

TECHNICAL & FINANCIAL FILE

WATER SUPPLY AND MANAGEMENT CONTRIBUTING TO FOOD SECURITY IN GAZA PROVINCE

MOZAMBIQUE

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THE BELGIAN
DEVELOPMENT COOPERATION **.be**

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ABRÉVIATIONS

AfDB	African Development Bank
ARA	Regional Water Resource Management Agency
BTC	Belgian Technical Co-operation
CAADP	Comprehensive African Agriculture Development Program
CFPAS	Professional Training Centre for Water and Sanitation
CDC	Community Development Council
CHAEM	Centre for Environmental Hygiene and Medical Examination
CLTS	Community-Led Total Sanitation
CoC	Code of Conduct
CRA	Water Supply Regulatory Authority
DAH	Provincial Department of Agricultural Hydraulics
DAS	Provincial Department of Water and Sanitation
DAR	Rural Water Department
DES	Sanitation Department
DCC	District Consultative Council
DHR	Department of Human Resources
DNA	National Directorate of Water
DNHA	National Directorate for Agriculture Hydraulics
DPPF	Provincial Department for Planning and Finance
DPFP	Decentralized Planning and Finance Program
DPOPH	Provincial Directorate of Public Works and Housing
DRA	Demand Responsive approach
FDA	Fund for Agriculture
FDHA	Fund for Agriculture Hydraulics
FIPAG	Fund for Water Supply Investment and Asset Management
FNS	Food and Nutritional Security
GAS	Water and Sanitation Working Groups
GoM	Government of Mozambique
GPC	Division of Planning and Control
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
MDG	Millennium Development Goals
MINAG	Ministry of Agriculture
MOPH	Ministry of Public Works and Housing

NDP	National Decentralisation Program
NGO	Non Governmental Organisation
NRWSSP	National Rural Water Supply and Sanitation Programme (= PRONASAR)
O&M	Operation & Maintenance
PAF	Performance Assessment Framework
PAP	Programme Aid Partnership
PARP	Poverty Reduction Strategy Paper
PEC	Community Education Programme
PDD	District Strategic Development Plan
PEDSA	Strategic Plan for Agricultural Development
PDP	Provincial Strategic Development Plan
PES	Annual Economic and Social Plan (National and Provincial)
PESOD	Annual Economic and Social Plan and Budget of the District
PIT	Project Implementation Team for RWSS at district level
RWSS	Rural Water Supply and Sanitation
PMT	Project Management Team
SDAE	District Economic Affairs Service
SDMAS	District Health, Women and Social Action Service
SDPI	District Planning and Infrastructure Services
SETSAN	Technical Secretariat for Food Security and Nutrition
SINAS	National Water and Sanitation Information System
SISTAFE	National Financial Management system
UGEA	Procurement Management Unit
WHO	World Health Organization

ANALITICAL FICHE OF THE INTERVENTION

Intervention number	3011287
Navision Code BTC	MOZ 11 024 11
Partner Institution	Ministry of Public Works and Housing
Validity of Specific Agreement	6 years
Duration of intervention	5 years
Estimated starting date of intervention	mid 2012
Mozambican Contribution	Non determined
Belgian Contribution	9,000,000 EUR
Sector (CAD codes)	14 030 Basic water supply and sanitation
Global Objective	The food security and nutrition of vulnerable households in Gaza province is improved
Specific Objective	The access to and control over water supply and sanitation in Gaza province is sustainably increased
Results	<ol style="list-style-type: none"> 1. Access to drinking water supply and sanitation facilities is increased in a sustainable manner 2. Access to complementary productive water facilities is enabled in a sustainable manner 3. Agencies at provincial, district and local level assume their responsibilities in planning and management of water supply and sanitation 4. Water users and service providers manage water and sanitation infrastructure in an effective and sustainable manner.

1. SITUATION ANALYSIS

1.1. INTRODUCTION

In 2010, it was estimated that a population of 350,000 could be considered as food insecure in Mozambique, spread over 30 districts. Food insecurity is explained by a number of factors such as weak agriculture production combined with environmental factors (e.g. climate change with drought and floods), weak local economic development, and difficult access to markets. Tackling the problem of food insecurity is an integral part of the poverty reduction strategy (PARP II).

In the coming years, Belgium will contribute to support the Food and Nutritional Security (FNS) in 6 districts of the northern part of the province of Gaza (i.e. the districts of Chicualacula, Chigubo, Guija, Mabalane, Massangena and Massingir). The Belgian support will be provided through a number of channels, including bilateral co-operation between the two Governments, support through UN organisations and Belgian NGOs. The present Technical and Financial File (TFF) will only deal with the bilateral support of the Government of Belgium to the Government of Mozambique, which will focus on improving the access to drinking water, which is an important factor to explain food insecurity in this region.

1.2. TECHNICAL SECRETARIAT FOR FOOD SECURITY AND NUTRITION

The FNS agenda in the country is coordinated by the Technical Secretariat for Food Security and Nutrition (SETSAN), which reports directly to the Minister of Agriculture. SETSAN is a multi-sectoral coordination structure with the following mission: "Ensure the coordination and articulation of policies, planning, evaluation and monitoring of the programmes and actions within an inter-sectoral framework, at various levels, while preserving the specific role of each Ministry, public institution, civil society body and the private sector, with a view to guarantee the development of human capital in Mozambique".

At provincial level, the Governor represents the President of Mozambique and the Provincial Director of Agriculture is the SETSAN executive secretary. The provincial SETSAN technician is embedded within the Agricultural Services Department of the Provincial Department of Agriculture (DPA). The Provincial SETSAN is an inter-sectoral body whose mandate is to coordinate, and guarantee the success of the formulation, implementation and monitoring of the FSN policies and programmes by all stakeholders. The Provincial SETSAN is to assure early warning about food security problems, to report three times a year on the FNS situation in the respective districts and to feed the results back to the provincial government.

At district level, the District Administrator represents the Governor and coordinates the Government decentralized structures. The District Director for Economic Activities and Services is the SETSAN executive secretary. A SETSAN focal person is embedded within the Department of Economic Activities and Services (SDAE). Districts are in charge of developing District Development Plans (PDD) which should include multi-sector Food Security programmes, aiming at increased agriculture productivity and diversification, improved health and education services, equitable access to natural resources, soil and water conservation programmes, improved roads and markets, increased stakeholder organisation and user-friendly, participatory monitoring system to steer the programmes.

1. 3. GAZA PROVINCE

The northern part of Gaza Province is characterised by dry and semi-arid areas, with limited opportunities for agriculture. The population of the 6 districts in northern Gaza is estimated at 211,000 inhabitants – representing 20% of the province – with an average density of 3.7 pp/km². The settlement pattern is characterized by sprawl, with some concentration of communities along the Limpopo river basin and the railway. Whereas a majority of the inhabitants is based in settlements of 300 to 2000 people, an important part lives totally dispersed. At the same time, a few larger settlements up to 10,000 are found, i.e. in Guija district (Fig. 1).

Since 2010, all districts in Gaza have a District Development Plan (PDD) in line with the Law on Local Authorities. These plans have been bundled in a 5 year provincial strategic development plan. In addition yearly provincial economic and social plans and budgets are developed at district level (PESOD) and at provincial level (PESOD). Non Government Organisations (NGOs) and other development partners participate in district planning and their resources are included in district plans and budgets.

Livelihoods in the semi-arid and dry zones covering northern Gaza are currently based on livestock, and to a limited extent on agricultural production. Other income generating activities are searched for, in and outside the intervention zone, in agriculture but also in other sectors such as mining. Meanwhile, Gaza province has considerable infrastructure along the Limpopo river just outside of the intervention zone (in Chokwe and XaiXai district) with thousands of hectares that are underused. Poor households from the intervention zone provide their labour on an ad hoc basis in times of hardship.

Table 1 presents respectively the number of inhabitants and number of inhabitants prone to food insecurity. While absolute numbers are highest in Guija district, the relative poverty rates are highest in Chicualacuala, Mabalane and Massagena.

