



Palestinian Water Authority
State of Palestine



Water Authority Strategic Plan

2016-2018

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Definitions

The terms and words used in this document have the following connotations and meanings unless the context would imply otherwise.

Water Supplies: Includes all that has to do with surface and groundwater resources. Also, they include all available distribution systems i.e. pump, water distribution stations and gravity. Moreover, they consist of distributing water for different usages (potable water, agricultural water and water used for recreational (tourism)). In addition, water supplies include water facilities that include water networks and water reservoirs

Water Facility: Any facility or construction that is necessary for extracting, treating, and providing water. Also, it includes facilities that are used for collecting, treating, and sanitizing wastewater. In addition, water facility that includes constructions for storing water.

Water resources: all water resources that are located within the Palestinian land. Hence, water resources include conventional surface or groundwater resources. For example, water flowing out of springs: hot springs, wells, rivers, lakes, and any other area that collects water. Furthermore, water resources include any non-traditional water source such as wastewater, desalinated water, and brine water.

Contamination: Any change in the quality of water or its constituents. Such contaminations may cause harms to the health of the humans and to the environment.

Wastewater: Water resource that is a by-product of using the original water. Hence, wastewater is not considered to be suitable for usage, besides reusing purposes after treatment.

Foreword: Statement of H.E Mr. Mazen Ghunaim, the Head of the PWA

Since it was established in 1996, PWA has been diligently working on securing the Palestinian water rights and expanding the water provision services to cover all Palestinian communities through implementing many water and wastewater projects with a firm belief that water is an indispensable component of the Palestinian economic, social and political fabric.

The water sector in Palestine has been facing many restrictions and obstacles by the Israeli occupation which has resulted in underdevelopment and lack of proper water and wastewater infrastructure in general.

The strategic plan is a basic component prerequisite for the process of development and advancement of institutions and communities that stride for the improvement and development of services. This strategy is so important in light of the challenges and difficulties that Palestine is facing due to the occupation control over our national water resources and the scarcity of financial resources. That is why we should exploit these financial resources in the best possible ways and means in order to achieve our main objectives of managing the water sector in Palestine in an efficient and effective manner based on a sustainable economic and social bases.

This (2016-2018) plan is in line with the Palestinian Government attitude toward termination of the Israeli occupation and the establishment of an independent Palestinian state and in harmony with the government's sectoral plan and in compliance with the resolution (No. 4 of 2014) regarding the water law. Since this plan was based on scientific and professional bases and on the principle that participation is indispensable for the success of strategic planning, there has been continued participation in the process of preparing this plan by all levels and administrative units of the PWA which consolidates the culture of strategic planning and ensures that everybody take part.

We, by presenting this plan, hope that it will represent a roadmap for the work on the institutional level and we are confident that it will be a quality contribution and addition and we will work hard to execute it in the coming three years God willing.

Finally, I would like to thank all who participated in preparing this plan through efforts and constructive cooperation that led to this final document.

The employees of PWA in, particular are the ones to be credited with this achievement.

We are indebted to our partners in the World Bank for their support.

And to everybody who takes part in the development of this institution.

Eng. Mazen Ghunaim
Minister
Head of the Palestinian Water Authority

Introduction

Since the establishment of the Palestinian Water Authority (PWA) according to the Act no.2 of 1996, the PWA has been shouldering the responsibility of building and developing the water sector. Additionally, the PWA has been taking the responsibility of building and rehabilitating the damaged infrastructure through projects funded by donors' community. In addition, the PWA has been providing water and wastewater services to the Palestinian citizens; services that they had been deprived of by the occupation for decades.

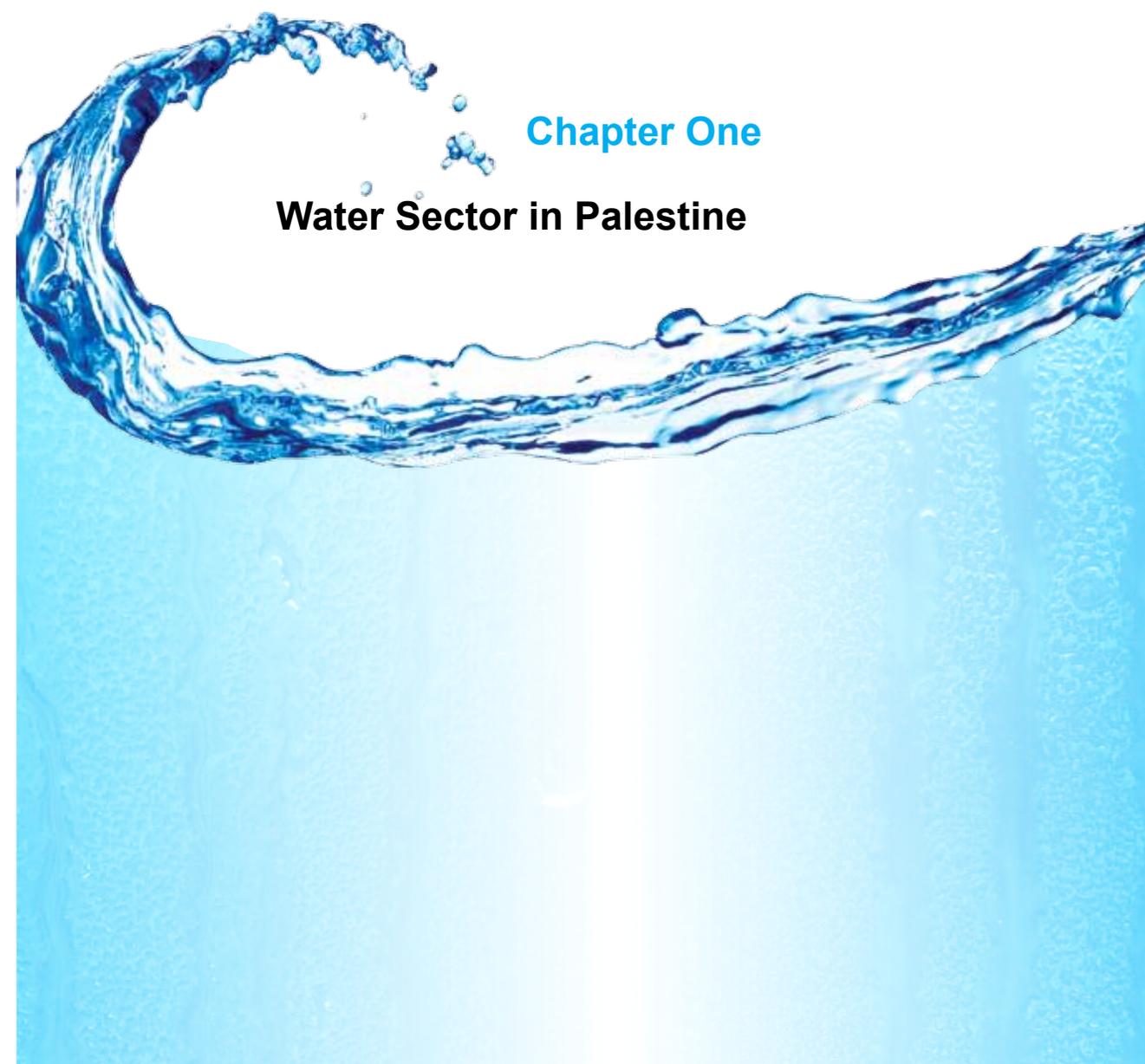
The water sector is one of the most vital sectors for the sustainable development at the national level. The Israeli occupation has deliberately neglected the development of the water sector in Palestine for decades. Thus, this has directly diminished the potentials for true development. Despite of launching the peace process and the establishment of the Palestinian Authority in 1994, the development of the water sector remained restricted due to the obstacles imposed by the Israeli authorities even within the signed agreements between the PLO and Israel.

The Israeli occupation has insisted on keeping the restrictions and obstacles in place that prevented the development and modernization of the water sector. This was deliberately done due to the high strategic importance of this sector in the sustainable development on one hand. Also, the Israeli occupation wants to maintain control over the water resources on the other hand. Thus, the Israeli occupation can exploit water resources to serve the development's requirements of the Israeli society while disregarding the Palestinian needs of water.

