experience of its remaining purpose and is aware of how it intends to satisfy that reason. Steve Jobs' original undertaking assertion for Apple is a great example that describes in a few phrases both the corporation's final intention, "To make a contribution to the world," and the way it intends to reach that goal, "through making equipment for the mind that advance humankind." fantastic leaders inspire and direct. frequently the way they try this maximum persuasively is by using instance. After 30 years of brutal and setting apart imprisonment, Nelson Mandela returned to South Africa to lead the us of a. it'd have been understandable if upon gaining strength Mandela had retaliated for the brutality of South Africa's Apartheid regime. rather, he endorsed verbal exchange, information and forgiveness. consequently, South Africa achieved independence with a minimum of violence and retained and applied the talents of most of the people of its citizens. a hit corporations thrive on strong communicate practices, in which teams and team leaders talk freely and frequently to enhance outcomes. This -way communication up and down the hierarchical shape extends from pinnacle to backside. agencies with communicate deficiencies regularly have rigid leadership structures that damage consider. At one time, most corporations had exceptionally hierarchical systems, with many layers of management and control defining the corporation from top to backside. greater lately, there may be a growing know-how that organizations with flat structures – few hierarchical layers from pinnacle to backside – outperform organizations with hierarchical structures. W. L. Gore, a noticeably a success global materials technology corporation that is centered on discovery and product innovation, has more than 10,000 personnel, but simplest three hierarchical tiers: a democratically elected CEO, a few group heads and every body else. mastering is one of the maximum essential human activities and accounts at once or in a roundabout way for the fulfillment of

any company. As technological advances result in quicker fees of trade, a success groups need to find a way to respond that encourages innovation and builds into every worker's enjoy the opportunity to research and discover.

modern-day most a success businesses, like Google, Apple, Amazon and the cluster of organizations led through Elon Musk, are basically gaining knowledge of businesses. Musk's willingness to discover areas where he is not already an professional has given him a high-quality gain due to the fact what he is gaining knowledge of in one subject regularly has an immediate application in any other.

Sub theme I: Unfair recruitment

According to Kermit burley an effective selection process improves the chance of hiring the right person for the right job in an organization. An effective recruiting process leads to better company results. Financial success is ensured when the best people got select, trained and hired. An organization gives better results when an employee knows how to do their job better .it also helps to attract new people when your organizations reputation for selection is good. According to the one respondent *“there is no proper way to select better persons”, “no proper check and balance on the employees”*. That is obvious that if there is no way to hire a suitable person for a post in an organization then the quality of service provision is also not ensured. There should be proper way to hire and trained people for the better service provision and quality assurance.

Sub theme II: Accountability (to mayor)

MCI is responsible to give feedback to the mayor of Islamabad .According to respondents *“we are responsible to the mayor”, “Of course, MCI is responsible to*

mayor's office", "and we are directly responsible to mayor". It shows that MCI is accountable to mayor of Islamabad which means that the organization has not freedom to take steps for the betterment of service provision as well as for organization own itself. It also effects the proper provision of resources to the service receiver properly and timely.

Sub theme III: Biasness

Biasness in any organization leads to the negative relations between employees and owner. *According to the respondent "there is biasness in the organization"*. This shows that old employees have more preference then new employees as like other government organizations.the old employees do decrimination with the new and young employess which is not good for the better service provision.

Sub theme IV: Inappropriate utilization of resources

According to the respondents *"water leakage is one of the major causes that hinder effective water management"*. *"Theft of water is also becoming the issue for us Old methods are being used"*. *"People have boring system in their homes"*. These are the three points which relates the inappropriate utilization of resources. Due to the old methods of water provision there is issue of water leakage and that's why proper service provision is being lacked. Similarly in Islamabad when people don't get proper water provision mostly people do boring system in their houses that's why the underground water table is also getting affected.

Sub theme V: Weak implementation

According to the respondents *"Policy is properly formulated but not implemented"*. *"We have policies but they need amendmets"*. *"We have policies but we don't have*

funds to implement those policies.” these are the responses from which we can just find that the organization is trying to implement their policies but due to some internal and external factors they are not able to provide timely services.