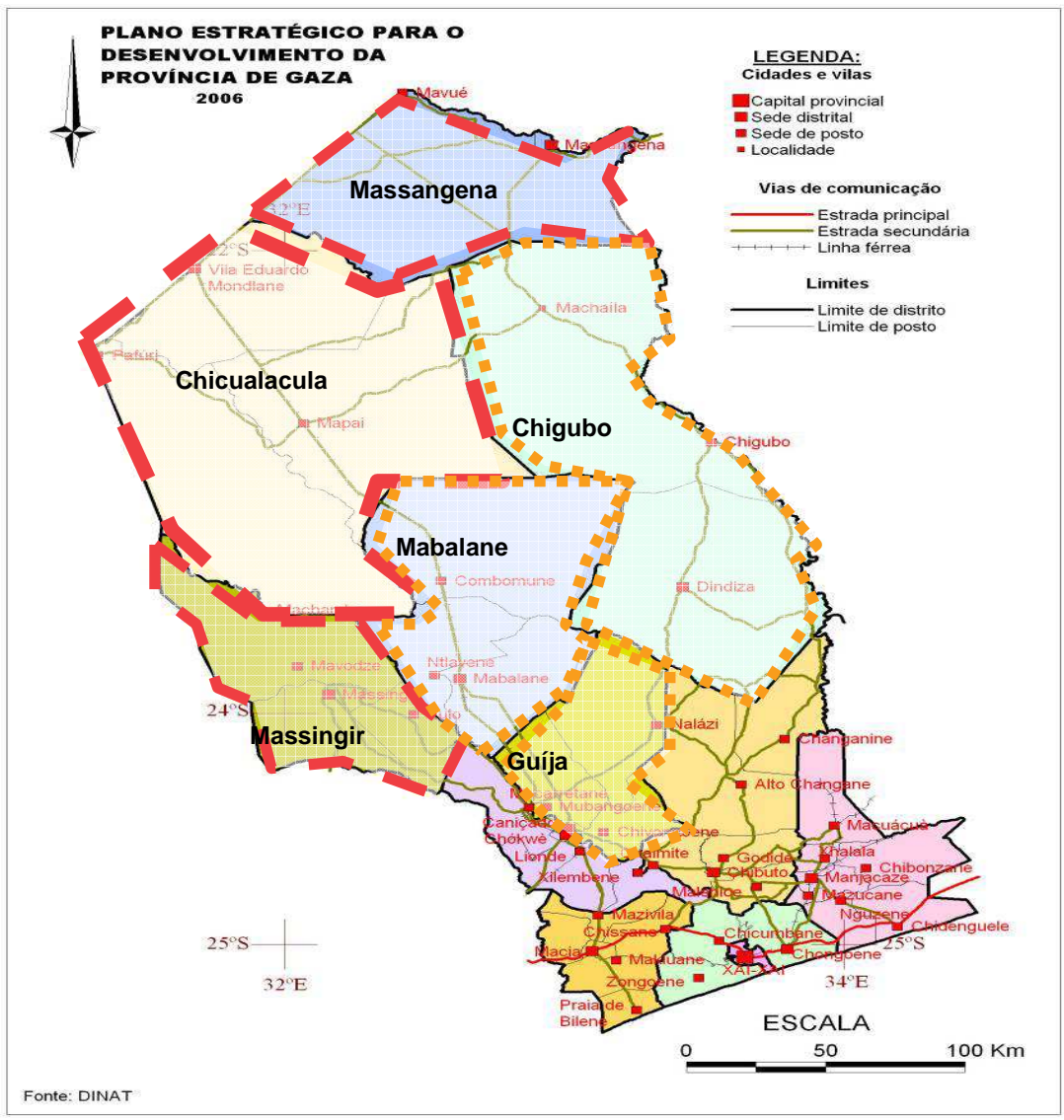


Fig. 1 Map of Gaza Province

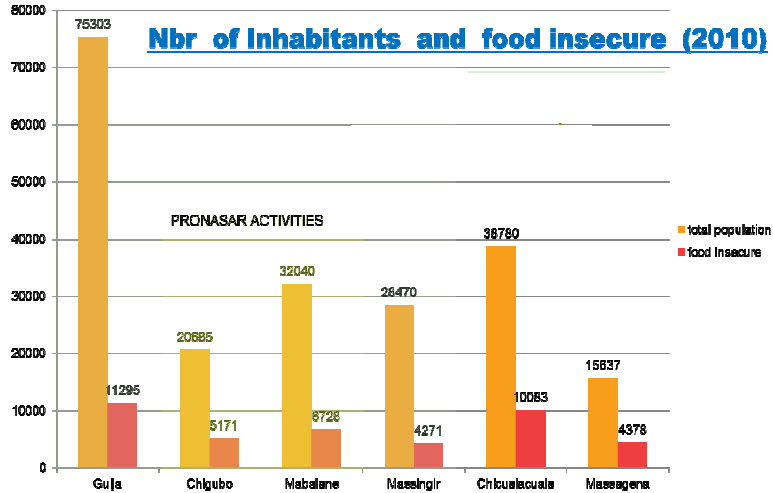


Table 1: food insecurity in 6 districts of northern Gaza Province

1. 4. DRINKING WATER AND SANITATION

1. 4. 1. Policy Framework

In recent years, the Government of Mozambique (GoM) has made a lot of efforts to reform its water sector. A Rural Water Supply and Sanitation Strategic Plan 2006-2015 (PESA-ASR) was launched which should enable Mozambique to reach the Millennium Development Goals (MDG) target of 70% coverage for rural water supply and 50% coverage of rural sanitation at national level, respectively.

In 2010, a National Rural Water Supply and Sanitation Program (NRWSSP), called PRONASAR was elaborated to implement the national strategy. This Program is implemented on a priority basis in provinces and districts meeting agreed criteria, which include present water and sanitation coverage, poverty, written commitments, adequate staffing, presence of other Rural Water Supply and Sanitation (RWSS) projects and other support programmes. Emphasis is on provinces and districts with lowest coverage and highest poverty. GoM invited development partners, NGOs, the private sector, community members and other stakeholders at central, provincial, district and local levels to support PRONASAR.

The Program consists of four components:

- (1) Support to sustainable increase in rural water supply and sanitation (RWSS) coverage
- (2) Development of appropriate technologies and management models for RWSS
- (3) Capacity-building and human resource development in the RWSS sub-sector
- (4) Support to decentralized planning, management, monitoring and financing of RWSS activities

It emphasizes:

- A demand-responsive approach (DRA) whereby communities choose service levels based on their perceived needs and capacity and ability to pay
- An upfront contribution to capital costs and full operation and maintenance (O&M) costs to foster ownership of the improved facilities. This contribution can be financial, in kind or in labour.
- Involvement of beneficiaries in planning, design, construction, supervision, monitoring and O&M through local committees and councils, NGOs and the private sector
- Maximizing health benefits by integrating water supply, sanitation and hygiene promotion and including school-based activities.

A Program Operations Manual is available to support the implementation at all levels.

At central level a Program Steering Committee guides PRONASAR. At provincial level, provincial steering committees provide oversight, guidance and support. At district level, Program Implementation Teams supported by partner NGOs and others are being formed to plan, manage and monitor RWSS activities. In addition, Water and Sanitation Working Groups (GAS) and Water and Sanitation Fora are being established as consultative and advisory bodies to support RWSS activities at provincial and district levels, respectively.

The present rural water supply coverage is estimated at 29%. Increasing it to 70% by 2015 requires the provision of up to 17,000 new or rehabilitated water points and 151 small supply systems, while increasing sanitation coverage from 39% to 50% by 2015 requires the construction of up to 493,000 improved latrines, representing a total investment of USD 347 million. PRONASAR aims to cover an additional 7.4 million rural inhabitants by improved water and sanitation facilities.

1. 4. 2. Actors

Public sector institutions

Decentralisation

The Government's decentralization strategy identifies districts as the focal point for local development and provides decentralized local development funds and technical support to enable districts to play a larger role in planning, implementation, management and monitoring of development activities. Current laws allow for the formation of local consultative councils as links between the public and district authorities. Existing laws and regulations permit the formation of local fora, community committees and community development funds.

The National Directorate of Water (DNA) of the Ministry of Public Works and Housing is in charge of water affairs, including rural and urban water supply, water resources management and transboundary water issues. DNA is in charge of implementing PRONASAR. Its main departments are:

- The Division of Planning and Control (GPC) responsible for planning, monitoring and control of budget allocations and investments both from the State Budget as well as external resources;

- The Rural Water Department (DAR) responsible for
 - promoting and supporting affordable and sustainable supply of water for the rural population;
 - defining and implementing policies, strategies, guidelines;
 - mobilizing resources and monitoring in the rural water supply sub-sector;
 - supervising preparation of provincial RWSS master plans;
 - coordinating activities among stakeholders;
 - developing and managing the National Water and Sanitation Information System (SINAS).
- The Sanitation Department (DES) responsible for promotion and monitoring of sanitation in rural, urban and peri-urban areas;
- The Department of Administration and Finance (DAF) in charge of preparing and executing financial plans and budgets, receiving, disbursing and accounting for funds;
- The Department of Human Resources (DHR) responsible for institutional and human resource development and capacity building;
- The Procurement Management Unit (UGEA) responsible for planning and managing procurement of goods, works and services.

At provincial level, Provincial Directorates of Public Works and Housing (DPOPH), through the Department of Water and Sanitation (DAS), are responsible for implementing the Program.

District governments include the district administration, technical units (services) and district consultative councils. District administrations, operating through the District Planning and Infrastructure Services (SDPI) and the Health, Women and Social Action Services (SDMAS), are responsible for rural water supply, sanitation and health and hygiene promotion.

