State of Palestine

سلطة المياه الفلسطينية
PALESTINIAN WATER AUTHORITY

National Water Sector Strategic Plan and Action Plan (2017-2022)

Part I: Strategic Development Plan (SDP)

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Palestine

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Acronyms and Abbreviations

GETAP	Gaza Emergency Technical Assistance Program
JSCs	Joint Services Councils
JWU	Jerusalem Water Undertakings
l/c/d	Liter per capita per day
LGUs	Local Governorate Units
MoLG	Ministry of Local Governorate
NDP	National Development Plan
NRW	None Revenue Water
NWC	National Water Company
PWA	Palestinian Water Authority
SC	Steering Committee
SDP	Strategic Development Plan
SWOT	Strengths, Weaknesses, Opportunities and Threats/Challenges
UfW	Unaccounted for Water
WB	World Bank
WSPs	Water Service Providers
WBWD	West Bank Water Department
WSRC	Water Sector Regulatory Council
WWTP	Wastewater Treatment Plant

1. Introduction

1.1. Background

The Palestinian Cabinet of Ministers endorsed an Action Plan for Reform to guide the definition and implementation of a comprehensive program of institutional and legislative reform in the Palestinian Water Sector. This should include the re-organization of the water sector and its institutions, capacity building, and the development of strategies and policies as a result of changes in the structural arrangement of the sector. A new water law has recently been endorsed (No. 14/2014); reflecting the new organizational structure of the Water Sector.

The Strategic Development Plan (SDP) contributes to the process of evaluating and identifying resources and needs at a national level; taking governorates into consideration. The strategic development plan is prepared following interactive and participatory approach involving all stakeholders. This forms the bases for proper planning process and informs sustainable strategic development policies on the national and regional levels accordingly. The strategic development plans also define development priorities, which in turn increase the plans prospects of success and obtaining funding and efficient implementing.

In this context, the Water Sector Strategic Plan for 2017-2022 was prepared based on the method used for preparing the Strategic Development Plans in West Bank and Gaza Strip, and is reflecting the resources and needs on both national and regional levels in adopted Water Sector Policy and Strategy for 2012-2032 and the National Water Sector Strategy for 2014-2016.

1.2. Project Objectives

The preparation of the water sector SDP is diagnosing water sector development fields, identifying priority developmental issues, revising and analyzing the water sector vision. It also sets objectives to achieve the vision, taking into consideration the priority issues, and then identifying development interventions, such as programs and projects in order to achieve the goal of improving the sector performance.

The SDP identifies integrated strategic development goals, which reflect the Vision of the Water Sector. It also identifies the Action Plan for developmental priority projects/ programs and their implementation areas locally and in Governorates.

The main objective of the National Water Sector Strategic Plan and Action Plan project is to guide the technical assistance to the Palestinian Water Authority (PWA). This includes:

- To prepare a detailed water sector SDP that includes vision, priorities and, anticipated results for the coming 6 years based on existing resources and capacities
- To develop needed Action Plans based on the SDP
- To develop an implementation plan within a set time frame and its related financial estimates
- To develop monitoring methodology for implementation as well as setting implementation success targets and measurement tools
- To link the SDP document to the other spatial, national, local, sectorial, and inter-sectorial plans and policies
- To link the SDP (2017-2022) with the Water Sector Policy and Strategy for 2012-2032, and the National Water Sector Strategy for 2014-2016.

1.3. Project Nature

The Consulting consortium of three firms, one of which is an international firm, realizes the need for a strategic plan and its important role in the development and improved performance of the PWA. The consulting team is composed of highly qualified experts, who have extensive experience in strategic planning, as well as specialized international consultants.

Achieving the SDP and its objectives for the 6-years period (2017-2022) depended mainly on the National Water and Wastewater Policy and Strategy for Palestine 2012-2032 as well as the Water Sector Strategic Plan 2014-2016. Meetings and workshops with the different stakeholders are considered a main part in identifying project outcomes and outputs.

Table 1 lists the main background references and consultancy assignment output related to the of preparation of the SDP.

Table 1: Background references and consultancy assignment output

Main Background References	**Consultant's Output**	
Water and Wastewater Sectoral Strategy 2014-2016 National Water and Wastewater Strategy and Policy for Palestine 2012-2032	National Water Sector Strategic Plan (2017-2022) • Objectives of the Strategic plan • SWOT Analysis • Needs and capabilities • Meetings and workshops	Action Plan • Implementation plan according to priorities • Identifying priorities and responsibilities • Sustainable and implementable plan • Identifying work steps

1.4. Work Methodology

Efficient management of the project implies that its impact is reflected in achieving project objectives effectively and in consistency with the terms of reference. In order to achieve this, the Consultant adopted some principles, which helped in managing the project and implementing its activities. These principles are summarized as follows:

a) Quality

As the Consultant understands that the project outputs will be used by different entities as references for funding and implementing the developmental projects, the following were taken in consideration:

- Generating high quality outputs
- Careful review and discussion of all projects outputs before final submission to assure the quality of the technical and lingual production
- Efficient coordination with the different entities and taking their comments and feedback

b) Documentation

As project outputs documentation is very important, the consultant has:

- Documented meetings in formal reports to ensure the follow up of reports and approval of all participants. This documentation includes minutes of meetings, participants, place, time and date, meeting objectives, as well as meeting outputs and recommendations.
- Documented the different workshops (lists of participants, photos, and reports including workshops procedures and results).
- Managed formal correspondence between the different related stakeholders. In addition to effective communication and instantaneous response with the different entities.

c) Communication with all related stakeholders

The Consultant realized the importance of communication between all stakeholders as well as defining their roles, contributions, and engagement in the different stages and activities of the project. **Annex I** is the adopted communication plan and presents the roles of the Palestinian Water Authority (PWA) as well as the role of the Consultant. The table also presents the suggested dates of the workshops, meetings, and their expected feedback.

1.5. Technical Methodology

The SDP depended on the participatory approach involving all related stakeholders from the governmental institutions and local councils. In addition to being guided by the nationally adopted planning and working mechanisms, which the consulting team participated in developing or using.

The formulation of the SDP comprised three main stages; the First Stage of data and reports collection and analysis (*Where are We*?), the Second Stage of preparing the strategic development framework (*What Do We Want?*), and the Third Stage of identifying the action plan (*How to Get There?*). The First Stage included activities related to project launching and preparation of the Inception Report as well as data and reports collection, analysis, discussion and surveying needs and projects. The Second Stage included the development of the strategic development plan, while the Third Stage included formulating Action Plans. The following parts briefly presents the methodology of each of these stages and their related activities.

1.5.1. Kick-off meeting and inception report

A kick-off meeting for the SDP project was held on Monday 16/11/2015. During this meeting, some administrative issues as well as other issues and remarks, by the consulting team, were discussed and approved. The kick off meeting was documented as the Inception Report is considered one of the first stage outputs.

1.5.2. Data and reports collection

Data collection process showed excellent progress during the first period of the project due to the good cooperation of PWA. Several reports were also collected, revised, and verified for their importance to the project. **Annex II** summarizes a number of documents collected and verified for needed data as the stage of data and report collection is considered a main stage ending by the end of the project.

1.5.3. Literature Review

The Consultant conducted literature review for all studies and reports collected from PWA. The experts, each related to his sector, reviewed and commented on their related issues. During conducting literature review, the experts had:

- Documented their comments and identified discrepancies
- Identified and addressed gaps in information
- Gathered information and enclosed projects as well as identified the scope of work and working methodology
- Identified some head notes to be discussed with PWA
- Identified the Vision through literature review
- Started setting some headlines for the criteria to be followed for priority projects selection

This stage was conducted in close communication with PWA who had updated the consultant with the latest versions of the previous studies as well feedback on these.

1.5.4. Needs Assessment

The consultant, in correspondence with PWA, revealed all necessary information in order to understand the needs of the local councils, governorates, and PWA related to water and wastewater sector.