Sub theme VI: Lack of timeliness

The most fundamental factor is to satisfy the needs of customers. According to the respondents *“We are trying our best to provide timely services”*. *“Timely services are provided but still citizens are not satisfied”*. The organization is trying to defend itself by giving the responses like that in which they totally think that they are providing services but the service receivers are not satisfied from that.

Sub theme VII: Technical issues

According to a respondent” *Sometimes delays occur due to some technical issues”*. There is also a factor of technical issue which causes delay in service provision and its quality also .Technical issue can be caused by both internal and external factors for example natural disasters, old machinery ,old pipelines etc.These issues need to be addressed properly for the betterment of organization as well as the service receivers.

RQ 4 How quality of domestic water supply and effective utilization of the scarce resources can be maintained?

Main theme: Properly utilization of resources

According to Reiss (2019), useful resource usage refers back to the technique of making the most of the resources available to you with the intention to acquire the goal which you want to or, on a personal the front, your individual task and the usage of your sources for the equal may also be called useful resource usage. Water bureaucracy the premise of all life on the planet and is the most number one primary foodstuff for all sorts of civilization. this is why very high standards are set for the quality of consuming water. Water sources are available many bureaucracy, but the 3 foremost classes are saltwater, groundwater and floor water. Water sources are sources of water which can be useful or doubtlessly useful to people. it's miles important due to the fact it's miles wanted for existence to exist. Many uses of water include agricultural, industrial, household, recreational and environmental activities. without a doubt all of those human makes use of require fresh water. In city like Islamabad the water is a scare resource that's why the proper provision is not making sure. The resources are mostly of two types the rain water which is stored in dams and the underground water but these both ways are not enough for the supply because the demand is much more than that. There are certain policies to store the water of rain but due to the some internal and external factors that can't be possible. Similarly the underground water also getting less due the citizens doing boring system .there should be proper utilization of these scare resources to maintain the balance between demand and supply and also for better service provision.

Sub theme I: Controlling water leakage

Water leakage is the most important issue in not the provision of proper services. Because there are resources which are already not enough and also with that the leakage of water pipelines also making delay in service provision. According to the respondents: *water leakage is one of the major causes that hinder effective water management*". *"We are working with old methods"*. So from these responses it is clearly mentioned that the *water leakage is an issue and this issue is due to following the old methods. Because the pipelines are old and they are getting broke day by day that's why the mostly water got waste and there is a big gap between demand and supply.*

Sub theme II: Overcoming fund issues

According to respondents *"Fund are not adequate", " We have policies but we don't have funds to implement those policies"*. The next major issue is that there are fewer funds and the organization needs more for the new projects and policies. There are policies but they are not getting implemented properly due to the fewer funds. It can also be a cause of the usage of old system in offices that there is not proper check and balance in the organization on the monetary resources. There should be more funds to overcome the issue and also to have check on the utilization of funds that they are getting used properly and for adequate purpose.

Sub theme III: Checking theft of water

Water theft is unlawful tapping of water supply systems. collectively with losses from water leaks in the piping, water theft is one of the important elements .According to a respondent *"Theft of water is also becoming the issue for us"* Theft of water can be seen in two different school of thoughts in from one said that the water is necessary and can't be priced but the other think it is a commodity and can be charged. Similarly the water provision is not being ensured by the organization that's why many people are doing water theft. Old way of water provision is also a cause because from mostly places the pipelines are broken and can't be fixed due to the

lack of funds that's why public take advantage from that and stole water from those points. To reduce that issue there should be proper and timely check on water stealing issue as well as fix those points which are broken. And ensure the water provision to reduce this issue.

Sub theme IV: Properly utilization of scare resources

According to the respondents, *“There is shortage of water which influences effective water management”.* *“Scarcity of water. 60 mgd is available while required is 130 mgd”* water shortage is the geographic and temporal mismatch among freshwater call for and availability. weather exchange, which includes altered climate-patterns (together with droughts or floods), deforestation, improved pollution, inexperienced house gases, and wasteful use of water can reason inadequate supply.

1. Growing water filtration structures. it is one aspect to have access to water, and it is another to have get right of entry to to water this is safe to drink
2. Promoting water stewardship
3. Protecting wetlands
4. Improving irrigation efficiency
5. Growing water storage in reservoirs.