In addition the water sector includes the following autonomous institutions:

- Fund for Water Supply Investment and Asset Management (FIPAG)
- Water Supply Regulatory Authority (CRA)
- Regional Water Resource Management Agencies (ARAs)
- Professional Training Centre for Water and Sanitation (CFPAS)

Under the mandate of the Ministry of Health, the Centre for Environmental Hygiene and Medical Examination (CHAEM) and the National Laboratory for Food Safety and Water Quality have the mandate to test water quality. In each province CHAEM is responsible to test and analyze drinking water quality.

Districts also work with small-scale contractors, suppliers and individual artisans. Presently, districts have limited capacity to plan, undertake procurement, supervise construction, manage contracts, inspect and certify works and monitor progress.

At local level, Community Water Supply and Sanitation Committees are being formed and supported to assist in planning and to manage, maintain and monitor improved water supply

and sanitation facilities.

Private actors

PRONASAR encourages the private sector, including small businesses and artisans, to develop and market a wide range of products and services. This includes consultancies, geo-physical studies, drilling and construction, manufacture and supply of pumps, spare parts and other equipment, training, including on-the-job training, auditing and other services. The capacity of the private sector to provide timely and quality products and services is critical for the successful execution of RWSS activities.

Private sector providers of Community Education Programme (PEC) services assist communities in forming water and sanitation committees, planning, choosing technologies and management models, collecting funds, O&M arrangements and post-construction managerial and technical support to community level organizations.

Civil Society Actors

NGOs can contribute to the development of the RWSS sub-sector in the following ways:

- Provide funding and technical assistance for capacity building for decentralized planning, budgeting, management, supervision and monitoring at provincial, district and local levels as well as training and supporting other/local NGOs, small-scale enterprises and artisans
- Supervise and/or carry out PEC activities - mobilizing, training and organizing communities, including support to water and sanitation committees in mobilizing and managing contributions to capital and O&M costs, and in choosing management models and supply chain arrangements for spare parts and repair services
- Conduct social marketing and awareness campaigns for sanitation and hygiene promotion, provide advice and technical assistance in establishing sanitation demonstration centres and district water and sanitation fora and other activities
- Support piloting and promoting alternative technologies and management models
- Document and disseminate best practices, manuals and other knowledge products

International development partners

DNA chairs the Water and Sanitation Group (GAS), a forum for exchange and policy debate among development partners in the water sector. It plays an important role in exchange of relevant knowledge and experiences with regard to PRONASAR. Its Code of Conduct (CoC) commits GoM and development partners to establish and implement a sector-wide approach in the water sector and to adopt a common performance review mechanism. The GoM has established a Memorandum of Understanding with development partners participating in the RWSS Common Fund.

Within the framework of PRONASAR a common fund has been established combining funds of the Government and 5 donors (i.e. CIDA-Canada, DFID-UK, The Netherlands, Switzerland and UNICEF). However a number of donors finance and/or implement projects within PRONASAR without joining the common fund.

1. 4. 3. Strategy of PRONASAR

Program strategies are closely related to and support achievement of the objectives:

- ✓ **Increasing sustainable water supply and sanitation coverage and improving the quality of services**
 - ❖ Incentive-based business packages for the private sector
 - ❖ Social marketing, traditional PEC, PEC zonal, poverty targeting and gender equity
 - ❖ Strengthen supervision capacity
 - ❖ Redress imbalances in coverage
 - ❖ Provide post-construction support
- ✓ **Broadening the range of technical options and management models**
 - ❖ Promote piloting of new technologies, services and management models
 - ❖ Apply the Demand Responsive Approach at district and local level
- ✓ **Decentralizing and strengthening sub-sector institutions and human resources**
 - ❖ Support enabling environment and capacity building for planning, management and monitoring at all levels
 - ❖ Provision of Technical Assistance, training and other support
- ✓ **Strengthening the relationship between planning, financing and decentralization**
 - ❖ Support inclusive, bottom-up planning, budgeting and monitoring
 - ❖ Improve accuracy, usefulness and flow of information
 - ❖ Promote use of a RWSS Common Fund and national systems for planning, budgeting, procurement, financial management and procurement

The principles of the Demand Responsive Approach (DRA) are:

- water should be managed as an economic as well as a social good
- management should be focused at the lowest appropriate level
- a holistic approach to the use of water resources should be employed
- women should play a key role in the management of water

Key characteristics of the DRA are:

- ❖ Community members make informed choices about:
 - Whether to participate in the project
 - Technology and service level options based on their willingness-to-pay for various levels of service (higher levels or service are more expensive).
 - When and how their services are delivered
 - How funds are managed and accounted for

- How their services are operated and maintained
- ❖ Government plays a facilitative role, sets clear national policies and strategies, encourages broad stakeholder consultation and facilitates capacity building and learning;
- ❖ An enabling environment is created for the participation of a wide range of providers of goods, services and technical assistance to communities, including the private sector, and NGOs;
- ❖ An adequate flow of information is provided to the community, and procedures are adopted for facilitating collective action decisions within the community and between the community and other actors

1.5. PRODUCTIVE WATER

The National Directorate for Agriculture Hydraulics (DNHA) of the Ministry of Agriculture (MINAG) is the coordinating entity of activities related to irrigation and drainage. The former Fund for Agriculture Hydraulics (Fundo de Hídrica Agrícola –FDHA), currently associated with the unique Fund for Agriculture (FDA), has as a mandate to promote, stimulate and finance hydro-agricultural works and other activities related to the development of irrigated agriculture. MINAG cooperates with DNA of the Ministry of Public Works and Housing for those aspects concerning the planning and use of water resources. At provincial level, coordination is made with the Provincial Directorates for Agriculture.

Management of water in agriculture is dealt with in the National Irrigation Strategy (MINAG/EI, 2010) proposes, between others, the following:

1. improve the efficiency of water use
2. guarantee an adequate maintenance of the irrigation systems and minimise water losses through the transfer of responsibilities towards the users
3. promote and stimulate small-scale irrigation, mobilizing financial and technical resources
4. use alternatives for conventional irrigation, like the use of low and humid lands through low-cost technologies
5. support the capacity development for management, handling and maintenance of irrigation systems

The irrigation strategy is developed in the Strategic Plan for Agricultural Development – PEDSA (2010-2019). By systematising the wide range of strategic guidelines for agriculture, PEDSA aims to incorporate a vision that is shared by key actors within the sector, creating a harmonized framework that will guide decisions, deal with issues that affect investor confidence and speed up agricultural competitiveness in a sustainable way. It aims to increase agricultural growth by an average of at least 7% per year. The sources of growth will be productivity (ton/ha) combined with an increase in the area under cultivation, with a view to doubling yields and a 25% increase in the area cultivated for basic food production by 2019, while ensuring the sustainability of natural resources.

To achieve the vision and general objective in the medium and long term, the PEDSA establishes five specific strategic objectives, aligned with the pillars of the Comprehensive African Agriculture Development Programme (CAADP):

1. Agricultural production and productivity and its competitiveness increased
2. Infrastructures and services for markets and marketing improved
3. Land, water, forest and wildlife resources used sustainable
4. Legal framework and policies conducive to agricultural investment in place
5. Agricultural institutions strengthened

The first specific objective “Agricultural production and productivity and its competitiveness increased” comprises a specific result on water for agriculture: “**R1.4- the availability and management of water for agriculture and animal production improved**”, with the following strategies:

- Improve the knowledge of the relevant actors through increased support for training institutions and extension systems, including increased knowledge for farmers about managing irrigation schemes;
- Promote the incorporation and use by farmers of irrigation technologies using rainwater, thus increasing the irrigated area, especially in dryer areas;
- Improve water management through developing and implementing an integrated national water management policy, with legal instruments and a strategy for agriculture and other use and for mitigating the risks stemming from climate change;
- Strengthen and rationalise the institutional framework for providing support to farmers with regard to irrigation, in accordance with the water management policy and strategy;
- Improve the collection, conservation and management of rainwater through creating capacity and promoting appropriate technologies;
- Build and rehabilitate irrigation and drainage systems.

1. 6. KEY CHALLENGES IN THE INTERVENTION ZONE

1. 6. 1. Hydrology, water quality and water cost

The six selected districts partly belong to the Limpopo Basin. Generally, the aquifers of the Limpopo Basin are characterized by poor water quality and limited productive capacity, presenting significant constraints for human consumption. According to hydrogeological maps conducted by the Mozambican National Directorate of Water, the districts are characterised by aquifers associated with fissures and areas without significant underground water which means that water is rare, except along the Limpopo valley and around Massingir dam. This explains why drinking water was imported to this area by railway under Portuguese colonization.

Two major inefficiencies in the RWSS sub-sector need to be addressed to ensure efficiency and sustained coverage in the 6 selected districts

- ✓ the high number of negative boreholes (up to 50%), which increases costs and affects the credibility of other activities,
- ✓ the high number of non-operational water points and systems (up to 40%),

The average depth of boreholes currently in use, are between 40 and 65 m. In the intervention area, high levels of salinity are reported, mitigating the quality and attractiveness of a high number of existing water sources. Recent hydrological studies highlight that safe

drinking water within salinity standards (< 2000 µS) is to be found at 150 m depth or more (excluding in the Limpopo basin).