Needs and projects were gathered at the level of the governorates. Meetings were conducted at each governorate inviting the Ministry of Local Governorate (MoLG) and related Local Governorate Units (LGUs) as well as Joint Services Councils (JSCs) for water and wastewater. During these meetings, the project objectives were presented and needs and projects were gathered. The Consultant documented and archived all meetings, and prepared the list of projects.

1.5.5. Development of the Strategic Development Plan

Based on the outputs of the previous activity and related meetings conducted with the different stakeholders and feedback obtained, implementation and follow-up plans were prepared. The Consultant then prepared the SDP for the water sector. The consultant cooperated with the Steering Committee (SC) responsible of following up the development of the SDP, feedback and support.

1.5.6. Setting Implementation and Follow up Plans

Based on the outputs of the previous activity, the consultant set the implementation and follow-up plans using special forms. The implementation plan includes issues, goals, proposed projects and their estimated budgets, national code for projects fields, implementation time frame, entity responsible for implementation, and proposed funding organization. The follow up plan includes goals, proposed projects, measuring indicators, time frame for achieving goals and its indicators, entity responsible for follow up, information resources, and measuring tools.

1.5.7. Preparation of the Strategic Investment Plan

The Consultant started the development of the SDP considering the driving forces of the water sector, which were discussed during the different stages of the project. The consultant conducted Strengths, Weaknesses, Opportunities and Threats/Challenges (SWOT) analysis and presented and re-identified the strategic goals of the water sector. The consultant also identified performance indicators and expected results as well as estimated cost and budget for each activity.

The SDP preparation is considered the main outputs of this project. The SDP works as a guiding framework for the water sector planning as well as financing of the projects based on the needs and priorities of PWA, local councils and governorates. The SDP highlights the most important results of the analysis as well as the goal of the strategic development.

The SDP is for the coming 6 years (2017-2022). The draft was presented to related stakeholders and decision makers in full coordination with PWA and the SC. Comments and feedback were collected and amended

1.5.8. Final Development of the Strategic Investment Plan

Based on previous output and following the workshop held on 17/1/2016, comments were taken into account and the final SDP was prepared.

1.6. Development of Action Plan

Base on the investment program identified in the SDP, the Action Plan was formulated, including proposed programs and projects to be implemented over the coming 6 years within the priorities of the water sector, including time schedule and budget.

1.6.1. Development of a System for Priorities Identification

The Consultant, in cooperation with PWA, designed a system (mechanism) to identify priorities, taking into account PWA vision as well as other indicators and considerations; such as urgent measures, priority activities, and interventions at a governmental level. This is in addition to coordination with relevant bodies and data collection in a way considered appropriate to PWA and the SC.

1.6.2. Priorities Identification

The priorities identification system will be applied for all PWA projects as well as the projects of the local authorities and governorates as to meet the set objectives of the SDP.

1.6.3. Time Frame

Some projects will be considered, documented and studied for its feasibility and the time frame for their implementation as well as the proposed funding from related donors.

1.6.4. Development of a Draft Action Plan

Based on previous outputs, a draft action plan was prepared. The action plan include issues, goals, proposed projects and their estimated budgets, national code for projects fields, implementation time frame, entity responsible for implementation, and proposed funding organization. A draft action plan was submitted to related stakeholders and decision makers during a workshop in full coordination with PWA and the SC in order to obtain feedback and comments.

1.6.5. Development of the Final Action Plan

Following the workshop held for discussing the Action Plan, comments were taken into consideration and the Action Plan was finalized.

2. Palestinian Water Sector

In order to prepare a realistic and applicable SDP, the consultant considered actual information of the water sector considering five main components; water resources, water supply, wastewater, institutional and legal structures and the financial issues.

2.1. Water Resources

A. Surface Water

Surface water resources in Palestine are considered very scarce as most of the wadis are intermittent flowing for few days in the year in the form of flash-floods after heavy thunderstorms. The main permanent surface water resources are:

1. Jordan River

   It is heavily used by the Israeli occupation for irrigation. Since 1967, Palestinians cannot reach this resource. It is considered as a trans-boundary water resource; shared by Jordan, Syria, Lebanon, Israel and Palestine. Integrated management of this water resource as well as having an agreement on the domain of the Jordan River is considered as an essential component for long-term strategies. Historically, the quantity of water flowing into the southern part of the Jordan River and discharging into the Dead Sea is estimated at 1,400 million m^3/year. This amount significantly decreased during the past decades and is presently estimated at 30 million m^3/year

2. West Bank Wadis

   The average annual flood flow through West Bank wadis is amounted to 165 million m^3/year.

3. Wadi Gaza

   The Israeli occupation, trapping Wadi Gaza's natural water flow, caused the wadi to dry except in the years of heavy rainfall. The average annual flow of this wadi was historically estimated at 20 million m^3/year.

B. Groundwater Resources

Groundwater is the main source of water in Palestine, from either wells or springs. Total available quantities of groundwater are estimated at 100 million m^3/year in West Bank while it is about 189 million m^3/year in Gaza Strip.

There are three main groundwater aquifers in West Bank; the western aquifer basin, the eastern aquifer basin and the north-eastern aquifer basin. The average annual renewable recharge of these basins ranges from 578-814 million m^3. For Gaza Strip, the coastal aquifer is considered the main water resource, which is annually recharged by 55-60 million m^3.

The Palestinian water allocation according to the Oslo Agreement is 118 million m^3. 51 million m^3 out of 100 million m^3 is annually consumed in irrigating 115,000 dunums, while 49 million m^3 is annually consumed for domestic and industrial uses; knowing that the Unaccounted for Water (UfW) is more than 35% and that there is about 51 million m^3 of purchased water from the Israeli water company Mekorot (4 million m^3 for agricultural purposes and 47 million m^3 for drinking). This brings the total Palestinian consumption of water to 151 million m^3.

For the Gaza Strip, seawater intrusion to the coastal aquifer, in addition to other contamination factors, resulted in only about 90 million m^3 of drawn water with un acceptable quality for human consumption.

C. Non-Conventional Water Resources

Since water resources are scarce and there is an increasing demand for water, the Palestinian Government started focusing on developing non-conventional water resources in order to reduce the gap between demand and supply:

1. Desalinated Water

   There is only one seawater desalination plant in the middle area of Gaza Strip (Deir Al-Balah) with capacity of 600 m^3/day (0.25 million m^3/year) by using two coastal groundwater wells, and supposed to be expanded to 2,600 m^3/day (0.95 million m^3/year). Currently, there is a seawater desalination plant to be constructed with a capacity of 6,000 m^3/day, serving parts of Khan Younis and Rafah. A regional seawater desalination plant with a capacity of million m^3/year (as a first stage) is planned to be built in the central area of Gaza Strip by year 2017. By the year 2035, the capacity will be enlarged to 129 million m^3/year. It should be noted that there are also privately owned desalination plants with small capacities in Gaza Strip.

2. Treated wastewater Reuse

   There are few activities for reusing treated wastewater in Gaza Strip. Some wastewater reuse pilot projects in scattered areas with a total reuse quantities of around one million

m^3/year. As for West Bank, there are also very few wastewater reuse activities and projects.

2.2. Water Supply

The most common water supply services level in Palestine is individual household connections to piped system. Over the last few decades, collective communal supply points have disappeared and do no longer exist, except in zones where there is no piped water supply. The connection rate (expressed as the number of connections per 100 inhabitants) has been regularly increasing in all urban areas and currently stands at 14-18 connections per 100 inhabitants. Despite large investments in water supply services projects, there are about 120 residential areas with more than 180 inhabitants not connected to water network.

The total amount of water consumed in the West Bank and Gaza Strip provides each person with an average of 96 l/c/d in Gaza (95% of water in Gaza has unaccepted quality for drinking), and 72 l/c/d in West Bank, which is considered as one of the lowest water consumption rates in the world.

2.3. Wastewater

Wastewater quantities, generated in Palestine, are estimated at 106 million m^3/year. 62 million m^3/year is generated in West Bank; including municipal and industrial wastewater. Only 60% of the generated quantity is collected. This is in addition to 35 million m^3/year of untreated wastewater discharged by Israeli settlements and industrial zones into the West Bank environment.