Sub theme V: Balancing fund and supply

According to a respondent *“There is demand/supply issue. Supply is less whereas demand is high.”* there are basic issues in which the funds are not being provided that's why the supply of resources is also not being ensured. The funds are the main issue for different organizations as well as MCI also. The funds are the cause of less new projects and old methods are being used. The issue of provision of fund should be addressed as well as the proper use of fund also. If there

are adequate funds then the new projects will be implant and there will be balance in demand and supply.

Main theme: providing technical and training assistance

Technical assistance (TA) is the system of presenting targeted aid to an enterprise with a improvement want or trouble. it's far typically known as consulting. Technical help is non-economic assistance provided through neighborhood or worldwide specialists. it can take the shape of sharing data and know-how, guidance, skills training, transmission of running information, and consulting services and can also involve the switch of technical statistics. these are a few styles of technical help, application exams, evaluations and evaluation, Curriculum improvement, schooling methodologies and substances improvement, community needs exams, grant writing, application improvement and implementation, Tribal, organizational and community strategic making plans. Technical help enables groups to expand greater powerful establishments, legal frameworks, and guidelines to promote financial stability and inclusive increase.

According to the respondents, " *Adequate Training is not provided to the officials*".

"*No proper and timely training is provided*". Not proper training is being provided to the employees of CDA which effect the water provision as well as not being using new project and water restoration. There should be properly and timely sessions of training which will help in better service provision and also help in the usage of scare resources of water. The assistance can be from different government and non government organizations also to help the organization.

Sub theme I: organize seminars

According to a respondent, “ *Seminars are not properly arranged for training* ” it shows that there are not proper seminars or sessions are being arranged that’s why there is less awareness in the employees on how to use new technology and also how to use scarce resources in proper way and restoration of resources also. There should be proper sessions and seminars in which there should be addresses the most important issue and it will help in balancing between demand and supply.

Sub theme II: workshops

According to a respondent, “ *Timely sessions are not arranged for workers by the officials (engineers)* ”.there are not timely sessions are being arranged to make workers aware of new technology this is causing delay in service provision and also affects on funds. There should be proper workshops arranged for the employees that will help them in better service provision.

Sub theme III: surveys

According to the respondents, “ *No survey has been conducted since last three years* ”. “ *We have no policy of getting feedback* ”. There are not proper way to get feedback from people on service provision .since last three years not any a single survey is being conducted and even the organization does not make a policy to get feedback from the service receivers. Some people are giving complaints by themselves in different offices of MCI for the better service provision but the organization does not have its own portal for the complaints. There should be ways to get public feedback and also surveys should be conduct to know the issues of the people and then to make sure to address those issues properly.

Main theme: collaborating with private organization or NGOs

businesses can improve their social and environmental performance and discover new marketplace opportunities via partnerships with NGOs. The know-how, expertise and skills of NGOs and companies are distinct and may be complementary; together, NGOs and businesses can frequently accomplish greater than they may by myself. There are some of reasons for which NGOs and the personal region ought to collaborate and shape partnerships. these are the approaches how the agencies and NGOs can collaborate:

- embody distinction
- Assign a champion and provide her/him authority and decision-making potential
- Make NGO engagement a part of the middle commercial enterprise
- Plan for the relationship to evolve over the years

There are some blessings to be participating with NGOs that are given under:

- they have the capacity to experiment freely with modern methods and, if important, to take risks.
- they're flexible in adapting to local conditions and responding to neighborhood wishes and therefore capable of increase incorporated tasks, as well as sect oral projects.
- They experience correct rapport with people and may render micro-assistance to very negative humans as they could pick out those who are maximum in want and tailor help to their desires.
- they have the capacity to speak at all degrees, from the neighborhood to the top stages of government.

- they're capable of recruit both experts and incredibly influenced team of workers with fewer regulations than the authorities.

Sub theme I: working on projects

According to the respondents, *“Some NGOs and private organization provide us projects of water management”*. *“Certain organizations do help and support CDA and MCI but do not solely responsible”*. from these responds we can tell that the NGOS are helping in the better service provision but not solely responsible.CDA and MCI are somehow dependent on those organizations for example sailani foundation is helping them in water provision etc.the NGOs are also helping them in building new projects and dams for better water provision. There should be more collaboration with that type of organizations to solve the issues and for better service provision also.