However deep boreholes in the aquifer require higher investment costs. The average investment cost of a new borehole in Gaza is estimated at 139% of the average cost in Mozambique overall. A mechanical pump might be needed rather than a handpump. Compared to an average cost of boreholes at USD 6,393, a 150m deep borehole equipped with solar pump and reservoir could easily cost around USD 40,000.

Combining the effects of technical requirements for safe drinking water in the northern districts of Gaza with the settlement pattern of scattered communities, leads to a cost benefit analysis in Table 2 – considering a potential investment in 100 new boreholes.

A similar conclusion is reached when considering management costs. The Water and Sanitation committees (WSC) should decide the required service level and are in charge of management and maintenance of the water points. These costs will be higher for the equipement of the deeper wells.

Table 2 Cost benefit analysis

	settlement 1000 pp ~ 150 families	settlement 100 pp ~ 15 families
Beneficiaries (safe water users)	100.000	10.000
Capital investment cost	€ 45/pp	€ 450/pp
Upfront contribution*	€ 30/family	€ 300/family
Capital maintenance cost	€ 1/pp/year	€ 10/pp/year
Minimum monthly maintenance contribution	€ 0.6/family	€ 5.6/family
Current common monthly "water price"	€ 1.3/family	€ 1.3/family

* the contribution of families can be financial, in kind or in labour

Poor WSC financial management and lack of a pro-poor water pricing policy also jeopardize sustainability of water supply and its community management. Currently, no treasury systems are in place as to save money for upcoming maintenance cost. Banking services are not available in the intervention zone.

The current applied flat rate is not a pro-poor water pricing policy as it does not reflect the actual volume of water used. Socio-economic indicators in the area insinuated that poorer families require less water as they tend to be smaller, lack cattle and occupy smaller pieces of land.

1. 6. 2. Drinking water coverage

The estimated drinking water coverage per district is presented in Table 3. However the definition used for water coverage here refers to the number of water sources for every 500 people and does not include aspects such as distance to the water source, the quality of water, etc.

The effect of sprawl and the low population density in the chosen intervention area imply that the unit cost to assure drinking water per food insecure water user can rise to more than a tenfold as compared to areas that are more densely populated. Northern Gaza province does not belong to priority areas for public investments with high agricultural potential.

Other interventions supporting rural water supply and sanitation have been planned in the 6 districts identified for the Belgian support, and are expected to significantly improve water coverage. In 2012, the Common Fund of Pronansar will realize 90 new bore holes in the districts of Chicualacuala, Chigubo and Mabalane. Further, 2 NGOs are investing in water supply infrastructures.

Table 3: Water sources in the Province of Gaza (2006)

Districts	Boreholes		
	Existing	Operational	Coverage
Guijá	132	94	64,4%
Massingir	33	16	33%
Mabalane	55	30	52,8%
Chigubo	25	15	55,9%
Chicualacuala	56	39	51%
Massangena	40	26	86,7%
Bilene	231	176	60,7%
Xai-Xai	280	214	59,9%
Mandlakaze	237	169	47,5%
Chókwe	267	202	54,8%
Chibuto	343	250	56%
TOTAL	1,700	1,231	59,9%

1. 6. 3. Development and sector budget

The budget for Investments in the District Strategic Development Plan (PDD) is relatively small compared to projected Water and Sanitation investments for the coming years. Table 4 shows a comparison between the current average district budget, the PDD investment for water supply for the period 2010-2014 and preliminary projections of the Belgian support to the selected districts. These illustrate that there will be a need i) for strong coordination to avoid overlap, ii) to strengthen capacity development and iii) strengthen decentralised planning.

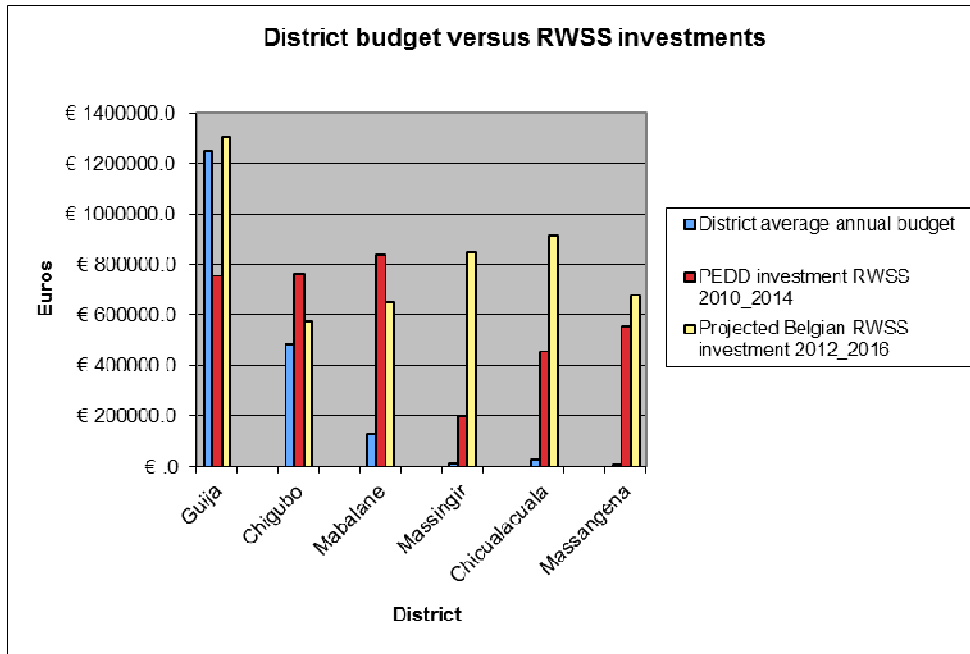


Table 4 Comparison of current district budgets compared to projected water and sanitation budgets in the coming years

2. STRATEGIC ORIENTATIONS

2.1. GENERAL PRINCIPLES

The intervention in the northern districts of the Gaza Province supported by Belgium will align with the policy of the Government of Mozambique, including PRONASAR for water and sanitation and the PEDSA defining the strategy for productive water for livestock, agriculture and the irrigation strategy. The intervention will assure that the planning of its activities will be an integral part of the Provincial Strategic Development Plan (PEDP) and the District Strategic Development Plans (PDDs).

The intervention will focus on 2 priorities

- rehabilitation of existing water points for drinking water
- new sources of drinking water

To a lesser extent, the intervention will deal with

- productive water for livestock
- productive water for silviculture/agriculture
- sanitation

The Belgian contribution will focus on the districts of Chicualacula, Chigubo, Guija, Mabalane, Massangena and Massingir. If during the implementation it is revealed that the norms of water coverage of the national water policy are reached in the selected areas, the intervention area can be extended to the rest of the province. From the start of the intervention, a number of capacity building activities will take place in Xai-Xai, the capital of the province.

A key challenge will be to balance investments among “drinking” water supply and “productive” water supply infrastructure. The water sector policy always prioritizes safe water for human consumption. In practice, drinking water supply infrastructure in the dispersed communities of northern Gaza may provide spillover capacity for productive water, and would as such be a first option. Productive water supply facilities (or agricultural hydraulics) based on surface water would then be a complementary alternative in northern Gaza. Productive water allows for improving the income generation capacity of vulnerable households in communities. In part, this may enhance their ability to contribute to the operation and maintenance costs of improved water and sanitation facilities.

The intervention will deal with the following aspects

- infrastructure, management and maintenance of water supply;
- institutional strengthening for planning and monitoring of water resources at district and provincial level of the public sector;
- capacity building for the private sector and the civil society

However the following aspects should be addressed or taken into account

- The food insecure population is not geographically concentrated in the districts but scattered;

- The low density of the population and all the problems that are linked to this (e.g. decision of the localisation of new bore holes, management problems, low return on investment, ..);
- The hydrological and water quality problems;
- The threshold population size for advanced technological options;
- The time/distance accepted to fetch water;
- The climate conditions and vulnerability to climate change;
- The limited agriculture opportunities of the zone, which is not a priority for agriculture for the Government;
- The limited management capacity at different levels;
- Harmonisation with interventions are already ongoing.

Investments in sanitation infrastructure will be limited to pilot community infrastructure, mainly in schools. Household level infrastructure will be promoted through community education and artisan training.

2. 2. PLANNING AND MANAGEMENT

Supporting the implementation of the district development plans will be instrumental for the project. The process is bottom-up and inclusive, as district plans provide inputs to the updating of the provincial RWSS master plan, to be approved at DNA. This requires properly designed data collection instruments and an integrated system of information flow and reporting between districts, provinces, DNA, development partners and other private service providers. During the implementation of the intervention, the activities will be adapted to the PDDs of the selected districts which will imply a close collaboration with the stakeholders involved in the PDDs.