Regarding wastewater networks coverage in Palestine, almost all areas of Gaza Strip are connected to wastewater networks. For West Bank, wastewater networks are limited to main cities with partial coverage in most cases, which makes wastewater treatment infrastructure incapable of dealing with all collected wastewater quantities.

Wastewater in many West Bank cities is still discharged into wadis and natural waterways. In some cases, wastewater even flows beyond West Bank boundaries, where it is collected and treated in treatment plants built originally to treat the Israeli wastewater or plants built specifically to treat the Palestinian wastewater crossing the borders.

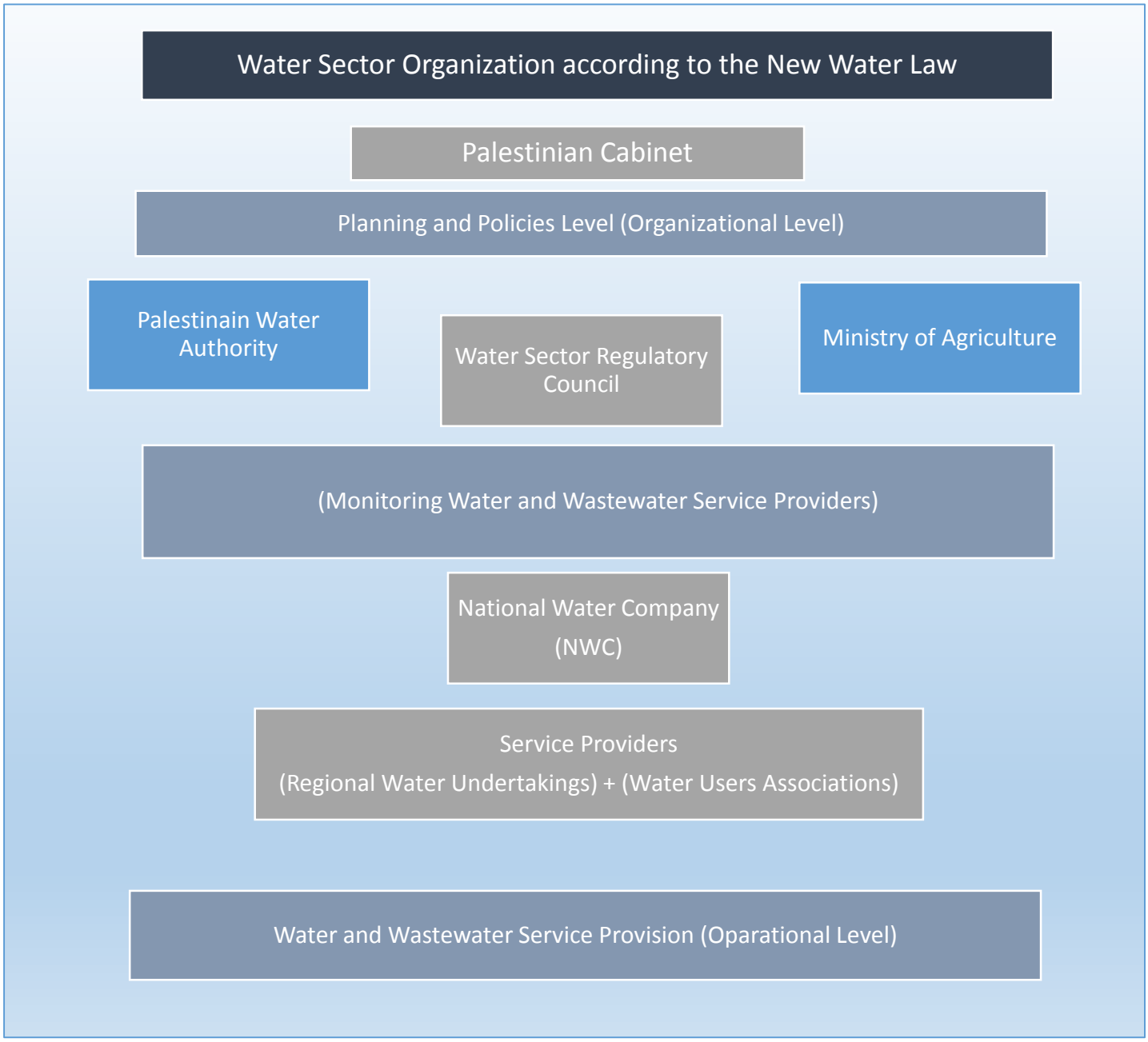
Recently, many wastewater networks have been constructed and expanded as well as constructing and operating Nablus-West Wastewater Treatment Plant (WWTP) and Jericho WWTP. Currently, Tubas-Tayaseer WWTP and wastewater collection network are being constructed.

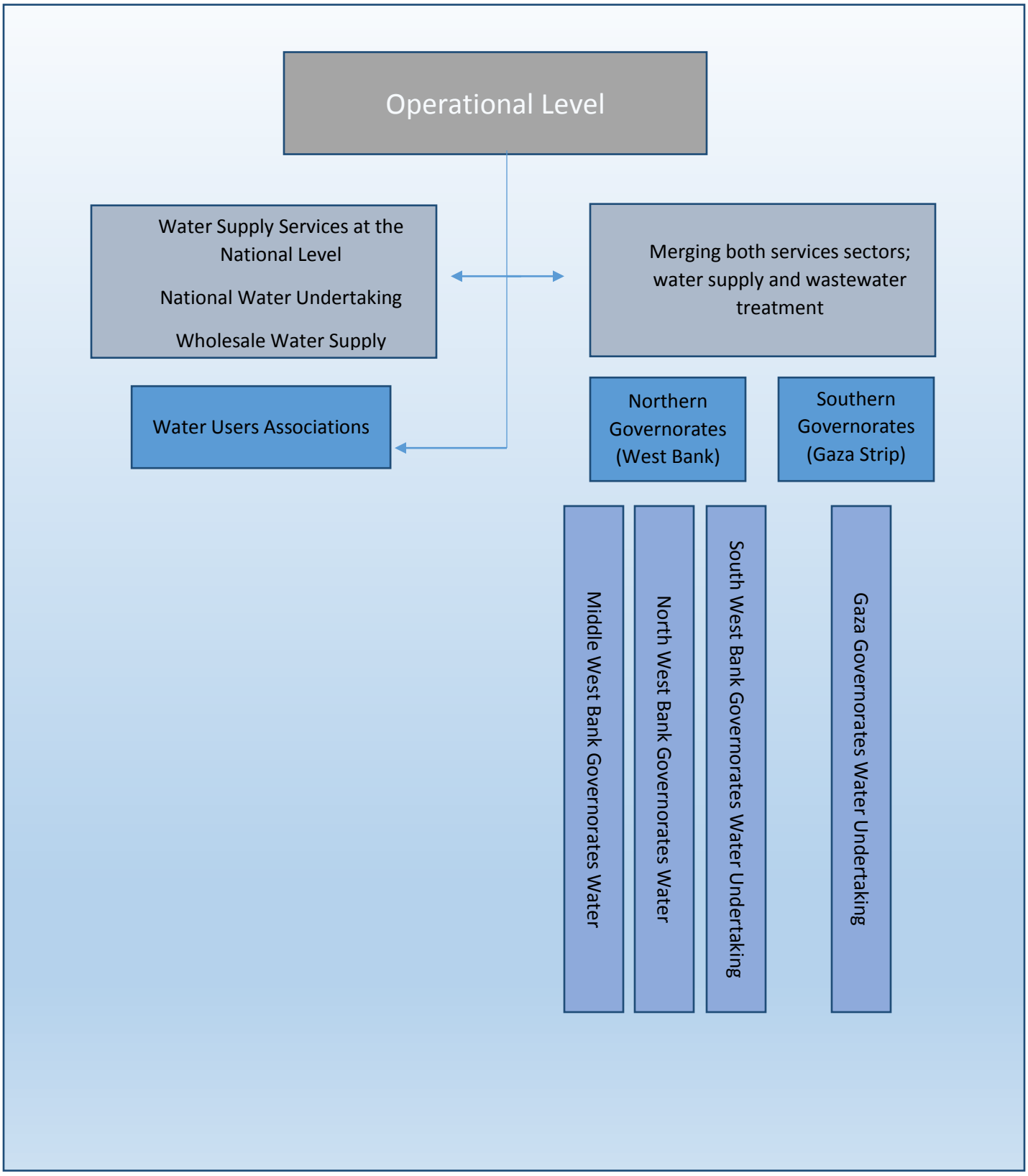
2.4. Institutional and Legal Structures

This includes the legal, organizational, legislative and administrative framework, which ensures sustainable management and protection of water resources. In addition to monitoring mechanisms of water and wastewater services to ensure providing services according to standards and considering sustainable service, which take into consideration social, economic, environmental, and humanitarian aspects as water is considered a social good and crucial for the development of the Palestinian society.