Sub theme II: funding

Funding is a main issue in the organizations late and not effective service provision .because there are not adequate funds available. According to the respondents, *“NGOs are somehow supporting”*. *“NGOs help in terms of providing different projects or funds”*. It clearly shows that with other type of help the NGOs also help CDA and MCI in funding. That is of two types no one is that NGOs are collecting funds by themselves and then help them in different projects and on the other side they are helping in the way of refereeing the projects to other international organizations to help the CDA and MCI in both technical and funding ways .it is necessary for the timely and better service provision that there should be proper and enough funds.

Sub theme III: Trainings

According to some respondents, *“Yes, certain organizations do come and support”*. *“Not provided on regular basis”*.trining and technical assistance is very important in every

organization time to time after getting feedback from service receivers.but in that case not even a single survey got conducted as well as trainings are also not being provided to the employees.thatswhy different NGOs are working on that part by giving training and timely sessions to the employees to get them familiar by the new technology and new ways of better service provision .that is a good step it is helping the organization to better service delivery. These kinds of steps should be taken further also.

There is some good news. In fact, one study found that water scarcity can be reduced significantly by 2050 if we are committed to making great, but practical changes.No quantitative problem of water scarcity, especially in developing countries.the population ratio for water resources increases as captured by concept.it water barrier is interesting to note however that in rich countries the availability of water in the river system has increased not decreased.thus may exist potential overcome some problems of water scarcity through improved skills in water management.

Secondly there is the potential for conflict that large quantities of water than the water quality issues.in the latter case, it appears that the state has been able to find a formula to deal with the issues of pollution and regulatory questions.thus appear to have a record of finding solutions.

Discussion on capacity building of CDA:

if we're devoted to poverty discount, to improve fitness and residing standards of our people, to increase productivity levels and if the social exclusion should be minimized, then there's a want for the favored body a coherent policy and investment in the sector WATSAN underline the quantity and pleasant of water troubles and environmental sanitation. national water and

sanitation policy record gives a broader framework of movement. but, the policy need to be revised after each 5 years including unbiased mid-term evaluation and post.

Water deliver and management companies must have the obligation to maintain water exceptional in water distribution gadget to the patron degree that booster chlorination ascertained at one of a kind stations. function of improvement partners and the non-public area is important for improvement in WATSAN region. The authorities need to inspire the personal sector to provide offerings WATSAN as within the case of the supply of different social sectors, e. g., fitness and education.

Provision of WATSAN is the felony responsibility of provincial and neighborhood organizations sktor, consequently, policy makers and Provincial and nearby government representativesl government must be aware of the deteriorating situation and want guide to elevate stock WATSAN expenditure in national GDP. underneath the neighborhood authorities machine, 25% of the total finances is sure to spend the Provincial improvement thru Citizen community boards (CCBs). build consciousness about the results through CCBs can bring about a exchange in living conditions poofs. Society must inspire to spend via CCBs for their own advantage.

government and the personal zone to guide micro-credit score scheme handiest sales-producing possibilities. they also must remember the release of micro-credits to humans and / or families to put money into their infrastructure. test is successful in Bangladesh and India; which ultimately enhancing the health and living requirements. El authorities need to help price effective and coffee preservation prices WATSAN schemes. further, sufferers of home subsidies to underline the consuming water treatment at family level consumerl need to be taken into consideration in place of spending quite a few cash within the scheme of complex and steeply-priced.

leakage and wastage of water should be minimized cause 30 to 50 percent loss of total drinking water supply. awareness ought to be deployed to minimize activities consisting of thinking and wasteful use tap water for washing motors or watering lawns and home gardens aren't necessary. each folks ought to understand that the little water used means less waste water. For effective attention, academic establishments, mosques, inclusive of the mass media have to be used to build attention of the importance of the pleasant and quantity of water among customers.

water supply organization have to set up meters to fee clients on a "pay as you operate". public zone is to present sufficient interest to not noted WATSAN sub-sectors, i. e. waste water remedy and waste management. If no instantaneous action will be taken to triumph over this problem, the remaining water amount and exceptional will have an effect on the health, education and financial zone.