The Demand Responsive Approach of the national program will be respected - consisting of three main steps:

- At a general meeting, community leaders agree on priority areas using agreed selection criteria, including population size, availability of water sources, incidence of water-borne diseases, poverty and prevalence of HIV/AIDS. The selected communities will have to meet a number of conditions, such as up-front contribution in cash or in kind; a water and sanitation committee per water point (WSC), payment of full operation and maintenance costs, etc.;
- The willingness and capacity of communities to contribute to the improvement of their water and sanitation services will be assessed;
- Communities that meet agreed requirements will be included in the annual economic and social plan and budget of the district (PESOD) subject to the availability of resources.

Through the National Decentralization Program (NDP), cross-cutting issues are integrated into the decentralized strategic planning. FNS is one of the cross-cutting issues and likewise are dimensions like gender, HIV-AIDS and climate change adaptation. The current intervention will contribute by taking into account existing methods and information on climate change, food and nutritional security, and gender and HIV-AIDS into RWSS plans.

2. 3. APPROPRIATE TECHNOLOGIES

2. 3. 1. Drinking water

To capture the underground water, the intervention will align to the technologies applied by PRONASAR. This implies solar pump if necessary. Domestic rainwater harvesting is a valuable alternative or complementary water source for the dispersed communities. The construction of domestic rainwater harvesting structures and appropriate treatment will be promoted through the Community Education Programme (PEC).

2. 3. 2. Hydro-agricultural works

The best option to provide productive water in the intervention area, is by harvesting surface water, i.e. collecting water from (non perennial) rivers during the rainy season. This water will be stored in large storages dug in the ground. Such basins shall be constructed outside areas with high risks for flooding to avoid damage from erosion and sedimentation.

Environmental and socio-economic factors jeopardize other technologies to provide productive water in the intervention zone:

- The construction of a sub-surface dam usually will allow the supply of drinking water without treatment. However the soil conditions and the shape of the dry valleys restrict opportunities in the intervention zone. And cost benefit is likely to be out of range compared to surface storage.
- Directly pumping along the perennial Limpopo to provide water for irrigation schemes leads to high maintenance and running costs for pumps and electricity outside the grid. Experiences in the past evidenced abandonment of equipments in the intervention area.
- Given cost benefit analysis, and stress on water resources, the current intervention does not envisage drilling new deep wells for productive water only. Irrigation schemes require approximately 60–80 m³ of water per day per ha. That volume of water serves 4,000 persons at a ratio of 20l/day.

2. 3. 3. Partnerships for maintenance

The local private sector will be encouraged and trained to contribute to water and sanitation services such as sale of spare parts, managing, maintaining and repairing water facilities, manufacture, sale and construction of hygiene and sanitation related products.

Public-private partnerships and the commercialization of pumps and spare parts may complement the current community management model. Given the high technological standards for water infrastructure in northern Gaza, a professionalisation of maintenance services will be necessary to ensure the sustainability of the facilities.

The following models of sustainable supply of spare parts shall inspire maintenance strategy development:

- the commercialization of spare parts at district level;
- community management with a support system of local artisans for major re-pairs and the supply of spare parts through a mobile representative for district and provincial traders;
- business packages for managing sources serving various communities, for an

individual or collective private commercial entity, responsible for maintaining and repairing sources.

2.3.4. Monitoring and performance assessment

The monitoring of the Belgian supported intervention will be in line with the system set-up for PRONASAR, including a set of indicators that serve as Performance Assessment Framework (PAF). It will also apply the standard methodology for collecting, processing and reporting data and information in the water sector of DNA.

There are three main levels at which information is generated in the RWSS sub-sector: 1) district and community levels, 2) provincial level, and 3) DNA. Monitoring is bottom-up as information is usually transmitted from districts to provinces and from provinces to central level in the form of monthly, quarterly, mid-year and annual reports.

Communities will also have an opportunity to participate in monitoring facilities and services and the performance of those who provide them. Communities will be involved through their WSC in the planning, inspection and commissioning of water and sanitation facilities.

3. INTERVENTION FRAMEWORK

3.1. GENERAL OBJECTIVE

The general objective of the intervention is defined as:

The food security and nutrition of vulnerable households in Gaza province is improved

3.2. SPECIFIC OBJECTIVES

The specific objective of the intervention is:

The access to and control over water supply and sanitation in Gaza province is sustainably increased.

3.3. EXPECTED RESULTS

Two sets of results address respectively the “hardware” and the “software” of the water supply and sanitation intervention:

Results addressing drinking water supply and sanitation:

This first result area addresses drinking water supply and sanitation being the core mandate of the water and sanitation sector in Mozambique (see §1.2 and 2.1). However in rural dispersed communities as in Gaza, an excess of drinking water supply is also used for livestock, and to a certain extent for small-scale irrigation.

- R1 Access to drinking water supply and sanitation is increased in a sustainable manner
- R2 Access to complementary productive water facilities is enabled in a sustainable manner

Results on institutional development:

- R3 Agencies at provincial, district and local level assume their responsibilities in planning and management of water supply and sanitation
- R4 Water users and service providers manage water supply and sanitation in a sustainable, effective and equal manner

3. 4. ACTIVITIES

3. 4. 1. R1 Access to drinking water supply and sanitation is increased in a sustainable manner

3. 4. 1. 1. A.01.01 Rehabilitate defect drinking water facilities

Rehabilitation of existing water facilities will get priority at the beginning of the implementation of the intervention. However, a certain number of checks need to be done prior to the decision to rehabilitate an existing water facility:

- The water must be of good quality and get certification from CHEAM
- Cleaning of the well – i.e. by air-lift – to restore its initial characteristics
- A realistic estimation of the possible yield of the well, and determine the level of rehabilitation:
 - For yields between 0.15 and 1 l/s a hand pump will be sufficient to provide drinking water to 50-300 water users and their cattle.
 - For yields >1.5 l/s the optimization of the pumping system can be considered in order to provide drinking water to 1000 water users (see activity 01.02).

The rehabilitation works will generally include an airlift, the installation of a new hand pump, the improvement of the protection around the well preserving the water quality, and the separation of tabs for human and animal consumption.

If the upper aquifers are too salty to be suitable for human consumption and livestock – they could be recharged with surface water if available close to the well. If the water quality standards can be obtained through dilution, and the volume of water to be provided is fairly limited, the desalination by surface recharge shall be included in the rehabilitation.

The bulk of rehabilitation works will be initiated early in the project. Rehabilitation will continue throughout the intervention period to make up for future breakdowns. Once WSC are established at rehabilitated water supply facilities, maintenance will be in charge of the community according to the DRA principles (see activity 04.01).

3. 4. 1. 2. A.01.02 Optimize existing drinking water facilities

For existing deep wells equipped with a hand pump, it will be assessed whether it is possible to provide higher volumes of water with more adapted pumping system. Key factors will be the water quality certified by CHEAM and sufficient yield (with limited drop of the water table). After cleaning the well by an air-lift, the optimization of the installation will include a mechanic pumping system driven by photovoltaic solar power and equipped with storages tanks and deliver up to 40 m³/day.

Such a system can provide drinking water for up to 1,000 water users. Facilities for an additional 20 m³/day water discharge for livestock or irrigation could be integrated in the design of the works. Given the important investment and maintenance cost, minimal service levels (# water users and distance to fetch water) will be discussed with all actors involved. According to preliminary cost benefit analysis, such optimized facility shall serve a minimum of 350 people (tending over 200 head of cattle) living at maximum 3 km from the well.

This activity will be initiated in the second year of the intervention following elaboration of water supply and sanitation plans and DRA sensitisation in the community. Upon completion

of the works, the community education programme will continue to build capacity with regard to the management and maintenance of the facility (see activity 04.01).

3. 4. 1. 3. A.01.03 Construct and equip new drinking water facilities

Additional drinking water facilities in the intervention area will often imply drilling new deep boreholes, possibly equipped with a mechanic pumping system powered by a photovoltaic system, and include storage tanks on an elevated metallic structure.

The drilling company will be responsible for providing “positive” boreholes, which refers to both quantitative and qualitative requirements. The quantitative requirements constitute a water yield of 0,8 l/s or more. The choice for the pumping system will depend on the available yield and the number of future water users and livestock. The qualitative requirements are according to the standards set by the department for environmental health in the Ministry of Health. Certification of water quality is done by CHAEM prior to the reception of the works. As to enhance chances for successful drilling of new boreholes, necessary hydrological surveys will be done (see also activity 03.03). Ad hoc field studies will be requested from the drilling company.

Equipped deep boreholes can provide drinking water for up to 1,000 water users. Facilities for an additional 20 m³/day water discharge for livestock or irrigation could be integrated in the design of the works. Given important investment and maintenance cost, minimal service levels (# water users and distance to fetch water) will be discussed with all actors involved. According to preliminary cost benefit analysis, a mechanised water supply facility shall serve a minimum of 500 people (tending over 350 head of cattle) living at maximum 3 km from the well.

A secondary option is harvesting surface water but only if water can be treated for human consumption at economic cost.

This activity will be initiated in the second half of the second year of the intervention following elaboration of water supply and sanitation plans, DRA sensitisation in the community, and research on the hydrology. Upon completion of the works, the community education programme will continue to build capacity with regard to the management and maintenance of the facility (see activity 04.01).