The two charts below show the institutional frameworks of the water sector according to the new Water Law (2014). The new Water Law stipulates establishing regional water utilities for water and wastewater as legal and financially independent entities:

- Palestinian Water Authority (PWA): Ministerial role to ensure better handling of the planning and development policies of the water sector.
- Water Sector Regulatory Council (WSRC): Monitoring the performance of water services providers and approving water prices and water tariff to ensure that service is provided according to standards.
- Water Service Providers (WSPs) of municipalities, regional utilities, and the National Water Company (NWC): Water supply to the customers.


Water Sector Organization according to the New Water Law
Palestinian Cabinet
Planning and Policies Level (Organizational Level)
Palestinain Water Authority
Water Sector Regulatory Council
Ministry of Agriculture
(Monitoring Water and Wastewater Service Providers)
National Water Company (NWC)
Service Providers
(Regional Water Undertakings) + (Water Users Associations)
Water and Wastewater Service Provision (Oparational Level)


Operational Level
Water Supply Services at the National Level
National Water Undertaking
Wholesale Water Supply
Merging both services sectors; water supply and wastewater treatment
Water Users Associations
Northern Governorates (West Bank)
Southern Governorates (Gaza Strip)
Middle West Bank Governorates Water
North West Bank Governorates Water
South West Bank Governorates Water Undertaking
Gaza Governorates Water Undertaking

2.5. Financial Situation

The financial resources of the water sector, especially resources allocated for funding of new projects, depend mainly on donors and donor countries. The Palestinian Government allocates annual budget for the PWA and other water utilities within the Governments' yearly budget.

The None Revenue Water (NRW) figures are considered relatively high. Most service providers in Palestine suffer from low efficiency in collectability, as the average collection rate is 65-75% in West Bank while the average collection rate in Gaza is in the range of 25-50%.

In addition to low collection rates, the UFW is relatively high forming an additional financial burden on almost all service providers in Palestine. The high loss within the water distribution systems must be reduced and gradually brought in line with international and commercial practices. That is why the idea of establishing a national water company came up, in addition to the regional water utilities to ensure gradual transition of subsidized and unqualified service providers to a new structure of commercial service providers providing high quality commodity.

The costs of production and distribution of water vary from one region to another, and from one system to another, according to some physical features such as elevation and groundwater quality and to the condition of the water network. The water tariff maintained by each water utility reflects this difference, which in turn makes prices vary from one provider to another.

The investments planned for the Palestinian water sector during the last 5 years reached US$ 800 million (US$ 160 million/year) knowing that the National Water and Wastewater Policy and Strategy for 2012-2032 had estimated the water sector needs by US$ 7 billion from which US$ 2500 million are allocated until year 2022.

3. Water Sector Diagnoses and Priority Issues

3.1. Literature Review

The consulting team in the planning referred to different documents (**Annex II**) which include previous related plans and studies whether at the national level, water sector level, agricultural level (most related sector), or at PWA level. The new Water Law was also reviewed.

The following are the most important studies and documents reviewed:

A. National Water and Wastewater Policy and Strategy for Palestine 2012-2032

The policy and strategy aim at:

- Reinforcing the Palestinian Authority's approach to sustainable water resources management by ensuring that all arms of government work together in the pursuit of shared water resources management goals; and
- Establishing a framework for the coordinated development, regulation and financial sustainability of water supply and wastewater services to ensure concerted efforts towards improved water systems management, rehabilitation and maintenance.

The National Water Policy and Strategy will also act as a platform for ensuring close collaboration and cooperation among all water-related agencies and stakeholders at the national, governorate, municipal and local levels.

B. National Development Plan 2014-2016

The National Development Plan (NDP), prepared by the Palestinian Government, aims at providing a strategic policy framework, which sets Palestinian directions and priorities for three years (2014-2016). The NDP also presents a framework that guides government functions and development interventions in the 4key sectors, one of which is the infrastructure sector, which includes the water sector.

C. Water and Wastewater Strategy 2014-2016

This Plan aims at setting a strategy to improve the water and wastewater sector during the three years (2014-2016) in order to have a strategic developmental for the sector. In addition to identifying the objectives and the developmental strategy and accordingly, it should derive at interventions related to the policies identified in the Water Policy in Palestine through analyzing the current situation using SWOT analysis.

D. Strategic Plan for the PWA 2016-2018

This Plan aims at setting a road map at the PWA institutional level for the years 2016-2018 in order to help PWA activating its role in leading the development of the Palestinian water sector and achieving the sectoral goals of this developmental and vital sector

E. National Agriculture Sector Strategy "Resilience and Development" 2014-2016

The Agriculture Sector Strategy, "Resilience and Development" 2014-2016, directly contributes to the achievement of the national objectives, which aim at enhancing resilience in its different dimensions. At the same time, it moves economic and social development forward through experience and appropriate response to our national objectives.

F. Palestinian Water Law

This law aims at developing and managing the water resources, increasing their capacity, improving their quality, and preserving and protecting them from pollution and depletion. (Article No. 2)

G. Gaza Emergency Technical Assistance Program (GETAP)

This report addresses the water sector in Gaza, Palestine, with a primary focus on issues at the strategic level pertaining to water supply.

3.2. Strategic Analysis of the Water Sector Current Situation

The main aim of this section is to diagnose the current situation and to present the strategic analysis results in the water sector. The strategic analysis addresses 5main fields, which are considered as the columns of the Water Sector:

- Water Resources
- Water Supply
- Wastewater
- Institutional and Legal Structures
- Financial Situation

According to the SWOT analysis template, the internal factors were identified, whether positive (Strengths) or negative (Weaknesses). The external factors were also identified, whether positive (Opportunities) or negative (Challenges).

Based on the results of the strategic analysis of the water sector, priority issues and affective factors will be defined. Furthermore, the analysis results were used reconsidering the formulated vision of the water sector and identifying the strategic goals to be achieved over the plan period.

Table 2 to **Table 6** present the SWOT analysis results listed for each of the five main identified components of the water sector; water resources, water supply, wastewater, intuitional, and financial.

Table 2: SWOT Analysis of Water Sector Main Components - Water Resources

Strengths	Weaknesses	Opportunities	Threats/Challenges
• Ownership, control and management of some resources; • Desalinated and treated water constitutes a strategic additional water source • The availability of geological and hydrological studies, including the modeling of underground water basins • The existence of feasibility studies and designs for seawater desalination projects in the southern governorates • Adoption of water harvesting as a strategic source, and the existence of studies, programs and projects on water harvesting (reservation and storage facilities for the purpose of groundwater recharge and agricultural uses)	• Lack of Palestinian control over water resources • The absence of appropriate implementable legislation to regulate the ownership and management of water resources • Variant amount of water available in various areas • Private ownership of some water sources • Infringements on some sources • Sensitivity of some sources to the risk of contamination and depletion • High cost of treatment and desalination • The lack of acceptance of the local communities to use the treated wastewater.	• Supporting the Palestinian water rights by the international community • Availability of international financial support for the development of water resources • The possibility of developing new and/or alternative water sources, including desalination of sea water and the use of treated water • Palestinian right in water of the Jordan River Basin and other trans-boundary water resources • The abundance of water resources in some governorates and the possibilities of re-allocation • Trend of some donors to work in Area C, regardless of Israel's	• Israeli control on water resources and the continuation of the work under Item 40 of Oslo Agreement and all its addendums; including Joint Water Committee and the impediments of so-called Civil Administration • Climate change and its impact on water resources • The existence of Palestine within the semi-arid areas • Settlement expansion by the Israeli occupation • Lack of natural water resources • The presence of contaminants, which pose a threat to groundwater basins and water resources, including from Israeli settlements

Strengths	Weaknesses	Opportunities	Threats/Challenges
• Continuation of water harvesting practices for domestic and agricultural purposes • Having monitoring programs for water quality and quantity and the availability of accredited laboratories at relevant institutions • Water quality in Northern Governorates (according to the approved specifications).		approval.	• Some donors link financing water projects with the approval of the Joint Water Committee.