Despite of all restrictions and obstacles imposed by the Israeli occupation, the PWA has been able during the past years to utilize all efforts and water resources for the development of water and wastewater infrastructure. Also, the PWA utilizes all efforts and financial resources to improve the services provided to the citizens. In addition, PWA tries to increase daily the per capita consumption of water for the Palestinians like any other people of the neighboring countries. Furthermore, the PWA has strived to establish the concepts and principles of the comprehensive management of water resources. This has been done due

to the fact that the PWA strongly believes in the importance of the sustained water development and in the need to access to water. Also, the PWA strongly believes that it is necessary to provide water to all development sectors in Palestine, and to provide water for different developmental purposes including the domestic, industrial, agricultural and tourist uses and other important developmental sectors. The PWA is committed to provide water in a sustainable and safe manner to all sectors, constituents, and categories of the Palestinian society.

The PWA seeks to adopt concepts of strategic planning both in theoretical and practical driven. This is being done because of the PWA's awareness of the importance of long range and mid-range strategic planning. Thus, there will be a reach of a real and precise implementation of the concepts of the integrated management of water resources in Palestine. Hence, water is considered as one of the scarce resource due to the connection of water uses with the agreements signed with the Israeli side. In addition, water is a scarce resource due to the control of the Israelis over the water resources. For example, the Israeli occupation restricts the freedom of the Palestinian institutions regarding the extraction and use of water resources. Furthermore, water is a scarce resource because of the scarcity of financial resources needed for investment in the water sector and its infrastructure. The restriction of the access to water and wastewater services is one of the factors that led to elevation of poverty rates in the Palestinian society.



Chapter One

Water Sector in Palestine

1.1 Challenges of the water sector

The water sector faces a number of major challenges. The most important challenge is the capability of the sector to construct and build institutions as prescribed by the new law issued in the mid-2014. Another challenge is the capability of these institutions to play their roles effectively and efficiently to implement the water Law. The biggest challenge here does not lay in the establishment of different institutions as prescribed by the law. However, the biggest challenge is in the ability of these institutions to undertake their responsibilities, to provide the services especially services related to developing the infrastructure. Thus, enough quantity and good quality water is being provided to different groups and categories of the Palestinian society. Therefore, PWA is required to directly work with these institutions in the next few years. Accordingly, PWA is demanded to work directly with such institutions. In addition, the PWA guarantees the building of these institutions capacity in different technical, financial, and administrative fields. Also, in any other related fields which guarantees providing the required services and to perform effectively and efficiently.

The PWA has been working diligently, since its establishment, on developing the infrastructure needed for delivering the water and wastewater services to different communities and sectors. The PWA was not alone in this field but essentially the local authorities and service providers have worked on the development of the water sector infrastructure in direct coordination with the PWA. The PWA has taken part in providing the essential financial resources through programs and projects funded by donor especially to the local authorities who were not able to get the funds needed for the development of infrastructure. The role of the PWA was very critical for the development of the infrastructure. Many local authorities and service providers had relied on that role to provide water and wastewater services to the citizens, other segments, and clusters of the community.

We can conclude that during the next years, the reliance on newly constructed facilities (under construction) or even local authorities and existing water departments is considered a risk. It is risky because of the effects of that on the quality of the provided services. Also, it is risky because of the effects on the capability of these facilities to provide integrated services including the infrastructure. The failure to develop the infrastructure is one of the most important factors that impact the quality of water and wastewater services. In addition, it may cause an increase in the cost of these services. Thus, increase the cost

leads to an adverse impact on providing the essential quantities of water and the comprehensive water and wastewater services to the Palestinian community.

Based on the above, the PWA must keep going with developing the infrastructure of the water sector. However, this should include developing the infrastructure of water and wastewater networks. This should be done within a clear mechanism for the management of the projects executing party and in coordination with the relevant parties. Thus, this should be considered as a transitional stage of implementing the law as a whole. Also, building the capacity of the institutions that has the developing of infrastructure within its domain, even though the law has not mentioned it directly.

There are increasing of demand on water and noticeably large gap between demand and supply in the water sector. Both of these factors are considered to be one of the big challenges that water sector will be facing in the next few years. The demand on water is consistently getting higher due to: the natural increase in the population and in the requirements for development and the limitation of the access to the water resources and its usages due to the Israeli hurdles. Another reason is the complication associated with requirements imposed by the Israeli side for obtaining a water extraction license. All of these factors make a big challenge. Thus, it is necessary to Look for innovated solutions for providing the needed quantities of water to different segments. Also, such solutions can help maintain a balance in the optimal usage of water in Palestine.

Despite of clearly defining the framework of the institutions of the water sector in the Water Law, there are still other partners with whom the water institutions can effectively coordinate ,taking into considerations their different strategies, interests and needs, such as the Ministry of Agriculture, the institutions that are interested in the development of the agricultural sector, in addition to universities, scientific research institutions, societies that are interested in environment, the Ministry of Local Government, Ministry of Finance, Ministry of Planning and Administrative Development, Environment Quality Authority and many other relevant partners.

For instance, the national strategy of the Ministry of Agriculture poses a great challenge for the PWA, where the national strategy of the Ministry of Agriculture concentrates on land reclamation and providing huge quantities of water for this vital and strategic sector which requires tremendous efforts by the PWA to

coordinate with the Ministry of Agriculture and to work together in order to provide the needed quantities of water for the agricultural sector.

1.2 Water Sector Reform Program

The Palestinian Government adopted in 2009 a program for reforming the water sector. This program concentrates on the principles of separation the executive tasks from the regulatory tasks in the water sector. Also, the program focuses to create separate framework to insure transparency, rational governance, and to improve performance and efficiency of services provided in this vital sector. This program is widely supported by the Palestinian Government due to its positive impact on the enhancement and development of the level of the services provided. The positive impact starts from separating of executive tasks from regulatory tasks on the governance level. Then, there is rearranging and organizing the management of providing water and wastewater service on the national level in the communities and to all sectors on the basis of the optimizing the use of water resources.

As a result of different studies that had been conducted on this issue, the new Palestinian Water Law was one of the main pillars of this program, and the legal framework of regulating the water sector which defines the roles and responsibilities of different institutions of water sector on all levels, have been re-drafted .The new Law represent a starting point towards regulating this sector and to improve the services provided. Thus, there will be a reach for an integrated and sustainable management of the water resources which is the backbone of the economic and social development.

The reform program has helped in the consolidation of the concept of the Strategic Developmental Planning in the water sector, where the National Developmental Plan has been completed up to the year 2032, and the Sectorial Strategic Plan (2014-2016) and finally this document which represent the tool through which the PWA will be able to achieve its national developmental goals and to steer the water sector towards the implementation of the Sectoral Plan for the next three years.

1.3 Structure of the Water Sector

The new Water law has issued a “Decree no. 14 for the year 2014 on water” in which it defined the institutional framework of the water sector where the regulatory framework of the water sector has concentrated on two main factors:

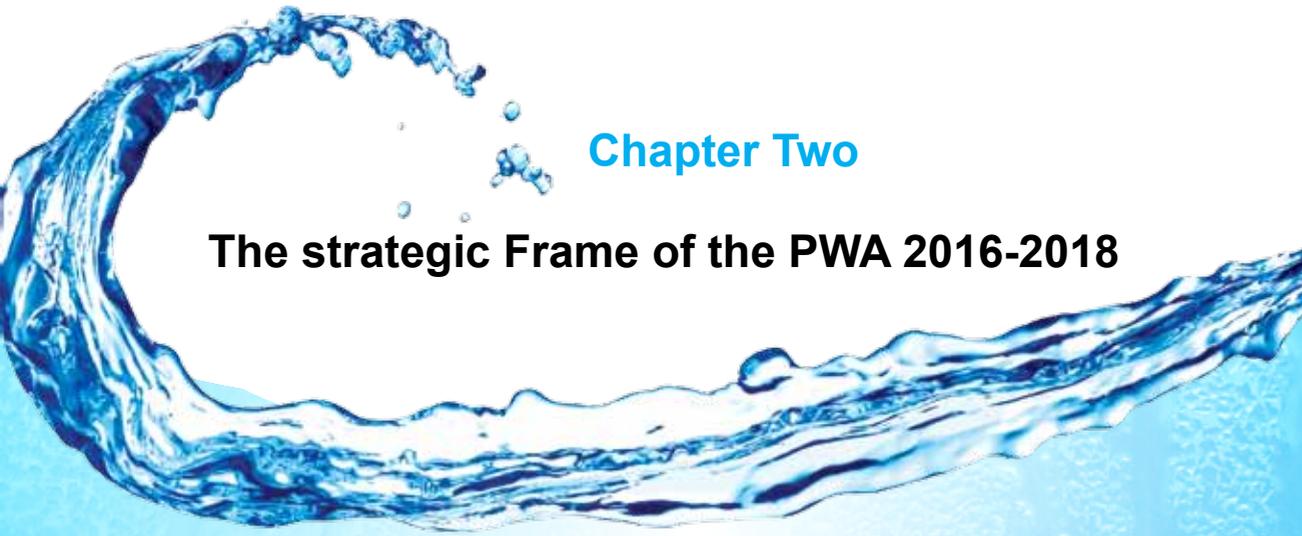
The first factor clarifies the institutional framework on the geographical level or the geographical coverage of the institution starting with the local level (the population community) passing through the regional level and ending with the national level.