3. 4. 1. 4. A.01.04 Develop alternative systems to assure water distribution

Currently part of the dispersed population is supplied by drinking water through trucks passing by. During the intervention it will be examined whether this approach can be further developed in a sustainable way.

3. 4. 1. 5. A.01.05 Construct demonstration sanitation facilities in schools

This activity will focus on public sanitation and its potential for agriculture (through the production of fertilizer). In each district, one of the larger schools will be selected to accommodate ecological dry toilets (type ecosan). This school will act as a pilot promoting water, hygiene and sanitation (see also activity 04.01). As to respect different user groups, blocks for boys and girls will be separated, while a third block will serve teachers and administrative staff.

The construction of household sanitation is not part of the current intervention, but the activities conducted under PEC will try to make villages and communities free of open defecation by promoting adequate latrines (see activity 04.01).

3. 4. 2. R2 Access to complementary productive water facilities is enabled in a sustainable manner

3. 4. 2. 1. A.02.01 Construct and equip new hydro-agricultural works

Collecting water from (non perennial) rivers during the rainy season is an efficient way of harvesting surface water for productive use. This water will be stored in large storages dug in the ground. Only local materials will be envisaged for rendering the bottom and the banks of the storage impermeable, for exemple clay, compacted sand, and some cement if necessary. A fence along the storage shall be provided to prevent drowning. Such basins shall be constructed outside areas with high risks for flooding to avoid damage from erosion and sedimentation.

The design of the storage shall correspond with the water volume required during the dry season (6 to 9 months), and nearby grazing capacity. Given the semi-arid conditions, productive water facilities will target livestock, especially outside of the main valley of the Limpopo. A storage of 30,000 m³ can be constructed for 2,000 to 3,000 head of cattle. Often a lower capacity will suffice and reduce overgrazing risks.

This water shall not be used for human consumption without specific treatments requiring skilled labour and important investments. Sensitisation around water and hygiene is foreseen in activity 04.01.

This activity is planned to be implemented in year 2 and 3, following elaboration of water supply and sanitation plans which will also integrate productive water issues, and upgrading of the PDDs.

3. 4. 3. R3 Agencies at provincial, district and local level assume their responsibilities in planning and management of water supply and sanitation

3. 4. 3. 1. A.03.01 Strengthen human resources development

This activity covers:

A. The recruitment of technical staff at district level.

- Districts are gradually taking on core responsibilities in planning and managing RWSS activities. The current intervention will provide financial support for the recruitment of technicians on renewable contracts for the District Offices for Planning and Infrastructure (SDPI). Considering evermore-enhanced administrative and fiscal decentralisation, the districts will follow proper recruitment procedures, and will be encouraged to retain the trained recruits beyond the intervention. The terms and conditions for such contracts will be equivalent to those for government staff with similar qualifications and experience.
- An assessment will be executed prior to the recruitment. Initial requirements include a graduate diploma in rural or water engineering, with at least two years of professional experience in public works, and may be refined by the district administration. The districts will seek recommendations from DPOPH and BTC and approval by the central DHR in the selection process. Coordination and

harmonisation will be sought with other RWSS and NDP activities supporting human resources development in districts in northern Gaza.

B. Training of district and provincial staff

- A swift capacity assessment will be made using existing documentation, previous studies, lessons learned and project evaluation reports. The current intervention will seek coordination with DNA as to avoid training of staff on an ad hoc basis, and support the inclusion of training plans in the provincial RWSS master plan. Meanwhile, it is important to reflect ongoing changes in the RWSS sub-sector. Therefore, capacity-building needs should constantly be redefined through a demand-responsive process.
- Training will be provided according to roles and responsibilities at deconcentrated levels, and can address both technical and managerial skills. The district is the level at which participatory planning, managing decentralized funds and some procurement and monitoring of contracts for provision of water supply occurs. Hence, training will focus in such areas as data collection and analysis, planning and monitoring, project and financial management, procurement, and technologies of water engineering. The province is the key level for management of implementation.
- In terms of training supply, there are two professional centres, and a limited range of individuals, consultancy firms and NGOs. The CFPAS provides formal, short term and tailor made training in a wide range of water-related subjects such as participatory approaches, social marketing, supply chains, business development, budgeting, and management and maintenance of rural water supplies. UFSA, can be requested to provide training in public procurement to relevant public and private sector actors. Some NGOs provide training and other support to provincial and district staff in such areas as planning, PEC activities, supervision, monitoring, supply chain development, piloting alternative technologies and spare parts supply.

3. 4. 3. 2. A.03.02 Facilitate planning and information management

This activity covers:

A. Elaborate RWSS plans

- Once initiated by the District Government, the Project Implementation Team for RWSS at district level has the mandate to coordinate the elaboration of a district RWSS plan. As required, the team will receive training (see A.03.01) and/or on the job support through technical assistance to enhance typical planning activities such as data collection and analysis, visioning and consensus building workshops with actors at stake, budgeting etc. Also, close collaboration with other district offices, as well as DAS, DPPF, SINAS etc. will be critical.
- The planning process is participatory and supports the Demand Response Approach at community level, including meetings with community leaders for debating service levels and explaining the requirements for applying a water point. The District Health, Women and Social Action Service (SDMAS) will have a facilitating role herein. If need be, assistance could be sought from private PEC service providers.
- The RWSS plan integrates water, sanitation, hygiene, sustainability, and institutional aspects. In addition, access to productive water will be considered as a trans-sectoral theme in function of the vulnerability to food and nutritional insecurity among

communities in northern Gaza. This will require close collaboration with District Economic Affairs Services (SDAE) and the Provincial Department of Agricultural Hydraulics (DAH).

- The current RWSS intervention will, along with other development actors, provide technical guidance to the District Technical Team in updating the PDD as to include the sectoral plans and crosscutting activities, and align those in subsequent PESODs.
- The current RWSS intervention will together with other development actors in the sector support the update of the provincial RWSS Master Plan, and PESOP.

B. Information management

- The current intervention will support the roll-out and consolidation of systems, procedures and instruments in line with the National Water and Sanitation Information System (SINAS). As required, the intervention will provide training (see A.03.01) and/or on the job support through technical assistance to enhance collection, managing, analysis, reporting and use of data and information.
- SDPI will be responsible for regularly updating the RWSS indicators database, and forwarding for analysis and recording at provincial and national level. Equipment such as GPS, conductivity meters, water levels, water analysis kits will be provided to facilitate monitoring of the sources and latrines. One of the main tools will be GIS mapping for strengthening the provincial database. The potential for digital database at district level will be analyzed and discussed.
- The baseline study will allow the piloting of PRONASAR indicators, if necessary adapt them to the geographical context in northern Gaza. The baseline study will also allow for the assessment and quantification of the set of intervention indicators. The latter are aligned with PRONASAR indicators, and complemented with indicators to monitor access to productive water. Further, the baseline will serve the updating of the district PDD.

3. 4. 3. 3. A.03.03 Research, design and supervise water and sanitation infrastructure

- With inputs by SDPI, DAS will proceed with the design of all water supply and sanitation works. Where required service contracts will be elaborated to assist the research and design of improved technologies.
- In view of assuring the quality of the infrastructure, the execution of works will be subject to supervision. Service contracts will be elaborated to allow professional independent follow-up. SDPI will be trained and encouraged to follow up on the supervision.
- The current RWSS intervention will assist DAS, groundwater professionals and drilling companies in collecting information on completed as well as new boreholes as to support contractors in selecting proper equipment, personnel and geophysical methods.
- Updating hydrological and hydro geological maps, adaptation to climate change related drought, and so forth, may be the subject of particular external research.
- To reduce the cost and improve the quality of construction and rehabilitation of

boreholes, the intervention will support DPOHP-DAS in effective negotiation of contracts by comparison of unit costs and performances across provinces, and the elaboration of business packages promoting economies of scale. Annually renewable contracts according to performance and the timely delivery of outputs can provide a long-term business perspective and contribute to improving the quality and efficiency of services over time.

- With regard to tendering and follow-up on contracts, the lead will initially be at the level of DAS and PMT in close collaboration with the district PITs.

3. 4. 3. 4. A.03.04 Support organisational development

- As to facilitate the variety of responsibilities and outreach activities to be undertaken at district level, the current intervention will provide following logistical assistance for RWSS activities at district level:
 - Means of transport, and contribution towards its operational cost
 - Office equipment
 - ICT equipment and contribution towards communication costs
 - Electricity supply through renewable energy sources (subject to feasibility which can be assessed in collaboration with FUNAE, a project on renewable energy for rural development financed by Belgium)
- While other on-going and upcoming development programs in northern Gaza have their particular outcomes and activities, harmonisation of the logistical support may result in a more varied and efficient acquisition. Hence, the above list remains subject to further assessment and coordination. In respect of activity 03.01 and 03.03, an organisational capacity assessment will be undertaken prior to recruitment and investment.