Environmental protection organization (EPA) ought to make sure a higher treatment coverage, underscoring the safe disposal of wastewater from families, commercial and business units prior to utility to the mainstream, and the development of the drainage network. As this has implications for the high-quality of water for consuming (specifically, downstream). The WATSAN, as given inside the PRSP, collective expenditure gift that doesn't tell proportionate water and sanitation one after the other. consequently, to assess the effect of spending on water and sanitation coverage in isolation isn't always viable with out making assumptions.

Developing a water filtration system

it is one factor to have get right of entry to to water, and it is any other to have get right of entry to to secure consuming water. effective water filtration structures help make certain clean water can be positioned to appropriate use-not make us sick. that is one motive why businesses

international are committed to developing a water filtration gadget advanced produce natural water free of micro organism, microbes and different contaminants, and convey clean ingesting water as many colleges, hospitals, places of work, and homes as possible.

Promoting water management

It takes every network inside the global to reduce the danger of water shortage. Now, more than ever, the sector needs a waiter water in all its bureaucracy. whether or not it means taking shorter showers, putting in low-flow lavatories and gather rainwater for the lawn at domestic; reusing graywater and put off water leakage and other inefficiencies in colleges and offices; or spend money on electricity and water discount of ongoing tasks by the enterprise, the management of water is a large a part of the puzzle in terms of restricting water scarcity.

Protect wetlands

Remember when we noted that wetlands are a natural water filtration device? nicely, that means they've a main role in amassing and purifying water. Wetlands are disappearing at an alarming price, however to maintain the wetlands will have wonderful effects. presently, the worldwide treaty called the Ramsar conference has helped more than 2,000 protect wetlands. greater aggressive conservation measures vital if we want to wetlands to assist our efforts to lessen water shortage.

Increased water storage in reservoirs

weather trade is increasing the frequency of droughts and floods. by means of increasing the capacity of our reservoirs can seize and garage flooding, to prevent damage to the sea, wherein he have become salinated and more difficult to treat. This saved water can be used to offer water for the duration of the dry season. within the US, many states (which includes California and Wyoming) is thinking about enlarging current reservoirs or building new ones.

at the same time as the subject of water scarcity can also find it quite daunting, there are quite a few expectancies. The future of our planet and water sources that aren't written in stone. If we come together to put money into decreasing water scarcity, we will help make certain that human beings can rely on a wholesome water source for many years to come.

Chapter 5

Conclusion And Recommendations

5.1. Conclusion:

This research was aimed to highlight the issues of mismanagement of water resources and effective utilization of water resources. For this research qualitative method was used. In qualitative method thematic analysis by Braun and Clark was carried out. According to the findings major factors contributed to mismanagement of CDA authority are categorized into main factors, training and technical assistance, institutional independence, political and administrative accountability, service receivers, influence of external factors, influence of internal factors, proper utilization of resources, providing technical and training assistance and collaboration with private organization or NGOs.

And under these main factors there are sub themes which are identified as seminars, informal guidance, timely sessions, authoritative, compliance, change in government, change in policies, accountability to mayor, technical issues, resources, communication gap, political influence, media influence, natural disasters, clients (influence of clients), biasness, inappropriate utilization of resources, weak implementations, lack of timeliness, technical issues, controlling water leakage, checking theft of water, balancing demand and supply, overcoming fund issues, proper utilization of resources, surveys, workshops, working on projects, funding and training.

5.2.Recommendations:

Based on the findings of the thesis, following recommendations are given to ensure effective water management by CDA.

5.2.1.Recommendations for the organization:

1. adaptation isn't always sufficiently taken into consideration in water control planning and calls for increased inclusion of a spread of stakeholders that are currently poorly incorporated in making plans exercises.
2. A prerequisite for a success adaptation motion is an extended coordination at the vertical level between government and stakeholders in addition to at the horizontal degree in different coverage and monetary sectors.
3. Participation of actors from distinctive sectors or management stages requires advanced communication and accelerated transparency. The inclusion of stakeholders is a aid intensive process whose gain is the improved satisfactory, attractiveness and possession of the developed effects.
4. The water control initiatives contributed to growing stakeholder possession and capacity that caused multiplied water-applicable moves being implemented because of stakeholder cooperation as well as to the leveraging of latest investment sources.
5. New scientific and technological tendencies can improve the green use of available water resources by using decreasing the emission of pollution into water our bodies and ensuring the microbiological safety of ingesting water.
6. There is a need to reparation of a depleted infrastructure and also there may be use of new technology (pipelines, machinery) for better distribution of water.