The second factor of the institutional framework has taken into account the functional and regulatory tasks of the institutions within the institutional regulatory framework of the water sector in general. These tasks cover the regulations and legislations, policy and strategy making, monitoring and regulation, service providing to the end users or users of the water and wastewater networks on all different level.

The Water Law has defined the institutions that work within the institutional framework of the Water Sector. Thus, the Water law ensures the development of services and the optimal provision of services to consumers .

The Law has laid the whole responsibility on the shoulder of the PWA to build different institutions within the regulatory framework of the water sector. The PWA's role is not confined to the building of institutions but it also includes the continuous developing of these institutions and their capacity building. Thus, the PWA will make sure that these institutions are able to perform in the optimal way possible. Also, the PWA ensures that these institutions provide outstanding services to the all Palestinian water consuming sectors and those benefiting from the water and wastewater services. On top of that comes the Palestinian citizen and the local community in all clusters.

The PWA, among the new water sector system, shoulders the responsibility of laying the public policies and different strategies for the development of the water sector. Also, the PWA takes the responsibility to secure the water resources that are needed by the Palestinian community for different uses .The PWA also is responsible for the development and conservation of the water recourses. It oversee the coordination between different partners and institutions interested in water sector in Palestine and work with them in order to develop this sector for the national benefit .The PWA also is in charge of the regional and international cooperation for the development of the water sector which contributes in the Palestinian economic development.



Chapter Two

The strategic Frame of the PWA 2016-2018

Based on the above mentioned facts and analyses in this document, and by using a shared methodology of all regulatory units and the employees of the PWA and other relevant institutions, the PWA has developed the institutional strategic frame that enables it to activate its leading role in the development of the Palestinian water sector. Also, it enables the PWA to achieve the sectoral goals of this developmental and vital sector and which is considered a true lever of the national development.

2.1 Vision

The PWA has developed its strategic plan based on the VISION:

Sustainable and integrated water resources that can achieve the basic and developmental needs of the state of Palestine.

2.2 Mission

The mission of the institution represents the grounds for its foundation. A work team from the PWA has reviewed the institutional mission and modified to be as follows:

A public institution that strives to manage, develop and protect the water resources and its infrastructure in a just, integrated and sustainable manner in order to provide water that is suitable for different purposes which guarantees the protection of the environment and achieve the objectives of the development of Palestinian society.

2.3 Values

The PWA seeks to establish the belief in a number of values that has to be adopted in order to achieve a vision and mission of the institution and its strategic goals .These values are:

1. Strong belief in the leading role of women and working diligently to be gender-sensitive in all activities of the PWA.
2. Constructive interaction with all end users of the water sector services and work on improving the quality of these services.

3. Having a sense of belonging to the institution and the homeland.
4. Respect regulations and laws and work in a legal environment that is suitable for the Palestinian society.
5. Equal opportunities.
6. Shared management and team work spirit.
7. Transparency and integrity.
8. Outstanding performance and incentives.
9. Innovation, pioneering and creativeness.

2.4 Strategic goals and objectives

The PWA, seeking to achieve its vision, and in line with its institutional mission, is working to achieve the following goals and objectives in the next years:

First Goal: Develop and protect water resources using an integrated water resource management.

Groundwater is the main source of water supply in Palestine. There are four main groundwater basins in Palestine, three of which are in the West Bank and the fourth is in Gaza Strip. There are also valleys and streams and the Jordan River basin.

Despite of the availability of the groundwater basins and that the annual renewable abstraction of the groundwater basins exceeds 700 million cubic meters in addition to water from valleys, streams and other sources, the rate of groundwater extraction that is allowed to the Palestinian by the Israelis is under 100 million cubic meters per year. This is far below the demand quantity, which necessitates the purchase of additional water quantities for different purposes from the Israeli Water Company (Mekorot) in order to decrease the gap between supply and demand. Also, the purchase of additional water helps to secure additional water quantities to be used by the Palestinian society for different purposes. As a result, the achievement of water security at the short and long range requires developing and protecting the water resources and maintaining its sustainability. In addition, protecting the usage and the quality of water resources according to the principles of integrated management .This by itself is considered a main goal that the PWA seeks to achieve within the next yeas through the following strategic objectives:

1. Improve the effectiveness of water usage and supply.
2. Protect water resources from pollution and depletion.
3. Enhance and promote the principles of sharing and cooperation in planning, operation, management and knowledge.

Second Goal: Achieve justice distribution of water and wastewater services:

Due to the limited accessibility and to the restriction of extraction and use of water from the different water resources in Palestine, the Palestinian society in all its groups and categories has been suffering from shortages of water resources. Up to this moment the rate of the daily water consumption for the Palestinian individual (in the West Bank and Gaza Strip) is still far less than that minimum acceptable rates of the international charters and norms which aims at the abatement of poverty. Also, the rate is still far less than the water consumption rate of the neighboring countries. This rate in Palestine does not exceed 80 liter per person per day, while the Israeli settlers in the West Bank are enjoying a rate of daily water consumption that is more than four times that of the Palestinian individual. Despite the great efforts exerted by the PWA and other relevant institutions within the water sector, there are still whole Palestinian communities that are not served by water networks. Also, there are more than 20 clusters inhabited by more than 180,000 Palestinians who are suffering from the lack of water and wastewater networks in their communities. Besides, there is always the improper and insufficient capacity and funds for the maintenance of the existing networks and its development in order to reduce the loss rate. The loss rate in the existing water networks is higher than 32%. The PWA has the responsibility in the next few years to work on achieving equity in water distribution. Moreover, the PWA has responsibility to contribute in supplying additional quantities of water for the different developmental segments and sectors of the Palestinian society. Thus, this will lead to increase the amount of available water for individual consumption which is one of the national goals enlisted in the national plan and the sectoral strategic plan .The PWA can achieve this goal through the following defined strategic objectives:

1. Develop policies, strategies and integrated plans for the water sector.
2. Oversee and monitor the development of distribution systems at the local and national levels.
3. Development of regulations and policies related to the equity of distribution.

Third Goal: Achieve efficient management and good governance in the water sector

The new Water Law has placed special emphasis on the restructuring of the water sector and on the development of the institutional infrastructure of that sector. It gave the PWA the responsibility to direct the work and oversee the restructuring and building of efficient institutions. In addition, it made the PWA in charge of working with these institutions to enhance their capacity and to rehabilitate them for the benefit of the national interests.

The PWA started the implementation of the institutional building stipulated in the Water Law. According to this law, the first body of the water sector to be established is the Water Sector Regulatory Council. The role of the Water Sector Regulatory Council is to monitor the quality of water services provided by service providers at the distribution level. The PWA is in the process of building the National Water Company which will be responsible for the distribution of water on the national level. Also, the National Water Company will be in charge of delivering water to the service providers and the regional facilities. The PWA will be building service providers and the regional facilities through the restructuring of the existing water distribution services in coordination with the ministry of Local Governance and the existing departments of water and wastewater. The role of the PWA is not limited to building of institutions but it includes the continuous work with these institutions to enhance their level of performance. Moreover, the PWA ensures that these institutions are capable of providing high quality services that ensures the equity in distribution and water supply and to be beneficial to the national developmental process on all levels .Therefore, the PWA should achieve efficient management and good governance in the water sector through the following defined strategic objectives:

1. Establish and develop institutions working in the water sector at both management and distribution levels.
2. Build the technical and managerial capacities for the water sector human resources.
3. Achieve the concepts of the water sustainability and enhance the participation of the private sector in the management and distribution of water and wastewater.