3. 4. 3. 5. A.03.05 Support coordination and capitalisation initiatives

- The project team shall participate in the Water Working Group (GAS) at national level as to contribute in a substantive and systematic manner to the debate and exchange among practitioners in Mozambique. To this end, the Belgian intervention will subscribe to the Code of Conduct of PRONASAR.
- Active participation of district and provincial staff in RWSS seminars, exchange visits and PRONASAR steering committees will be encouraged and supported. The current intervention will meanwhile support provincial and district GAS.
- Participation of the project team and/or relevant stakeholders in the committee(s) to be established by SETSAN with the mandate to coordinate the complementary Belgian support in northern Gaza
- The current intervention will contribute to the capitalisation of lessons learned related to RWSS and food and nutritional security, and their dissemination

3. 4. 4. R4 Water users and service providers manage water supply and sanitation in an effective and sustainable manner

3. 4. 4. 1. A.04.01 Establish the community education programme

A community education programme (PEC) has been integrated in the PRONASAR outline and manuals. Although PEC covers a range of activities targeting community leaders, water users and local artisans and business providers (see below), they can be grouped into one service contract.

The Provincial Department of Water and Sanitation (DAS), in close collaboration with the target districts, will create business packages for the “*zonal*” or “*traditional*” PEC in one or more districts simultaneously. A preliminary cost-benefit assessment will be made to determine the most efficient operation modus in dispersed communities in northern Gaza, namely *zonal* PEC (annual cost per district) or *traditional* PEC (per source cost). In view of having a significant impact on changing hygiene practices and promoting total sanitation, the operating time shall be a period of one-two years in the same area. Again, coordination with other RWSS interventions in the northern Gaza will be sought.

Service providers will be encouraged to strengthen local NGOs and SDMAS, allowing the transfer of know-how, contract management skills and technology. In this scenario, international NGOs / consulting firms will be expected to focus on strengthening capacity of local partners rather than on direct implementation.

PEC covers the following activities:

A. Establish and strengthen water and sanitation committees

- At community level, water supply and sanitation committees (WSC) will be formed to plan, manage and be responsible for operating and maintaining of completed water facilities, and to promote and support sanitation and hygiene-related activities.
- Rendering WSCs responsible in the management of the water facilities and resources, committee members will not only require technical and managerial skills development such as leadership, communication and reporting skills, financial management, monitor repairs and maintenance, but also knowledge in areas such as methods for sanitation and hygiene promotion, water quality and water resource issues.
- In the given intervention zone, WSCs require further support in view of establishing a financial management system and rendering it sustainable. A treasury system will be critical.
- Also, given the vulnerability pattern and pressure on scarce water resources in the intervention zone, pro-poor water pricing shall be promoted while water price shall be in function of water use.
- To further enhance the capacity of communities to carry out their roles and responsibilities, the current intervention will promote and support the “legalization” of community-based organizations and formalizing their relationship with local authorities. The role of the WSC as a thematic group of the Community Development Council (CDC), needs to be emphasized. The WSC should report to the CDC and be accountable for its activities and for managing revenues from water charges.

B. Develop technical and business capacity for maintenance

- Through PEC activities, districts will strengthen local artisans and support training in business development and construction of water tanks, latrines, hand-washing basins, washing areas, drinking water facilities, water treatment, septic tanks, and low-cost technologies for improving collection, conservation and transport of water.
 - A maintenance strategy will be developed to assure the sustainable supply of spare parts, and this potentially through commercialization and public-private partnerships.
- C. Promote behavioural change in water, health and sanitation practice
- PEC will promote the integrated and continuous implementation of water, hygiene and total sanitation at community level. Activities aim stimulating the demand for water, hygiene and sanitation related products and services by training local promoters, influential members in the community such as leaders and church, youth and women's associations, to carry out promotional activities.
 - The construction of domestic rainwater harvesting structures and appropriate treatment will be promoted through the PEC activities

3. 5. INDICATORS AND MEANS OF VERIFICATION

The preliminary intervention indicators are based on the PRONASAR indicators. They however need to be further adapted to the geographical context in Gaza. Certain indicators at the result level will measure mere intervention outputs. Few indicators complement the water sector-monitoring framework as to take into account productive water, and provide markers for food security. The latter will require further elaboration and integration by SETSAN.

Baseline data will be collected at the start of the intervention and indicators will be annually reviewed.

Indicators for the specific objectives are:

- ✓ Quantity of water used / day / person
- ✓ Percentage of households that spend less than 60minutes a day collecting water
- ✓ Percentage of water sources in optimal working condition
- ✓ Percentage of food insecure households in the villages
- ✓ Responsibilities in planning, procurement and support in management are carried out by local and regional actors
- ✓ Percentage of water sources with pro-poor management rules and regulations
- ✓ Percentage of water sources maintained and repaired by communities

Indicators for the results on water infrastructure are:

- ✓ Percentage rural population with access to improved drinking water supply within 1.5 km
- ✓ Percentage of women led families with access to improved drinking water supply within 1.5 km
- ✓ Number of rehabilitated and new water sources built

- ✓ Number of schools and health facilities with improved water and sanitation facilities
- ✓ Number of productive water (in m³) available on annual basis
- ✓ Percentage of agrarian households benefiting from assured access to surface water resources within 5 km

Indicators for the results on institutional development for water supply are:

- ✓ Number of district WATSAN plans approved by district governments
- ✓ Actors at central and deconcentrated level are satisfied about the available information on the hydrosystems and its exploitation
- ✓ Percentage of works following public procurement and realized within set timeframe
- ✓ Operational modalities of PRONASAR known and applied among actors at deconcentrated levels
- ✓ Number of training days to technical staff of deconcentrated water agencies
- ✓ Percentage of WSC with women in key positions
- ✓ Percentage of female members of the WSC
- ✓ Percentage of WSC applying effective management mechanisms
- ✓ Percentage of water sources with established maintenance strategy
- ✓ Number of technical training days to water committees and local artisans

The indicators are also mentioned in the logical framework at the appropriate places. As far as possible, the indicators should be quantified at the start of the project in order to allow adequate monitoring and evaluation. The intervention steering committee will approve the updated quantified indicators proposed by the baseline study.

3. 6. RISKS

The most important identified risks can be summarised as follows:

3. 6. 1. Effectiveness risks

Risk	Risk Level	Mitigation Measure
The required infrastructure is prohibitively expensive & economically unsustainable	High	<ul style="list-style-type: none"> - new bore holes identified by district plans have to be approved at national level - develop alternative approaches to provide water for scattered population groups
Inadequate number of skilled and properly equipped drilling operators distorting the market and reducing the effectiveness of the tender process	Medium	<ul style="list-style-type: none"> - more coordinated approach through the common fund mechanisms
Vulnerable families are difficult to reach as they are too scattered and too poor to contribute	High	<ul style="list-style-type: none"> - develop alternative approaches to provide water for scattered population groups - stimulate that women and vulnerable participate in Water and Sanitation Committees - activities expected through the FBSA programme
New boreholes provide inadequate water quantities and quality	Medium	<ul style="list-style-type: none"> - stipulate in the contracts that the contractors are in charge of conducting and interpretation of the preliminary surveys. Hence the contractor should take the risk of dry boreholes (stipulated in the contract). This practice is already applied in the context of PRONASAR
A pro-poor water price policy is difficult to implement, manage and enforce with the result that new and/or improved infrastructure will mainly benefit the better of (cattle owners);	Medium	<ul style="list-style-type: none"> - intervention will support survey and development of alternatives to be submitted to DNA - contribution can also be in kind or in labour - Operational Water and Sanitation Committee is a precondition before the start

3. 6. 2. Fiduciary risks

Risk	Risk Level	Mitigation Measure
Weak technical and financial management capacity at provincial and district level	High	- capacity building activities planned - recruitment of extra staff
Financial procedures are not respected	Medium	- DNA in charge as authorising officer rather than weaker provincial - within Pronasar programme, system of control of provincial and districts by DNA, to be extended in the Belgian support programme

3. 6. 3. Management risks

Risk	Risk Level	Mitigation Measure
Coordination mechanisms of Pronasar, the Belgian contribution and the FBSA are time consuming and/or counterproductive	Low	- The management and coordination mechanisms of the bilateral cooperation intervention clearly defined in line with mechanisms of the NRWSSP and district and provincial development plans - Decisions will be timely informed at FBSA coordination
Weak institutional capacity at provincial and district level	Medium	- Reinforcement of staff at both levels - Training possibilities
Weak Water and Sanitation Committee	High	- Preliminary training planned - Follow-up of the committees planned

3. 6. 4. Sustainability risks

Risk	Risk Level	Mitigation Measure
Weak Water and Sanitation Committees are unable to manage & sustain the infrastructure	Medium	<ul style="list-style-type: none"> - the programme will align with the Pronasar programme which has a programme of spare parts for standard pumps - training of WSC - people trained for maintenance - small government budget available for major breakdowns
No means available to replace the more sophisticated mechanisms (e.g. solar panels,)	Medium	<ul style="list-style-type: none"> - longevity of 5 years assured - potential synergy with other bilateral intervention for renewable energy
The support to the region results in more people settling in the area, diminishing the chances of the actual population to develop	Low	<ul style="list-style-type: none"> - employment opportunities elsewhere are on the short term more rewarding
Weak capacity at district level	Low	<ul style="list-style-type: none"> - staff provided at district level is conform the guidelines of Pronasar. Therefore these staff will be contracted by DAS, upon approval of DNA and BTC. After the project the contract will continue

4. RESOURCES

4.1. BUDGET

The **Belgian contribution** amounts to 9.000.000 EUR. The detailed budget, including the expenses chronogram, is given in Table 4.