7. More funds may be allocated to CDA for effective water management. There may be collaboration with NGOs for fund raising and technical assistance.
8. Timely training sessions may be conducted.
9. Hiring may be merit based.
10. Feedback portals may be created for citizens to file their complaints and give feedbacks.

5.2.2 Recommendations for citizens:

1. Wastage and leakage of water should be reduce inflicting thirty to fifty percentage wastage of the entire intake water deliver. Awareness should be propagated to attenuate the thoughtless and wasteful activities just like the usage of running water to wash automobile or irrigating the lawns and domestic garden unnecessarily. Every folks should comprehend that abundant less water used approach much less effluent produced. For powerful recognition, instructional institutions, mosques, including mass media must be used for building consciousness just about the importance of water nice and quantity some of the users.
2. The water supply businesses ought to installation meters to charge the purchasers on the basis of “pay as you operate”. It’ll assist in water control.
3. Boring in houses can be prohibited because from uninteresting device the extent of underground water gets lower.

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INSTRUCTION SHEET FOR QUESTIONNAIRE

Assalam o Alikum

Dear Respondent!

This questionnaire is in pursuance of M.PHIL research on analysis of institutional capacity for effective water management by CDA in Islamabad .The responses will be highly confidential. By accurately replying to the question, you are helping in the better provision of water through the results of the study.

You can also ask queries (if any) at munazzakhan113@gmail.com

YOUR PARTICIPATION IS HIGHLY APPERCIATED.

Munazza Sajid

NUML

ISLAMABAD

Name and signature _____

Thanks

INTERVIEW GUIDE

This interview guide will be used during interviews with the metropolitan corporation Islamabad members the CDA members and CSO's. This will enable the researcher to collect the relevant data for this study.

Sr. No.	Questions
1.	What are the factors which effects CDA's water management in Islamabad?
2.	Do you think that CDA's water management is influenced by the external environment?
3.	Is CDA giving adequate training to their employees for better and efficient performance to deal with management of water related issues?
4.	To what extent national programs on water management are properly implanted?
5.	Is private sector NGO's supporting for better water management?
6.	Is technical assistance provided to CDA officials for efficient performance enough?
7.	What is your opinion about the timeliness of service in CDA? Do always keep promise, showing the desire to help if customers face problems, provide services right / right from the start, providing services in accordance with the time promised, and

	avoid the occurrence of errors such as errors recording?
8.	How do you assure meeting the needs of customers? How do you measure their satisfaction from your services? Have you conducted customers' survey in last three years?
9.	To whom CDA office is responsible?
10.	Does your institution have a written water policy regarding service in your office? If yes, whether the policy has been implemented? If not, why?
11.	Are there any other agencies (public or private) that provide the same services provided by your office? Does the presence or absence of these institutions affect the way in this office?
12.	What innovations are in place for effective water management since last three years regarding administration, procedures or technology?

Focus Group GUIDE

This focus group guide will be used during interviews with the citizens or service receivers of Islamabad. This will enable the researcher to collect the relevant data for this study.

Sr. No.	Questions
1.	What is the frequency of water supply? Is this frequency sufficient for your needs?
2.	Is the quantity of water that you receive (from your main source of water) adequate?
3.	Is water available (from your main source) throughout the year?
4.	In your opinion, whose responsibility is it to ensure a community has access to clean water for drinking and sanitation?
5.	In your opinion, whose responsibility is it to ensure clean water for drinking and sanitation is provided to those who currently do not have it?
6.	When considering all of your daily activities which require water, how much do you feel a restriction on water consumption would affect your lifestyle?
7.	Would you be willing to pay an additional amount on your monthly bill in order to ensure a sustained supply of water for yourself?
8.	How concerned are you about the lack of safe drinking water in Islamabad?
9.	<i>Are you experiencing water shortages in the area where you live?</i>
10.	<i>Are you aware of any significant water pollution in the area where you live?</i>