Table 3: SWOT Analysis of Water Sector Main Components - Water Supply

Strengths	Weaknesses	Opportunities	Threats/Challenges
• The presence of water supply networks for more than 95% of the population • Availability of trunk lines between supply point and demand locations in most areas • The existence of regional water reservoirs in some Palestinian governorates • Quality of drinking water in supply systems in most of the northern governorates • The initiation of the preparation of comprehensive plans for many service providers, some of which have been completed • Having reduced losses programs for some service providers	• Severe deterioration of drinking water quality in the southern governorates • Insufficient information available on service providers in some areas • Variations in supply rates among regions • High percentage of unaccounted-for-water (UfW) • Depreciation of many water networks • Many of the existing networks do not serve all residents in the respective communities • Poor infrastructure of the supply system in some governorates and limited complementarily between	• The development of water supply systems is of the priorities of many donors • Effectiveness of Water Sector working groups, especially in the field of water supply • Trend of some donors to work in Area C, regardless of obtaining Israel's approval.	• Settlement expansion by the Israeli occupation • Increased demand for water • The weakness of the mechanism controlling the unaccounted for water • Some donors link financing water projects with the approval of Joint Water Committee • Israeli restrictions, imposed by the Joint Water Committee and the Israeli Civil Administration, that hinder the implementation of water projects which form the basis for the development of the Water Sector.

Strengths	Weaknesses	Opportunities	Threats/Challenges
• Many rural communities have new drinking water networks • The presence of some specialized laboratories and water quality monitoring programs.	resources and supply systems • Inadequacy of regional storage capacity and the limited number of regional reservoirs • Low coverage of trunk lines among regional centers and • Reliance on the Israeli network to serve some communities.		

Table 4: SWOT Analysis of Water Sector Main Components - Wastewater System

Strengths	Weaknesses	Opportunities	Threats/Challenges
• The presence of sewer networks in major cities, towns and refugee camps • The existence of treatment plants, operating efficiently, in a number of major cities and some villages • The readiness of the legal framework for wastewater Sector • Launching projects for treated wastewater reuse in irrigation • The initiation of the preparation of comprehensive plans for sewer systems in a number of areas.	• The limited percentage of coverage for sanitation services (wastewater collection and treatment) • The absence of sufficient environmental awareness, regarding sanitation and re-use • Limited accomplishment in wastewater projects, due to the complexities imposed by the Israeli occupation (high treatment specifications) • The high cost of sewer systems establishment • Limited proportion of treated and reused wastewater • Low efficiency of some treatment plants (old ones)	• The international community understanding of the needs related to sewer systems, treatment, and the provision of financial support • Effectiveness of Water Sector working groups, especially in the field of sanitation • A vital sector for the implementation of partnership projects with the private sector • The development of sanitation component is an urgent need on the regional level • The presence of governmental strategy for renewable energy utilization that can be used in the sector.	• Settlement expansion by the Israeli occupation, which constitutes an impediment to the establishment of sewage treatment systems • Wastewater flow toward areas controlled by Israelis, without the possibility of treatment and reuse • Political constraints that hinder the implementation of large sewer projects, that form the basis for the sector development • The high cost to run sewer systems • Linking wastewater projects with the availability of energy

Strengths	Weaknesses	Opportunities	Threats/Challenges
	• Lack of qualified technical staff in the field of management, operation and maintenance of networks and treatment plants • The difficulty of applying laws and regulations in the field of connection • There is no central administration to follow the sewer management, as in the case of water supply field (NWC).		sources, especially in Gaza Strip.

Table 5: SWOT Analysis of Water Sector Main Components - Institutional Arrangements

Strengths	Weaknesses	Opportunities	Threats/Challenges
• The existence of an updated water law, showing and illustrating the tasks, responsibilities and the authorities for the different parties emphasizing on the equitable distribution of water • The existence of laws and bylaws that regulate the work in the sector • Good coordination between different governmental parties • Qualified human resources • The availability of database for water and wastewater • The existence of national water and wastewater strategy 2012 – 2032	• The existence of a large number of service providers (+250) • Not targeting the specific needs of the sector in the area of capacity building optimally • The absence of clear mechanisms for the implementation of laws and strengthening the application of regulations, in cooperation with various institutions • Lack of proper building on internationally funded projects • Shortages in some experiences and competencies in some areas, especially desalination • Lack of readiness for the establishment requirements of	• Most stakeholders have a desire to develop the capacities of the Water Sector staff • The possibility to benefit from the principles of integrated management of water resources • There are trends among donors for Water Sector institutional support, and the signing of a memorandum of understanding in this regard.	• The continuation of the work under Item 40 of Oslo Agreement and all its addendums; including Joint Water Committee and the impediments of so-called Civil Administration; • Competencies leakage from the Water Sector to other sectors • Full implementation of the new Palestinian Water Law may take a long time.

Strengths	Weaknesses	Opportunities	Threats/Challenges
• The existence of strategic plan for the PWA 2016 – 2018 • Available institutional framework for some service providers • The existence of WBWD which form the root for the Water National Company • The existence of JWU and WSSA which form a root for the regional water utilities • The availability of road map for the reform arrangements at the resources, production and water distribution levels.	the National Water Company and regional water utilities • Sufficient priority is not given to wastewater issue, on the political level • Dispersion of services providing sector (water and sanitation) among the different ministries, municipal departments, joint service councils and camps committees • Failure to complete the detailed policies of National Water Sector.		

Table 6: SWOT Analysis of Water Sector Main Components - Financial Arrangements

Strengths	Weaknesses	Opportunities	Threats/Challenges
• The existence of Draft Financial Strategy for the Water Sector • The existence of tariff structure for water services • The existence of draft Tariff Bylaw for agricultural water • Financial independence of some service providers • The increased level of financial sustainability and increased collectability ratio through using pre-paid meters and the setting collection mechanisms • The existence of projects for lowering the operational costs through water loss reduction and • Starting the installation of pre-paid meters in some communities.	• The absence of some agreed upon mechanisms for driving funds in Water Sector • Conditional funding in some cases • Difficulties in applying direct cost recovery systems in wastewater • Lack of financial commitment of service providers • Low collection rates • Increased reliance on foreign funds • Not sufficient financial budget for Water Sector • High operation and maintenance costs and • High treatment and desalination costs.	• Donor willingness for funding Water Sector and • The possibility of having sector generated income due to services provided.	• High indebtedness of PWA to PNA Treasury as some municipalities are not paying PWA for water • Donors have conditions for canceling funds due to low efficiency and weak collectability • The Israeli tariffs on wastewater treatment

3.3. Influences and Priority Issues

Based on the results of the SWOT analysis, the Consultant team identified the affective factors and priority issues, which will form the grounds for starting the identification of the strategic development framework for the Water Sector. **Table 7** presents the most important effective factors and priority issues in the water sector.