Fourth Goal: Investing in organizational development and achieving the operational excellence of the PWA

The capability of the Palestinian water sector to achieve its goal depends on the ability of the PWA to practice its leading and pioneering role within the water sector. This requires the existence of a powerful institution which is able to shoulder the responsibilities and to lead the process of water sector development. The PWA was proactive within the reform program to implement some of the initiatives which aimed at raising the institutional performance .But that by itself is not enough and requires better investment in the process of institutional building and development. The development process includes the development of internal regulations and procedures and the enhancement of the concept of performance management on the basis of results. Also, it includes building an institution on the basis of knowledge and harnessing the available capacities in the institution for the benefit of achieving its goals and the intended results. The institutional development process also includes the investment in human resources and the enhancement of

the individual and collective capacities and skills of all employment segments in the institution. Therefore, the PWA has put forward the following strategic objectives to achieve this goal:

1. Attain the managerial (administrative) and operational efficiency of the PWA.
2. Resource mobilization and organization.
3. Enhance communication and networking both internally and externally.

The above mentioned goals and objectives represent the strategic frame of the PWA where the institution develops its different programs and activities and initiatives in harmony with the strategic objectives and goals of the PWA.

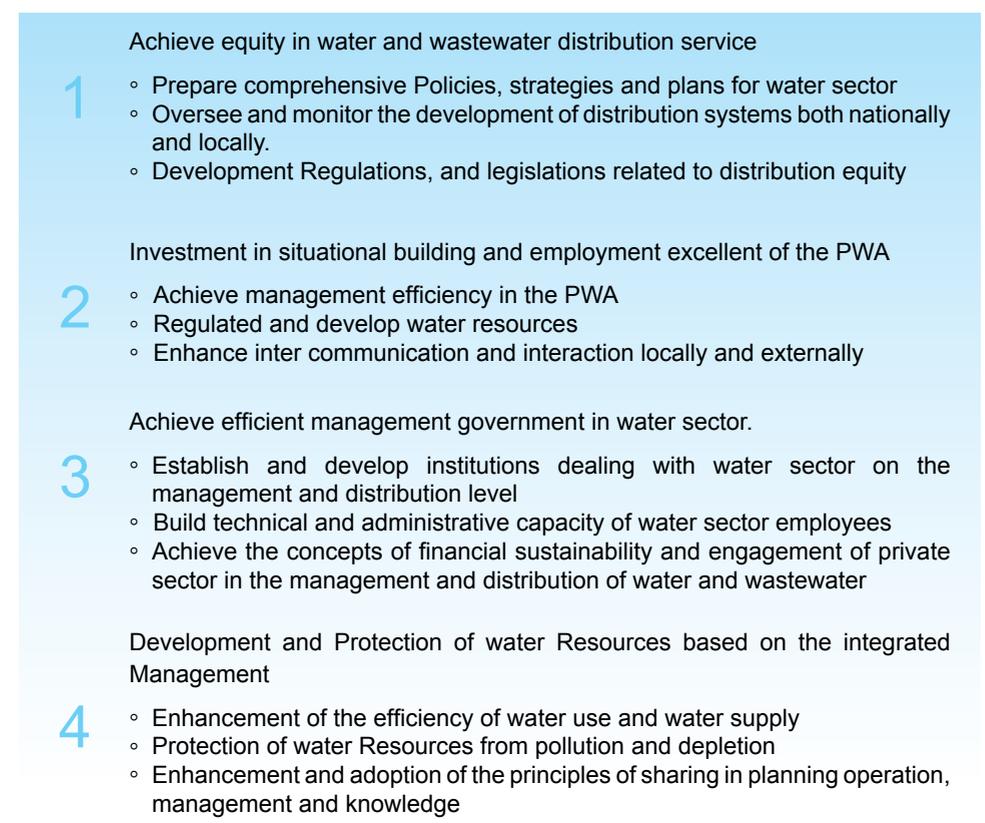
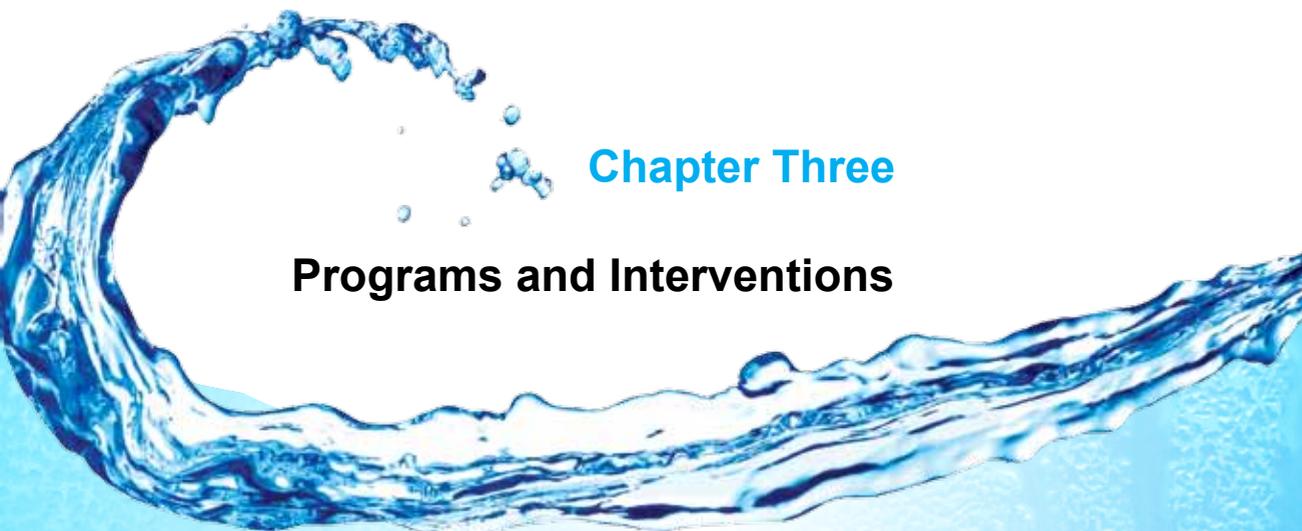


Figure no. (1): PWA's Strategic objectives and goals



Chapter Three

Programs and Interventions

The PWA seeks to implement its strategy and to achieve its goals through a number of programs. Thus, the PWA devoted a group of programs for each objective which help in attaining the objective and the strategic goals in mind. These programs are considered the executive arm of the institutional strategic frame of the PWA. The team which prepared this strategic plan has defined the main interventions and initiatives that the PWA will implement on its own or the cooperation and coordination with partners. The main initiatives and activities represent the final level of work within this plan. But on the Executive level, any project or any ongoing activity that is being executed by the PWA and which does not appear in the strategic level of this plan must be placed within the domain of one of the main initiatives and interventions.

The following figure represents the indicated programs which are linked to the first objective (development and protection of water resources under the principles of integrated management).

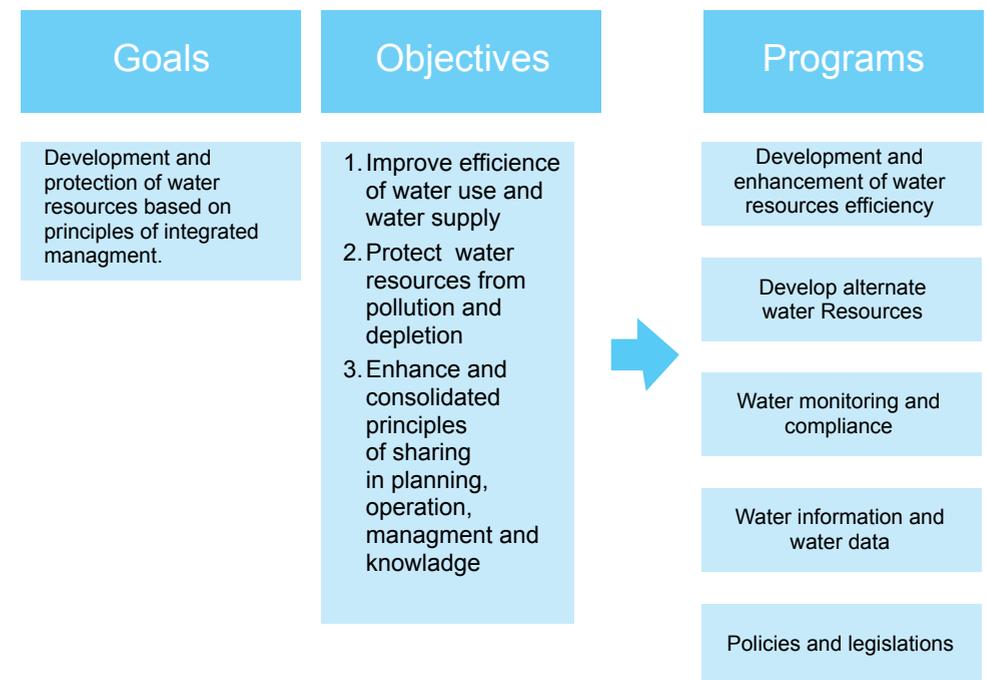


Figure no.(2) Executive programs related to the PWA's first Goal

3.1 Development and Enhancement of Resources Efficiency Program

This program aims to develop and enhance the efficiency of traditional resources existing or new there are many resources that do not need any rehabilitation or development. Occasionally there are some opportunities to exploit new resources despite of the difficulties and the challenges that accompany the development of the new conventional resources. This program includes a limited range of main work fields which in a way are the expected results of the work of the program. This program can be achieved through a number of the following major interventions and initiatives:

Development and Enhancement of Resources Efficiency Program		
	Work Streams Expected Results	Interventions
1.	Assessment, demarcation and allocation of conventional water resources and prioritize its usage (detailed maps).	Cadastral studies of the wells and springs to determine water uses and water quantities in the conventional resources. Conduct Hydrological studies Conduct hydro-geological studies Prepare annual report on the conventional resources
2.	Rehabilitation and development of Wells	Work with and provide technical support to the Ministry of Agriculture in order to rehabilitate agricultural and to provide water needed for irrigation. Provide technical support to the West Bank Water Department for rehabilitation of wells used for drinking water. Provide technical support to service providers and municipalities for rehabilitation of wells
3.	Enhance the efficiency of springs utilization	Prepare a plan for rehabilitation of springs in Palestine. Rehabilitation of springs used for agriculture in cooperation and coordination with the ministry of agriculture and local authorities.
4.	Development and exploitation of new water resources	Licensing of new well. Equipping of wells to start water pumping.

3.2 Development of alternate resources program

Due the scarcity of water and the limitation to the access to conventional water resources for reasons that have been discussed earlier in this document, the emphasis on the development of alternate resources is one of the possible solutions for getting extra water quantities. Even though these quantities are small and cannot cover the deficit stemming from the increasing demand, the concentration on these resources in the coming years such as water desalination, water harvesting, treatment of wastewater and others will contribute to meet some of the water needs of the Palestinian society and other various developmental sectors. The PWA, in the coming years, will work on the development of some alternate resources through the following interventions:

Development of Alternate Resources Program		
	Work Streams Expected Results	Interventions
1.	Sea water and Brine water Desalination	Building of a Seawater Desalination Plant in Gaza. Building of brine water Desalination Plants in Jordan Valley areas.
2.	Exploit (harvesting of) rainwater and surface(running) water	Build dams and new water collecting ponds. Rehabilitation of existing dams and collection ponds. Artificial groundwater recharge. Climate change projects in Palestine.

3.3 Water Monitoring and Compliance Program

According to the new Water Law, the responsibility of (preservation and monitoring and protection from pollution, depletion and over pumping of water resources) lies within the jurisdiction of the PWA. The PWA has been conducting various monitoring activities over the water resources to protect and preserve these resources. This program is designed to unify the control and monitoring efforts and the observation of the water resources to ensure the quality of water is within the approved specification through the following interventions:

Water Monitoring and Compliance Program		
	Work Streams Expected Results	Interventions
1.	Observe and monitor the water resources	Regularly observe and monitor water resources in the field and measure the water table and water abstraction. Observe springs and flowing streams in the field regularly and measure the water flow rates.
2.	Maintenance of high water quality in the various water resources.	Assess the water quality and the pollution of ground water aquifers in the West Bank and Gaza Strip. Water Safety Plan. Rehabilitation and development of PWA's Laboratory and getting it certified as a central water Laboratory.
3.	Compliance with the regulations relevant to the water resources.	Monitor the violation against the observed regulations and specifications. Pursuance of the legal lawsuits forwarded to the Public Prosecution.

3.4 Water knowledge and information

The PWA believes in the importance of enhancing the principles of participation in planning, operation, management and the expansion of the database and the publication of water data. Hence, this program is intended to achieve this trend, and to ensure a broader participation of different partners and parties relevant to the water sector. This also ensures the unification and recruitment of efforts and the support of the collective decisions policy and the reduction of cost at both the intermediate and the long terms. The water information and data program includes a number of interventions:

The water information and data program		
	Work Streams Expected Results	Interventions
1.	Promote scientific research on water.	Define the desired fields of research for the next years within the scientific research plan. Direct the research centers and academicians to conduct scientific research according to the needs and priorities of the water sector in Palestine. Promote innovation and excellence in the scientific research. Implement experimental practical projects of the conducted research studies results.
2.	Use the water information system as a basis for process Automation.	Develop the national water information system. Automation of operational processes through the information system.

3.5 Policies and Legislations Program

PWA is legally the entity responsible for issuing different regulations, instructions and policies aimed at the development of the water sector. It was also assigned by law to continuously review and develop the legislations related to water sector. Since the new Water Law has been issued, many of the policies and strategies that have to be developed and issued during the next few years. These upcoming policies and strategies were stipulated by the water law or by some regulations and the evidences that were not explicitly mentioned in the law. This program contains the following interventions:

Policies and Legislations Program		
	Work Streams Expected Results	Interventions
1.	Create a suitable environment for managing the water resources.	Prepare regulations stemming out of the new water law and get it endorsed by the Cabinet.
		Prepare policies and procedures aiming at the development of water sector.

The above mentioned five programs along with its activities and initiatives belong to the first objective and its definite strategic goals that it strives to achieve.

The second objective “attaining equity in water and wastewater service distribution”, the strategic planning team has adopted four programs to achieve the objective and the strategic goals related to it.

The following figure represents the main programs within the second Goal:

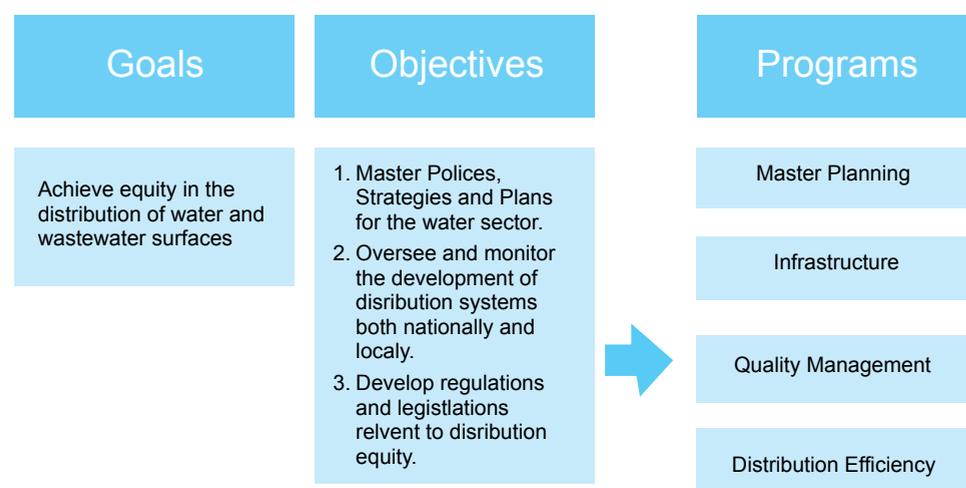


Figure no. (3): Executive programs linked to the second Goal of PWA.

3.6 Integrated (Master) Planning Program

This program contributes in the enhancement of the developmental approach and in avoiding the activities that are largely based on the instantaneous needs. The comprehensive planning is considered one of the most important methods of sustained and integrated planning. The comprehensive planning enhances the developmental efforts and placing it in a methodological scientific frame that is based on the society’s needs of water resources for the next years. Until this moment, there has been no investment in the concept of comprehensive (MASTER) planning of the water sector. The PWA has started recently showing some interest in this topic within the comprehensive planning that covers the northern areas of the West Bank as a first phase. The strategy should be continued later to include comprehensive plans for all areas of the West Bank and Gaza Strip. This program aims at completing the preparation of all comprehensive plans for all Palestinian areas during the next three years of this strategic plan. Starting with the Northern areas of the West Bank in the first year to be extended to areas within the following two years by conducting the following interventions:

Master Planning Program		
	Work Streams Expected Results	Interventions
1.	The consolidation of the comprehensive planning concept.	Prepare the comprehensive (master) plan for the northern part of the West Bank
		Prepare the comprehensive (master) plan for the central part of the West Bank
		Prepare the comprehensive plan for the southern part of the West bank
		Prepare the comprehensive(master) plan for the Gaza Strip
		Prepare feasibility studies for water and wastewater in its comprehensive concept

3.7 Infrastructure Program

The infrastructure in the Palestinian Territories has been generally suffering from neglect and restriction of its developmental process during the past decades. This has had an adverse effect on several levels. The water loss rate in the networks was over 35% of the quantity of water produced by different water resources due to the poor infrastructure. In addition, many areas and clusters have been deprived of getting water quantities that are enough to meet the continuously increasing demand.