Table 7: Water Sector Priority Issues

Water Resources	Water Supply	Wastewater	Institutional Arrangements	Financial Arrangements
• Weak integrated management of water resources • Lack of available water resources • Groundwater vulnerability to contamination and depletion • The Israeli control on water resources and • The International Community understanding of the Palestinian Water Rights.	• Weak quality and reliability of water and water supply service • Lack of fair distribution • No water networks in some communities • Weak regional connection between urban centers and • Weak regional storage capacity.	• No wastewater networks in a numerous number of communities • Weak infrastructure related to wastewater treatment (municipal and industrial) and • Weak use of treated wastewater.	• Non-completion of legal, organizational, and functional procedures for restructuring the Water Sector as to become consistent with the New Water Law • The absence of an effective system to encourage and build the capacities for Water Sector institutions • Low level of monitoring and power of the monitoring authorities in general • Scientific research and its response to Water Sector main priorities and • Continue applying Item 40 of Oslo Agreement and its addendum related to the Joint Water Committee.	• Available international funds for the Water Sector projects • Weak financial capabilities in implementing the operational and investment programs • Reinforcement of service providers' financial independence • Limited efficiency of collection systems and high indebtedness • No self-funded available to fund large projects and • Lack of consistency and compliance of funding programs to the Water Sector Palestinian priorities.

4. Strategic Development Framework of the Palestinian Waster Sector

4.1. Vision

The Strategy for Water and Wastewater Sector 2014-2016 had formulated a strategic vision within the strategic development framework for water and wastewater sector during the three years of 2014-2016. Based on the sector analysis conducted in order to prepare a realistic, participatory, and implementable sector strategy of the key sector components, the strategy concluded the following development Vision of the Water Sector:

"Towards an Organized Water and Wastewater Sector, which contributes in building up the Palestinian Sovereignty and ensures the sustainability of water resources according to robust health, environmental, social and economic structures capable of achieving the essential and developmental requirements of the Palestinian people"

This vision was analyzed in order to verify its suitability for the period covered in the strategic plan being prepared for 2017-2022. It should be noted that visions are usually referring to long-term development.

Table 8 presents the relation between PWA vision analysis results and SDP objectives:

Table 8: Relation between PWA vision analysis results and SDP objectives

"Towards an Organized Water and Wastewater Sector, which contributes in building up the Palestinian Sovereignty and ensures the sustainability of water resources according to robust health, environmental, social and economic structures capable of achieving the essential and developmental requirements of the Palestinian people"					
Sustainable Water Resources	Robust Health, and Environmental, Structures	Robust Social and Economic Structures	Essential and Developmental Requirements of the Palestinians	Building up the Palestinian Sovereignty	Organized Water and Wastewater Sector
• Increasing available water quantitatively and qualitatively (conventional and unconventional water resources) • Increasing the capacity of PWA in planning for water resources • Improving the efficiency of water distribution systems	• Maintaining public health and protecting environment from pollution • Increasing the efficiency of wastewater systems (collection, transportation and treatment)	• Reinforcing financial independence of water utilities and water providers • Increasing collectability efficiency and decreasing the public debt • Improving and applying regulations, guidelines, fees, and tariff systems to ensure financial sustainability • Promoting social consciousness and strengthening rights and obligations approach (payment for services)	• Increasing water quantity provided to beneficiaries • Good and sustainable water supply for all citizens from safe water resources • Increasing agricultural areas suitable for treated water irrigation from unconventional water resources	• Supporting national effort towards justifying the Palestinian rights in their water resources	• Establishing and restructuring the different Water Sector institutions according to the new Palestinian Water law • Increasing the capacity of Water Sector institutions and improving their roles and • Improving related Water Sector regulations.

4.2. Strategic Objectives (2017-2022)

The strategic objectives are considered the most important bases for identifying the development framework for the water sector. The strategic objectives was identified to be achieved over the SDP implementation years.

Based on the SWOT analysis results and taking into consideration the affective factors and priority issues, the consulting team identified the strategic objectives. **Table 9** lists the strategic objectives of the water sector.

The consultant made a comparison (**Table 10**) between these strategic objectives and those of the National Water and Wastewater Policy and Strategic Plan (2014-2016).

Table 9: Water sector SDP (2017-2022) Objectives

Item	Water Resources	Water Supply	Wastewater	Institutional Arrangements	Financial Arrangements
Strategic Objectives	• Integrated management and sustainable development of the water resources (quantitatively and qualitatively)	• Improving the quality and reliability of water supply services as well as ensuring fair water distribution	• Improving wastewater services and structure (collection, treatment, and reuse)	• Development of Water Sector institutions to reinforce good governance bases within an integrated legal and institutional framework	• Ensuring the financial sustainability of water utilities and water service providers

Table 10: Comparison between the SDP (2017-2022) strategic objectives and the strategic objective of the National Water and Wastewater Policy and Strategy for Palestine (2012-2032) and the Water and Wastewater Strategic Plan (2014-2016)

National Water and Wastewater Policy and Strategy for Palestine 2012-2032	Water and Wastewater Strategic Plan 2014-2016	SDP 2017-2022
1. Increasing the quantity of water delivered to customers 2. Maximizing the volume of water made available for irrigation 3. Providing all citizen with a goodaccess to a reliable source of water	1. Integrated management and sustainable development of the water resources (quantitatively and qualitatively)	1. Integrated management and sustainable development of the water resources (quantitatively and qualitatively)
4. Reducing inequalities amongregions and localities 5. Improving the quality of the water delivered to customers 6. Improving the quality and reliability of the service	2. Fair and reliable water services provision	2. Improving the quality and authenticity of water supply services as well as ensuring fair water distribution
7. Protecting the natural water resources from pollution by wastewater	3. Improvingwastewater services and structure as well as protecting water resources from contamination by wastewater	3. Improving wastewater services and structures (collection, treatment, and reuse)
8. Strengthening the foundations of good governance and the legal and institutional framework	4. Reinforcing the foundations of good governance and providing legal and institutional Framework that ensures fair service provision and capable of good and sustainable management of the sector	4. Development of Water Sector institutions to reinforce good governance foundations within an integrated legal and institutional framework
9. Ensuring financial sustainability of water operators	5. Ensuring the financial sustainability of water service providers	5. Ensuring the financial sustainability of water utilities and water service providers

4.3. Strategic Objectives and Priorities of 2017-2022

Table 11 presents the priority issues, goals, and strategic objectives matrix of the water sector, summarizing the issues discussed above.

Table 11: Priority Issues, Goals, and Strategic Objectives Matrix of the Water Sector

Water Sector Component	Priority Issues	Strategic Goal	Objectives
Water Resources	• Weak integrated management of water resources • Lack of available water resources • Groundwater vulnerability to contamination and depletion • The Israeli control on water resources • The International Community understanding of the Palestinian Water Rights	• Integrated management and sustainable development of the water resources (quantitatively and qualitatively)	• Increasing available water quantitatively and qualitatively (conventional and unconventional water resources) • Increasing the capacity of PWA in planning and management of water resources • Supporting national effort towards justifying the Palestinian rights in their water resources • Protecting water resources from pollution and depletion
Water Supply	• Weak quality and reliability of water and water supply service • Lack of fair distribution • No water networks in some communities • Weak regional connection between urban centers • Weak regional storage capacity	• Improving the quality and reliability of water supply services as well as ensuring fair water distribution	• Increasing water quantity provided to beneficiaries • Good and sustainable water supply for all citizens from safe water resources • Improving the efficiency of water distribution systems
Wastewater	• No wastewater networks in a numerous number of communities • Weak infrastructure related to	• Improving wastewater services and structures (collection, treatment, and reuse)	• Maintaining public health and protecting environment from pollution • Increasing the efficiency of wastewater

Water Sector Component	Priority Issues	Strategic Goal	Objectives
	wastewater treatment (municipal and industrial) • Weak use of treated wastewater		systems (collection, transportation and treatment) • Increasing agricultural areas suitable for treated water irrigation from unconventional water resources • Providing an investment environment for private sector participation in this component • Encouraging using clean energy resources in this component
Institutional Arrangements	• Non-completion of legal, organizational, and functional procedures for restructuring the Water Sector as to become consistent with the New Water Law • The absence of an effective system to encourage and build the capacities for Water Sector Institutions • Low level of monitoring and power of the monitoring authorities in general • Scientific research and its response to	• Development of Water Sector institutions to reinforce Good Governance bases within an integrated legal and institutional Framework	• Establishing and restructuring the different Water Sector institutions according to the new Palestinian Water Law • Increasing the capacity of Water Sector institutions and improving their roles and • Improving related Water Sector regulations.

Water Sector Component	Priority Issues	Strategic Goal	Objectives
	Water Sector main priorities • Continue applying of Item 40 of Oslo Agreement and its addendum related to the Joint Water Committee.		
Financial Arrangements	• Available international funds for the Water Sector projects • Weak financial capabilities in implementing the operational and investment programs • Reinforcement of service providers' financial independence • Limited efficiency of collection systems and high indebtedness • No self-funded available to fund large projects • Lack of consistency and compliance of funding programs to the Water Sector Palestinian priorities	• Ensuring the financial sustainability of water utilities and water service providers	• Reinforcing financial independence of water utilities and water providers • Increasing collectability efficiency and decreasing the public debt • Improving and applying regulations, guidelines, fees, and tariff systems to ensure financial sustainability • Promoting social Consciousness and strengthening rights and obligations approach (payment for services)

4.4. Expected Indicators

Table 12 presents water sector indicators, while **Table 13** compares the expected results, indicators and indicator values of the baseline year of 2014 and the targeted year of 2022.

Table 12: Water Sector Indicators

Water Sector Component	Strategic Goal	Objectives	Indicators
Water Resources	Integrated management and sustainable development of the water resources (quantitatively and qualitatively)	• Increasing available water quantitatively and qualitatively (conventional and unconventional water resources) • Increasing the capacity of PWA in planning and management of water resources • Supporting national effort towards justifying the Palestinian rights in their water resources • Protecting water resources from pollution and depletion	• Water quantity produced from conventional water resources (million m^3) • Water quantity produced from unconventional water resources (million m^3) • Water quantity purchased (million m^3) • Available water quantity for different uses (million m^3) • Existence of applied monitoring systems for the different water resources, quantitatively and qualitatively, and the infringements (number of resources monitored) • Number of infringements • Tests coverage percentage for water resources • Number of contamination cases which were prevented from resources

Water Sector Component	Strategic Goal	Objectives	Indicators
Water Supply	Improving the quality and reliability of water supply services as well as ensuring fair water distribution	• Increasing water quantity provided to beneficiaries • Good and sustainable water supply for all citizens from safe water resources	• The percentage of unaccounted-for-water • Water quantity available at tap (expressed in liter/capita/day) • Number of un-served communities • The ratio of households connected to the public network • Disturbance period in supplying water • The percentage of samples meeting the Palestinian specifications
Wastewater	Improving wastewater services and structure (collection, treatment, and reuse)	• Maintaining public health and protecting environment from pollution • Increasing the efficiency of wastewater systems (collection, transportation and treatment) • Increasing agricultural areas suitable for treated water irrigation from unconventional water resources • Providing an investment environment for private sector participation in this	• Percentage of households connected to wastewater system or suitable on-site sanitation system (septic tanks + infiltration beds) • Percentage of wastewater treated in wastewater treatment plants • Percentage of treated wastewater meeting the Palestinian specifications • Number of WWTPs, the effluents of which meet the Palestinian

Water Sector Component	Strategic Goal	Objectives	Indicators
		component • Encouraging using clean energy resources in this component	specifications • Percentage of treated wastewater used for irrigation • The area of agricultural lands irrigated with treated water • Number of projects in which the private sector participates within this component
Institutional Arrangements	Development of Water Sector institutions to reinforce Good Governance bases within an integrated legal and institutional environment	• Establishing and restructuring the different Water Sector institutions according to the new Palestinian Water law • Increasing the capacity of Water Sector institutions and improving their roles • Improving related Water Sector regulations	• Institutionalized Water Authority • Effective Water Sector Regulatory Council • Finish the establishment of a National Water Company • Effective Water Services Councils and regional water utilities • Integrated water regulations
Financial Arrangements	Ensuring the financial sustainability of water utilities and water service providers	• Reinforcing financial independence of water utilities and water providers • Increasing collectability efficiency	• The percentage of water suppliers and water utilities operating independently • Percentage of metered connections

Water Sector Component	Strategic Goal	Objectives	Indicators
		and decreasing the public debt • Improving and applying regulations, guidelines, fees, and tariff systems to ensure financial sustainability • Promoting social Consciousness and strengthening rights and obligations approach (payment for services)	• Working ratio = Operation & Maintenance (O&M) costs and Administrative costs (Excluding depreciation) / Operating revenue. • Collectability efficiency

Table 13: Comparing the Expected Results, Indicators and Indicators Values of base year 2014 and targeted year 2022

Water Sector Component	Objectives	Indicators	Indicators Values				
			Base year (2014)		Target (2022)		Comments
			Gaza	**West Bank**	**Gaza**	**West Bank**	
Water Resources	• Increasing available water quantitatively and qualitatively (conventional and unconventional water resources) • Increasing the capacity of PWA in planning and management of water resources • Supporting national effort towards justifying the Palestinian rights in their water resources • Protecting water resources from pollution and depletion	• Water quantity produced from conventional water resources (million m^3)	170.7	103.8	135	213	Springs and wells
		• Water quantity produced from desalination (million m^3) "unconventional water resources"	4.7	0	70	22	
		• Percentage of treated water quantity "unconventional water resources"	25%	4%	50%	12%	
		• Water quantity purchased (million m^3) "Available water quantity for different uses"	3.5	60	14	92	
		• Existence of applied monitoring systems for the different water resources, quantitatively and qualitatively, and the infringements (number of resources monitored)	50%		90%		

Water Sector Component	Objectives	Indicators	Indicators Values				Comments
			Base year (2014)		Target (2022)		
			Gaza	**West Bank**	**Gaza**	**West Bank**	
Water Supply	• Increasing water quantity provided to beneficiaries • Good and sustainable water supply for all citizens from safe water resources	• The percentage of unaccounted-for-water	36.4%	28.6%	31%	26%	
		• Water quantity available at tap (liter/capita/day)	79.7	79.1	104	88	
		• Number of un-served communities	0%	14%	0%	3%	
		• The ratio of households connected to the public network	93%	93.4%	96%	96%	
		• The percentage of samples meeting the Palestinian Specifications	68%	95%	100%	100%	
Wastewater	• Maintaining public health and protecting environment from pollution • Increasing the efficiency of wastewater systems (collection, transportation and treatment)	• Percentage of households connected to wastewater system or suitable on-site sanitation system (septic tanks+ infiltration beds)	72%	31%	80%	45%	
		• Percentage of wastewater treated in wastewater treatment plants	25%	13%	50%	24%	

Water Sector Component	Objectives	Indicators	Indicators Values				Comments
			Base year (2014)		Target (2022)		
			Gaza	**West Bank**	**Gaza**	**West Bank**	
	• Increasing agricultural areas suitable for treated water irrigation from unconventional water resources • Providing an investment environment for private sector participation in this component • Encouraging using clean energy resources in this component	• Percentage of treated wastewater meeting the Palestinian specifications		0%	100%	100%	
		• The area of agricultural lands irrigated with treated water	1700	0	24700	52300	
		• Number of WWTPs, the effluents of which meet the Palestinian specifications • Percentage of treated wastewater used for irrigation	3	2	6	11	
		• Number of projects in which the private sector participates within this component	0	1	2	2	
Institutional Arrangements	• Establishing and restructuring the different Water Sector institutions according to the new Palestinian Water law • Increasing the capacity of Water Sector institutions and improving their roles	• Institutionalized Water Authority	50%		100%		
		• Effective Water Sector Regulatory Councils and regional water utilities	0%		100%		
		• Capacity Building for Water Sector institutions	80%		98%		
		• Number of utilities and regional water providers	1	0	1	3	

Water Sector Component	Objectives	Indicators	Indicators Values				
			Base year (2014)		Target (2022)		Comments
			Gaza	**West Bank**	**Gaza**	**West Bank**	
	• Improving related Water Sector regulations	• Integrated Water regulations and instructions	30%		100%		
		• Establishment of the NWC	0		100%		
Financial Arrangements	• Reinforcing financial independence of water utilities and water providers • Increasing collectability efficiency and decreasing the public debt • Improving and applying regulations, guidelines, fees, and tariff systems to ensure financial sustainability • Promoting social Consciousness and strengthening rights and obligations approach (payment for services)	• The percentage of services councils and water utilities operating independently	80%	20%	90%	60%	
		• Working ratio = Operation & Maintenance (O&M) costs and Administrative costs (Excluding depreciation) / Operating revenue		126%	100%	100%	
		• Collectability efficiency	25%-50%	65%-75%	75%-80%	80%-90%	

5. SDP Proposed Interventions

Table 14 presents the SDP proposed interventions with projects/main interactions. These have been formulated considering the accomplished programs between the years 2012-2016. The interventions are related to the priority issues, goals, and strategic objectives matrix of the water sector SDP 2017-2022.