The PWA has made big contributions since its foundation to develop the infrastructure of the water and wastewater sector. But the comprehensive development of the sector's infrastructure requires tremendous efforts from all parties and relevant partners and also large financial resources in order to achieve it. Due to the importance of the infrastructure in the conservation of water resources, the PWA should work directly to develop an infrastructure along with other partners as well regional and local water facilities and the National Water Company. This program includes different activities ranging from the direct activities of the PWA to develop the infrastructure or working with the partners and other water sector institutions and supervise the development of the infrastructure in a way that serves the national interest.

Infrastructure Program		
	Work Streams Expected Results	Interventions
1.	Development and rehabilitation of infrastructure	Planning and execution of water infrastructure projects Planning and execution of wastewater infrastructure projects

3.8 Quality Management Program

The concept of quality management is not limited to the quality of the end product but also includes all stages related to the operational starting with the preparation for planning, through execution, monitoring and providing of the services. The PWA, among its responsibilities, is in charge of the consolidation of the concepts of quality and the enhancements of its standards throughout all stages related to water and wastewater service provision. This program includes a number of interventions:

Quality Management Program		
	Work Streams Expected Results	Interventions
1.	Description of Products and Projects	Review and development of technical specifications of the products in coordination with the Palestinian institution of specifications and standards. Review and development of specifications and standards and design codes for water and wastewater infrastructure. Acquainting the partners and concerned parties with the developed specifications and standards. Apply standards of quality control

3.9 Distribution Efficiency Program

This program is one of the responsibilities of PWA in helping partners in the water sector in delivering equitable service delivery to all those who are entitled to that serves. This requires the development and dissemination of policies and regulations related to distribution efficiency and guarantee its execution by relevant partners. This program includes the following interventions:

Distribution Efficiency Program		
	Work Streams Expected Results	Interventions
1.	Help partners and water facilities improve the distribution efficiency	Implement the un accounted for water strategy
		Develop the strategy of the assets management at the water sector and its different institutions level.
		Develop a manual that identify the priorities and the compliance with the implementation of the comprehensive plan.
		Develop the unified Tariff system based on the operational cost recovery.
		Prepare a water distribution system and get it endorsed.

The above mentioned four programs contribute to the achievement of the equitable distribution principle of the water and wastewater services. In addition, these four programs are considered complimentary tools in the hands of the PWA in order to play its pioneering role in regulating the water sector. Also, in order to improve the services provided to citizens and to different developmental sectors which contributes to the sustained developmental process.

The third objective for the PWA concentrates on institutional building of the water sector and enhancing the principles of Governance and improving the capacities of the sector. This is a major role that was assigned to the PWA in order to enable it to ensure providing service under the optimal standards and to facilitate the ability to receive these services.

The following figure represents the programs listed for achieving the third objective and the defined strategic goals that are related to it.

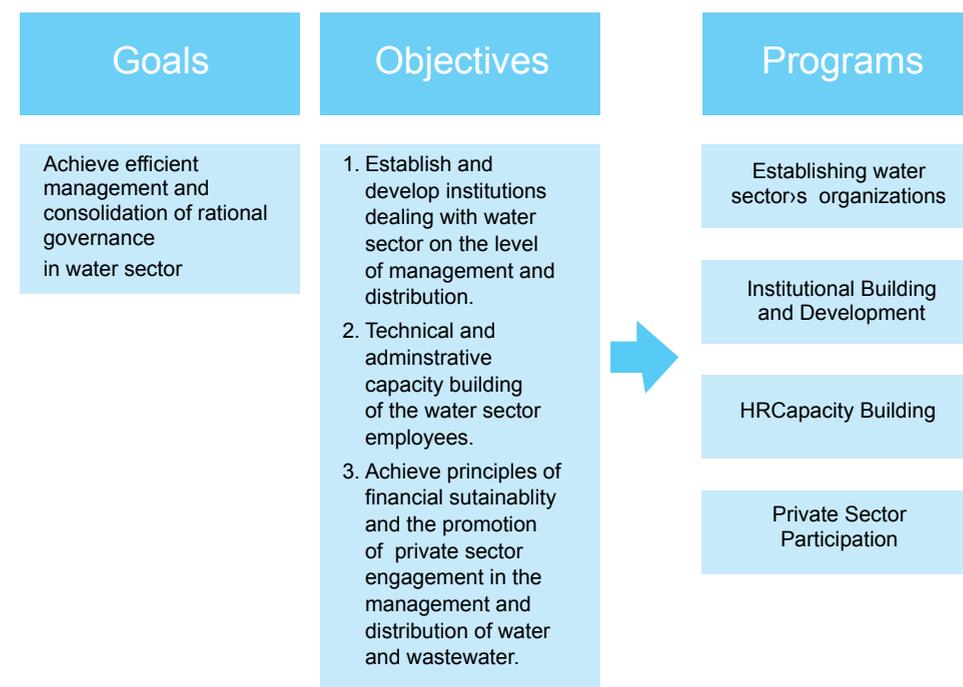


Figure no. (4): Executive programs relevant to the third Goal:

3.10 Establishment of Water Sector's Organizations Program

This program contributes to the implementation of the new governance framework which the 2014 Water Law has stated. The Law has defined a number of public institutions and facilities that deal with water sector. Also, the law assigned the responsibility of constructing these facilities and institutions to the PWA. This program includes the following interventions:

Establishing water sector's organizations Program		
	Work Streams Expected Results	Interventions
1.	Services facilities: constructed and activated.	Establishing of the National Water Company.
		Establishing of the new regional distribution facilities.
		Motivate the communities to establish water user associations.

3.11 Institutional Building and Development

The role of the PWA is not limited to the construction of facilities and institutions working in the water sector but includes the larger responsibility of continuous work with these institution to build their capacity and to enable them to do its job as best as possible. The institutional building and development program includes the following interventions:

Institutional Building and Development		
	Work Streams Expected Results	Interventions
1.	Identify developmental needs of the constructed facilities.	Prepare a policy and strategy of water sector capacity building.
		Study and identification of the developmental needs for institutions working in the water sector.
2.	Unification and updating of the automatic systems used in the facilities.	Development of the automated accounting system for the constructed facilities and for facilities under construction.
		Development of billing and financial accounting system for the existing water distribution facilities and for those under construction.
		Promote the exchange of experience and knowledge between the existing and the new facilities.

3.12 HR capacity building program

Beside the construction and enabling the institutions working in the water sector, the development of workers abilities and skills is an indispensable part of the capacity building process. This program facilitates providing of defined services that helps in the enhancement of the capacities of the people working in the water sector institutions. These interventions are as follows:

HR capacity building program		
	Work Streams Expected Results	Interventions
1.	Continuous training of the workers.	Prepare a policy and strategy of capacity building for the water sector
		Study of developmental needs of the institutions working in the water sector.
		Design and execute training programs for water sector staff.
		Participate in the training programs that are implemented by foreign parties.
2.	Efficient Management	Training of senior management and boards of directors of the facilities and service providers on the bases of rational governance and the application of the prevailing formal systems.
3.	Exchange of Expertise and knowledge	Helping union of water and wastewater service providers in developing a plan to exchange of expertise between different administrations in Palestine.
		Benefiting from all memorandum of understanding signed with several countries in the field of exchange of expertise (Morocco, Algeria, Bahrain and other Arab and non-Arab countries).

3.13 Private Sector Participation

The participation of the private sector in the development process is essential for its success. The development process requires vast investment on many productive and service sectors. The role of water sector is not confined to the production of consumable commodities and services, but its roll is extended to include wide participation in public services and the government engagement in

the production. In addition, it includes the delivery of services to consumers within a mechanism that ensures that all consumers receive these services at affordable prices and in a way that ensures an economic profit for these investments.

The concept of participation of the private sector in water sector and providing of relevant services may be a new concept for this region, but the Palestinian private sector has a complementary role to the government roll and the roles of water departments and local authorities in the development of water and wastewater services in the past years.