Table 14: SDP Interventions (2017-2022)

Water Sector Component	Indicators	Proposed interventions
Water Resources	• Water quantity produced from conventional water resources (million m^3) • Water quantity produced from unconventional water resources (million m^3) • Water quantity purchased (million m^3) • Available water quantity for different uses (million m^3) • Existence of applied monitoring systems for the different water resources, quantitatively and qualitatively, and the infringements (number of resources monitored) • Number of infringements • Tests coverage percentage for water resources • Number of contamination cases which were prevented from resources	• Drilling, completing, and operating new wells • Constructing desalination plants • Water Harvesting project such as dams, water barriers, and water tanks • Rehabilitation and completion of groundwater wells and springs • Monitoring of water resources; quantitatively and qualitatively, and violations • Implementing water resources management and development plans • Preparing documents and scenarios for negotiation • Participating in negotiations • To apply the Palestinian vision regarding trans-boundary water • Developing and applying a system for water resources protection against contamination
Water Supply	• The percentage of unaccounted-for-water • Water quantity available at tap (liter/capita/day) • Number of un-served communities • The ratio of households connected to the public network • Disturbance period in supplying water	• Re-allocation of water to ensure equity in supply • Rehabilitation of water supply systems • Establishment and supply of water distribution systems with available water resources for un-served communities • Connecting systems in a way that ensures regionally

Water Sector Component	Indicators	Proposed interventions
	• The percentage of samples meeting the Palestinian specifications	available and sustainable services • Better operation of the water quality monitoring system • Reinforcing the sense of responsibility, satisfactory and belonging of citizens
Wastewater	• Percentage of households connected to wastewater system or suitable on-site sanitation system (septic tanks + infiltration beds) • Percentage of wastewater treated in wastewater treatment plants • Percentage of treated wastewater meeting the Palestinian specifications • Number of WWTPs, the effluents of which meet the Palestinian specifications • Percentage of treated wastewater used for irrigation • The area of agricultural lands irrigated with treated water • Number of projects in which the private sector participates within this component	• Developing wastewater systems • Setting suitable financial, environmental, and technological measures for the wastewater systems • Establishing regional and local systems for reusing treated wastewater • Programs to encourage the use of treated wastewater • Developing regulations to motivate the engagement of the private sector • Capacity building programs
Institutional Arrangements	• Institutionalized Water Authority • Effective Water Sector Regulatory Council • Finish the establishment of a National Water Company	• Restructuring, re-establishing and activating Water Sector institutions • Developing the legislative framework (preparation of bylaws and related instructions)

Water Sector Component	Indicators	Proposed interventions
	• Effective Water Services Councils and regional water utilities • Integrated water regulations	• Capacity building programs
Financial Arrangements	• The percentage of water suppliers and water utilities operating independently • Percentage of metered connections • Working ratio = Operation & Maintenance (O&M) costs and Administrative costs (Excluding depreciation) / Operating revenue. • Collectability efficiency	• Issuing needed procedures manuals to apply tariff system and related financial bylaws • Implementing cost recovery concept for water and wastewater • Setting, approving and implementing the sustainable financial strategy for Water Sector • Raising consciousness for service providers councils • Developing regional water utilities regulation • Capacity building of institutions in order to adjust their financial situation and • Reinforcing the sense of responsibility, satisfactory and belonging of citizens.

Annexes

Annex I: Communication Plan
Annex II: Main documents collected and reviewed

Annex I: Communication Plan

Activity	Statements/ Mechanisms/ Responsibilities	Period	Technical Committee	Project Manager/ PWA	Steering Committee	Governorates	Local Governmental Directorates	LGUs, Water Undertakings, and Joint Councils	Others as Needed
Inception Report	The Consultant	Week 2		Revision, comments and feedback					
Data Collection and Documentation	The Consultant	Over the whole project period	Coordination and provision of documents	Coordination and provision of documents					
Needs Inventory	Designing forms, meetings and workshops	Until the end of week 6		Coordination with stakeholders		Provision of information and forms filling			
Documents Revision	The Consultant	Over the whole project period	Provision of Documents						
Develop SDP	The Consultant	Until the end of week 6	Coordination	Coordination					
Draft SDP Presentation/ First	The Consultant	End of week 6	Coordination, comments and	Coordination, comments and	Coordination, comments and	Participation in workshops and comments			

Activity	Statements/ Mechanisms/ Responsibilities	Period	Technical Committee	Project Manager/ PWA	Steering Committee	Governorates	Local Governmental Directorates	LGUs, Water Undertakings, and Joint Councils	Others as Needed
Workshop			feedback	feedback	feedback				
Final SDP Presentation/ Second Workshop	The Consultant	End of week 8	Coordination, comments and feedback	Coordination, comments and feedback	Comments and feedback	Participation in workshops and comments			
Develop Action Plan	The Consultant		Coordination, comments and feedback	Coordination, comments and feedback	Coordination, comments and feedback	Participation and comments			
Draft Action Plan Presentation/ Third Workshop	The Consultant	End of week 18	Coordination, comments and feedback	Coordination, comments and feedback	Comments and feedback	Participation in workshops			
Final Action Plan Presentation/ Forth Workshop	The Consultant	Week 20	Coordination, comments and feedback	Coordination, comments and feedback	Comments and feedback	Participation in workshops			
Final Report	The Consultant	Week 20		Revision, comments and feedback					

Annex II: Main documents collected and reviewed

No.	Document Title, Authority, and Year of Production
1.	Palestinian Water Law, Palestinian Water Authority, 2014
2.	National Water and Wastewater Policy and Strategy for Palestine, Palestinian Water Authority, 2012-2032
3.	Water and Wastewater Sector Sectoral Strategy, 2014-2016
4.	Executive Summary of Water and Wastewater Sector Sectoral Strategy, 2014-2016
5.	Current Situation of the Water Sector in Palestine, Palestinian Water Authority, 2008
6.	Comprehensive Plan for Water and Wastewater for Tulkarem Governorate, Palestinian Water Authority, 2010
7.	Comprehensive Plan for Water and Wastewater for Tubas Governorate, Palestinian Water Authority, 2009
8.	Comprehensive Plan for Water for Jericho City, Palestinian Water Authority, 2011
9.	Comprehensive Plan for Water and Wastewater for the City of Qalqiliya, Palestinian Water Authority, 2012
10.	Comprehensive Plan for the Lower Basin of the Jordan Valley, 2014
11.	Comprehensive Plan for Water and Wastewater for South West Bank, 2012
12.	Comprehensive Plan for Water and Wastewater for North West Bank, 2014
13.	Comprehensive Plan for Water and Wastewater for Jerusalem Water Undertaking, 2014
14.	Lists of projects of the Palestinian Water Authority
15.	Strategic Plan and Action Plan of the Ministry of Agriculture
16.	Agriculture Law
17.	Instructions regarding the reuse of treated wastewater for agricultural purposes
18.	Main Policy of the Irrigation Water Management Council
19.	Law of Water Harvesting Projects through small dams and water collection
20.	Public Health Law
21.	Environmental Law
22.	Local Authorities Law