The promotion of the private sector role and giving it bigger responsibility may better contributed to the development of water and wastewater services if the policies and strategies have been set clearly in this regard.

The role of the PWA engaging the Palestinian private sector is evident through the following interventions:

Private sector participation program		
	Work Streams Expected Results	Interventions
1.	Facilitate and encourage the participation of the private sector	Prepare the private sector participation policy and strategy Develop and apply the partnership system with the private sector

3.14 Institutional development of the PWA

The success of the PWA in the implementation of programs and interventions listed within the first three objectives in its strategic plan requires the existence of an institution that is capable and able of doing its job. Therefore, the fourth objective is focused on the institutional building of the PWA as an institution that leads all the efforts aiming at the development of the water sector in Palestine.

The following figure represents the main programs that are aimed at achieving the fourth objective of the PWA.

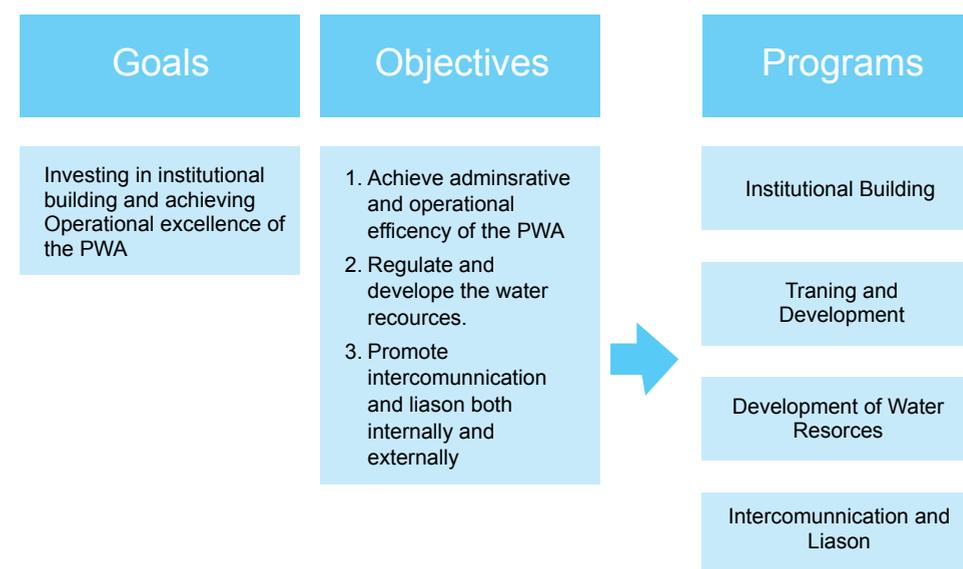
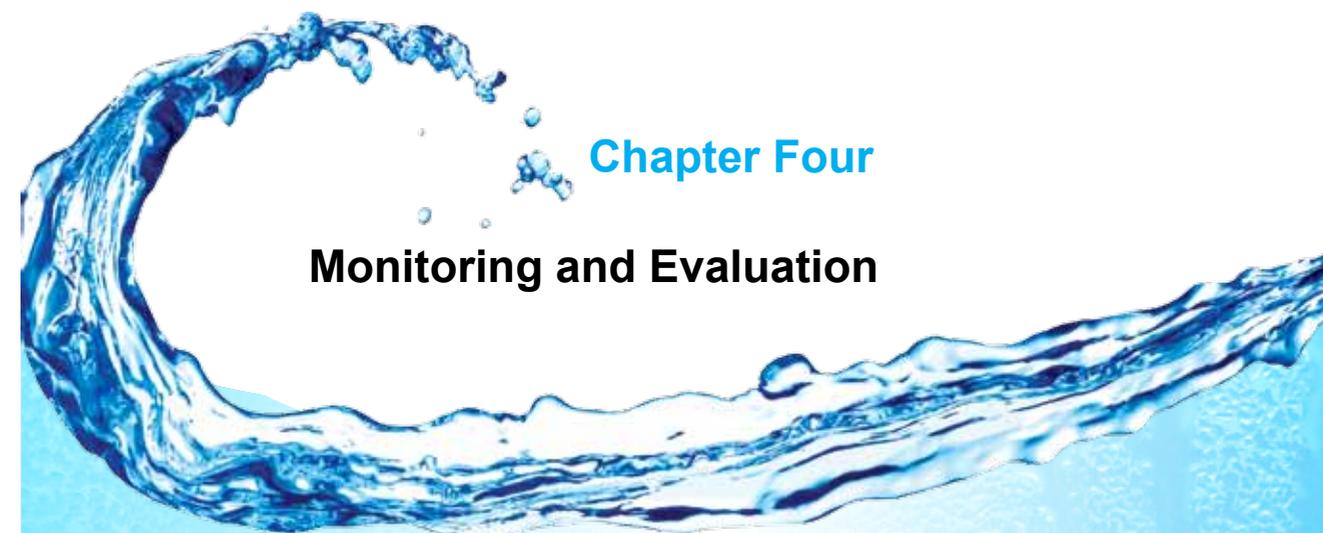


Figure No. (5): Executive programs connected with the third objective of the PWA:

The responsibilities laid on the PWA's shoulders as per new Water Law are comprehensive and big responsibilities. These big responsibilities require the transition from the traditional institutional building stage to the operational excellence stage. This demands large investments in the institutional and human resources development of the PWA staff. In addition, it demands providing the financial and monetary resources necessary for reaching outstanding levels of performance in accordance with the international standards of the operational excellence. This requires that the senior administration of the PWA disseminate the cultures of the operational excellence in the institution. Moreover, it requires trying to overcome the adverse impacts that have appeared in the past few years as a result of the lack of concentration. For example, lack of concentration on issues that aims at the internal development and the providing of administrative regulations and tools that consolidate the culture of continuous excellence and progress. To achieve that and to attain the employment excellence, four major programs have been identified under which the following interventions are listed:

Institutional Development of PWA Program		
	Work Streams Expected Results	Interventions
1.	Institutional Building Program	<p>Review and development of the organizational structure and job description of the institution.</p> <p>Develop work procedures Manuals.</p> <p>Development and application the Institutional Performance Management Methodology.</p> <p>Automation and computerization of the procedures and systems used in the institution.</p> <p>Adopt the Gender Strategy</p> <p>Provide needed logistical support to insure appropriate work environment</p>
2.	Training and development program	<p>Identification of training needs for the water sector employees.</p> <p>Implementation of the training plan.</p>
3.	Resources Development Program	<p>Establishment of the Water Sector Fund for financially supporting the water sector and encouraging donors.</p>
4.	Communication and liaison program	<p>Development and application of the external plan for communication and liaison.</p> <p>Development and application of the internal plan for communication and liaison.</p> <p>Development and application of water awareness plan.</p>



Chapter Four

Monitoring and Evaluation

In order to enable the PWA to pursue its ability of implementing its strategic plan and to assess the achievement of the strategic goals and objectives, performance indicators have been developed that imitates the main programs and activities of the PWA in addition to previously defined targets for each of the proposed indicator.

PWA, and within the capacity building program, must develop its capacities in the domain of pursuance and assessment and the construction of a special unit for this purpose within the new organizational structure of the institution.

As a result of the regular periodic follow up which aims at assessing the extent of the PWA's achievement in the implantation of its strategic plan, corrective steps can be made on the level of program and activities implementation, or on the level of modifying some of strategies and activities in the strategic plan itself. This requires annual review of the strategic plan and making some modification based on the results of the assessment done by the PWA.

The following tables represent performance indicators related to the programs and activities which in turn are linked to one of the main four objectives of the PWA.

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
Development and Improvement of the Efficiency of Water Resources	Assessment, Delineation and Allocation of conventional water resources and set the priorities of the uses of these resources (Detailed Maps)	The coverage ratio of the studies conducted on water resources in Palestine on a geographic basis.	60%	70%	85%	100%
		Feasible Water Budget at the end of each year		90%	95%	100%
		The percentage of the performance of national water accounts	10%	30%	50%	70%

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
	Rehabilitation of and development of wells	Percentage of rehabilitated well to the total of the wells used for domestic consumption		20%	20%	20%
		Percentage of the rehabilitated wells to the total of the wells used for agricultural use in cooperation with the Ministry of Agriculture		10%	10%	10%
		Percentage increase of the springs used	2%	2%	2%	2%
	Improvement of the efficiency of use of springs	The increase in the water supplies from the new conventional water resources		3 MCM	5 MCM	7MCM
Development of Alternative Resources	Desalination of sea water and brine water	The increase in water quantities produced by the desalination plants for the different purposes.		2.5 MCM	0.5 MCM	1 MCM
	Utilization of rain water and surface water (construction of pond and collection dams)	The amount of the increase in quantities produced by water harvesting (collection wells and dams)	6.6 MCM	1 MCM	2 MCM	3 MCM

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
Water monitoring and compliance	Quantitatively and qualitatively monitoring control of water resources	The coverage percentage of monitoring network for the total of the water resources	50%	60%	75%	90%
	Maintaining water quality of different water resources in all areas	Percentage of coverage of the testing of water resources allocated for domestic use(drinking)	80%	100%	100%	100%
		Number of elements that are tested or added to the Laboratory tests.		10	20	30
		Number of samples that are tested annually for each water resource.		2	2	2
	Modeling of water quality and aquifer pollution and infiltration of pollutants to the soil.	Number of reports issued for the models		0	3	5
	Development and rehabilitation of the PWA laboratory	Number of new instruments that are added to the lab every year		2	2	2
		Percentage of working instruments around the year		100%	100%	100%

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
		Percentage of progress in rehabilitating the lab in order to be certified by the ISO	10%	30%	75%	100%
		Percentage of achievement of lab's information system and its linkage with the national database system		50%	70%	100%
	Water Safety Plan	Number of samples that have been certified adopted		2	3	5
	Follow up on the compliance with regulations of water resources such as Toilet system, groundwater abstraction system, drilling and drilling operators system and protection system of springs and wells	Percentage of compliance to the approved regulations		50%	60%	70%
		The violation have reduce by a percentage of		10%	15%	10%
Water Information and data	Identifying the needs for the scientific research and types of research required by the annual scientific research plan	Percentage of achieving the scientific research plan according to priorities		60%	70%	80%

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
	Directing of the scientific research centers and academicians to conduct studies and scientific research according to the needs and priorities of the water sector	Number of studies conducted each year		5	5	5
		Number of memoranda of understanding signed with the research centers and institutions		2	3	3
	Promote innovation and excellence in the scientific research	Number of outstanding researchers who have been honored by the PWA		2	3	3
	Development the national water information system as a basis for the atomization process	Percentage of achieving the development of the national water information system		40%	60%	80%
		Percentage of annual increase in number of the users of the system		.....	20%	20%
	Development of means of information dissemination in and outside the PWA	Number of equipment's and medias for dissemination of information				
Percentage increase in the number of people benefited from the disseminated information				10%	10%	

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
Policies and legislations	Prepare the systems that are stated by the new water law and get them endorsed by the Cabinet		100%			
	Preparation of policies and measures aimed at the development of the water sector					
Master Planning	Prepare local, regional, and comprehensive plans	Percentage of achieving the master plan for the northern part of the West Bank		100%		
		Percentage of the achievement of the master plans on the national level (southern part of the West Bank and Gaza Strip)		.....	50%	50%
Infrastructure	Implementation of infrastructure development and rehabilitation projects	Expenditure amounts on infrastructure of wastewater projects	West Bank	36 Million	14 Million	48 Million
			Gaza	13 Million	15 Million	40 Million
		Amount of expenditure on water infrastructure projects.				

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
		Number of water and wastewater projects achieved at the end of each year	West Bank	6	1	3
			Gaza			
		Percentage increase in the number of families served by wastewater network	W.B. 33%	1%	2%	5%
			Gaza 70%	1%	1%	1%
		Percentage increase in the number of families served by water network	W.B. 97%	0.5%	1%	0.5%
			Gaza 100%	.....	.....	.....
		Water Loss Percentage		32%	29%	27%
Overall Quality	Review and development the technical specifications in coordination with the Palestinian Specifications Standards Institution	Number of specifications that have been achieved		2	2	2
	Review and development of the specifications and standards of pertaining to the designing of water and wastewater infrastructure	Number of specifications that have been achieved and adopted		2	2	2
	Implementation of Quality control standards	Percentage of compliance with the specifications and standards		75%	80%	85%

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
Distribution Efficiency	The implementation of the unaccounted for water strategy	Reduction of the Un accounted for Water to the percentage of		10%	10%	10%
	Development of the strategy of managing the Assets at the level of water sector and its various institutions	Achieve the strategy of Assets management	.....	.....	100%	
	Development of manuals of prioritization and commitment to the implementation of the Master Plan	Percentage of commitment to the implementation of the projects within the Master Plans	.....	.....	90%	90%
	Development of the unified Tariff system based on the operational cost recovery	Percentage of the service providers compliance with the unified tariff system	.....	60%	80%	95%
	Preparation and adoption of water distribution system	Percentage of accomplishment of the preparation of water distribution system				
	General Indicator Percentage of satisfaction of the Palestinian society over the water and wastewater services in their area.			60%	70%	75%
	Building of service Distribution Facilities	Building of the National Water Company	The National Water company is Built and registered		100%	

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
	Building of new regional distribution facilities	The national plan of building the facilities is ready and endorsed		100%		
		Number of built facilities and which is up and running			4	4
	Promote the communities to establish Water User associations	System of establishment of associations is developed and endorsed		100%		
		Number of established associations			4	4
	Development and adaptation of the Incentive system for encouraging of building of the regional facilities	The Percentage of achieved development of Incentive System			8	8
		Number of institutions benefiting from the Incentive System				
Institutional Building and Development	Identification of developmental needs for the constructed facilities	Developmental Master plan			100%	
	Development of computerized distribution system for the constructed facilities and those under constructed.	Percentage of the achievement of the development of the computerized system			100%	

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
	Development of billing and financial accounting system for the existing water distribution facilities and those under construction	Percentage of achievement of the development of billing and financial accounting system of the facilities			100%	
		Number of meeting for exchange of expertise		3	6	6
	Development of a manual for the regional master plan and the implementation of infrastructure projects in the areas served by the facility.	Percentage of achievement of development of the manual		100%		
		Percentage of the facilities' compliance to the application of the manual		.....	70%	85%
Capacity Building of the water sector Staff	Administrative and Technical Training for staff of the Water sector	Average technical training hours for each employee specializing in water facilities and operators		25	25	25
		Percentage of the employees who have been trained in each institution per year not less than			50%	50%

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
	Administrative and technical training of water utilities employees	Average training hours for each specialize employee			50%	50%
		Number of employees taking part in training in each institution is not less than			2	2
	Training of Senior management staff of the facilities on principles of rational governance and the implementation of the official effective rules	Number of meeting of senior management for all distribution facilities			12	12
	Development and execution of training program for those working in existing facilities	Number of employees benefiting from training program working in other facilities			20	20
Engaging the private sector	Development of the engagement of the private sector strategy	Percentage of achievement of the development of strategy of engaging the private sector		100%		
Institutional Building of the PWA	Review and development of organizational structure and job description of the institution	Redeployment for the employees according to the new organizational structure during the first quarter of the year.		100%		

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
	Development of professional work procedures manuals for the institution	Number of developed work procedure manuals				
	Development and adoption of methodology for institutional performance management	Percentage of compliance with the implementation of the approved procedures		.....	90%	95%
	institutional performance	Percentage of compliance with achieving of performance indicators in the strategic plan		70%	80%	90%
	Automation and computerization of procedures and rules applied in the institution	Percentage of achievement of the process automation (the automation plan).		30%	70%	100%
	Implementation of the Gender strategy	Percentage of achievement of the application of the gender strategy at the institutional level		70%	80%	90%
	Training and Development	Identification of the training needs of PWA employees	A three-year comprehensive plan		100%	
	Implementation of the training plan	Percentage of achievement of the training plan programs		20%	60%	100%

Program	Intervention	Performance Indicator	Targets as of the end of the year			
			Base Value	2016	2017	2018
		Average number of training hours for each employee		20	20	20
		Percentage of employees participating in the training		40%	60%	70%
Resources Development	Establishment of the Water Sector Fund for funding the water sector and attracting donors' support	Percentage of achievement of the implementation of the water sector developmental plan support		70%	80%	90%
Communication and interaction	Development and application of the external communication and interaction	Percentage of achievement of the external communication and interaction plan		100%		
		Percentage of achievement of activities of the external communication and interaction plan		70%	80%	90%
	Development and application of the internal communication and interaction plan	Percentage of achievement of the internal communication and interaction plan		100%		
		Percentage of achievement the of activities of the internal communication and interaction plan		85%	90%	95%
	Development and application of water awareness campaign					