The **Mozambican contribution** to the project will consist of human resources belonging to DAS and of the exemption of duties levied on goods and services purchased in the framework of the present intervention.

4.2. HUMAN RESOURCES

The Government of Mozambique assigns the director of the Provincial Department of Water and Sanitation as the Project Director.

For the implementation of the present intervention, the following staff will be funded by the Belgian contribution:

- 1 International Technical Assistant (ITA) (full time)
- 1 Expert institutional development RWSS (full time)
- 1 Financial and Administrative Officer (full time)
- 1 Accountant (full time)
- 1 Driver (full time)

In line with the guidelines of Pronasar, 1 rural development engineer will be appointed in each of the districts of northern Gaza (full time), according to the procedures and conditions specified by Pronasar, with the consent of BTC. For the duration of the intervention these will be funded by the Belgian contribution, but the contract will be extended after the Belgian contribution.

4.3. MATERIAL AND EQUIPMENT

In the framework of the intervention, material and equipment will be purchased (including means of transport, office and ICT equipment) based on a needs assessment.

Material and equipment will be imported free of taxes and other charges in compliance with the article 8 § 3 of the General Convention of Co-operation signed between Belgium and Mozambique.

The DAS will provide office space.

Table 4 Overview of the Belgian contribution

TOTAL BUDGET in euros				Execution mode	TOTAL BUDGET	%	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
A			Increase sustainable access to and control over water supply and sanitation		8.088.500	89,9%	1.644.200	1.505.450	1.973.950	2.037.700	927.200
A	01		<i>Access to drinking water supply and sanitation is increased in a sustainable manner</i>		4.465.000	49,6%	673.000	864.250	1.118.250	1.292.000	517.500
A	01	01	Rehabilitate defect drinking water supply facilities	Direct-M	690.000		483.000	138.000	34.500	34.500	
A	01	02	Optimize existing drinking water facilities	Direct-M	1.175.000		0	206.250	293.750	587.500	87.500
A	01	03	Construct and equipment new drinking water facilities	Direct-M	1.200.000		0	180.000	300.000	480.000	240.000
A	01	04	Develop alternative systems to assure water distribution	Direct-M	50.000		10.000	10.000	10.000	10.000	10.000
A	01	05	Construct demonstration sanitation facilities in schools	Direct-M	450.000		0	150.000	300.000	0	0
A	01	06	International Technical Assistance	Direct-M	900.000		180.000	180.000	180.000	180.000	180.000
A	02		<i>Access to complementary productive water facilities is enabled in a sustainable manner</i>		1.320.000	14,7%	0	220.000	550.000	440.000	110.000
A	02	01	Construct and equipment new hydro-agricultural works	Direct-M	1.320.000		0	220.000	550.000	440.000	110.000
A	03		<i>Agencies at provincial, district and local level assume their responsibilities in planning and management of water supply and sanitation</i>		1.636.000	18,2%	777.700	257.700	202.200	202.200	196.200
A	03	01	Strengthen human resources development	Direct-M	345.000		91.500	91.500	54.000	54.000	54.000
A	03	02	Facilitate planning and information management	Direct-M	240.000		156.000	21.000	21.000	21.000	21.000
A	03	03	Research, design and supervise water and sanitation infrastructure	Direct-M	90.000		54.000	24.000	6.000	6.000	0
A	03	04	Support organisational development	Direct-M	795.000		443.000	88.000	88.000	88.000	88.000
A	03	05	Support coordination and capitalisation	Direct-M	70.000		14.000	14.000	14.000	14.000	14.000
A	03	06	Expert institutional development RWSS	Direct-M	96.000		19.200	19.200	19.200	19.200	19.200
A	04		<i>Water users and services providers manage water supply and sanitation in a sustainable, effective and equal manner</i>		667.500	7,4%	193.500	163.500	103.500	103.500	103.500
A	04	01	Establish the community education programme (PEC)	Direct-M	667.500		193.500	163.500	103.500	103.500	103.500
X			Budget reserve		213.500	2,4%	0	0	0	0	213.500
X	01	02	Direct management reserve	Direct-M	213.500		0	0	0	0	213.500
Z			General Means		698.000	7,8%	175.600	155.600	105.600	155.600	105.600
Z	01		<i>Personnel costs</i>		198.000	2%	39.600	39.600	39.600	39.600	39.600
Z	01	01	Administrative and financial officer	Direct-M	108.000		21.600	21.600	21.600	21.600	21.600
Z	01	02	Accountant	Direct-M	54.000		10.800	10.800	10.800	10.800	10.800
Z	01	03	Driver	Direct-M	36.000		7.200	7.200	7.200	7.200	7.200
Z	02		<i>Investments</i>		70.000	1%	70.000	0	0	0	0
Z	02	01	Vehicle PMT	Direct-M	40.000		40.000	0	0	0	0
Z	02	02	Office and ICT equipment PMT	Direct-M	25.000		25.000	0	0	0	0
Z	02	03	Office Rehabilitation	Direct-M	5.000		5.000	0	0	0	0
Z	03		<i>Operating costs</i>		315.000	4%	63.000	63.000	63.000	63.000	63.000
Z	03	01	Operating costs of project office PMT	Direct-M	162.000		32.400	32.400	32.400	32.400	32.400
Z	03	02	Operation and Maintenance cost PMT vehicle	Direct-M	45.000		9.000	9.000	9.000	9.000	9.000
Z	03	03	Communications costs PMT	Direct-M	48.000		9.600	9.600	9.600	9.600	9.600
Z	03	04	Missions costs	Direct-M	60.000		12.000	12.000	12.000	12.000	12.000
Z	04		<i>Audit, Monitoring and Evaluation, Follow-up</i>		115.000	1%	3.000	53.000	3.000	53.000	3.000
Z	04	01	Financial audit	Direct-M	30.000			15.000		15.000	
Z	04	02	Mid term review & Final evaluation	Direct-M	60.000			30.000		30.000	
Z	04	03	Backstopping BTC	Direct-M	25.000		3.000	8.000	3.000	8.000	3.000
TOTAL					9.000.000		1.819.800	1.661.050	2.079.550	2.193.300	1.246.300
Direct management					9.000.000						

5. IMPLEMENTATION MODALITIES

5.1. IMPLEMENTATION AND FOLLOW-UP STRUCTURES

5.1.1. Steering Committee (SC)

A steering committee (SC) will be created for the implementation of the project. It represents the highest management level of the project and will provide the necessary strategic guidance to all project implementers and stakeholders in how to reach the program results and objectives.

The steering committee will consist of the following members from the national and provincial levels:

- The National Director of the National Directorate of Water of the Ministry of Public Works and Housing, chairman of the Steering Committee;
- The National Coordinator for the Technical Secretariat for Food Security and Nutrition (SETSAN);
- A representative of the Ministry of Foreign Affairs and Co-operation of Mozambique;
- The program coordinator of PRONASAR within the National Directorate of Water;
- The chairman of the Gaza Provincial PRONASAR Steering Committee;
- The chairman of the Gaza Supervisory Committee;
- The BTC representative for Mozambique.

All members can designate a delegate for the steering committee meetings. The steering committee can invite any relevant person to attend the meeting as an advisor.

The steering committee will provide general guidance to the project implementation and is mandated to:

- approve the Project Implementation Manual defining detailed implementation modalities including the selection procedures for priority projects proposed by the district plans and PESOD;
- approve the ToR of the baseline and endorse the baseline data at the end of the study.
- approve the six-monthly progress reports;
- approve the six-monthly action and financial plans;
- approve the ToRs of evaluation missions and endorse their recommendations;
- approve the ToR of the evaluation missions and endorse their recommendations;
- approve the possible extension of the intervention area;
- recommend modification of the objectives, the total budget and the duration of the project to the Mozambican and Belgian Government;

- approve modifications to the TFF, except for modifications of the objectives, the total budget and the duration of the project and for budget modifications of less than 10% compared to the budget line of the TFF
- approve the final report and the final closure of the project.
- ensure synergy and coordination with other projects, in particular the program of the Belgian Fund for Food Security in Gaza;

The steering committee lays down its own internal rules and regulations and takes decisions by consensus.

The first steering committee will be organized within the first 3 months after the signing of the Specific Agreement. Thereafter it will meet on at least a six-monthly basis until the closure of the project. It can also meet at the request of one of its members.

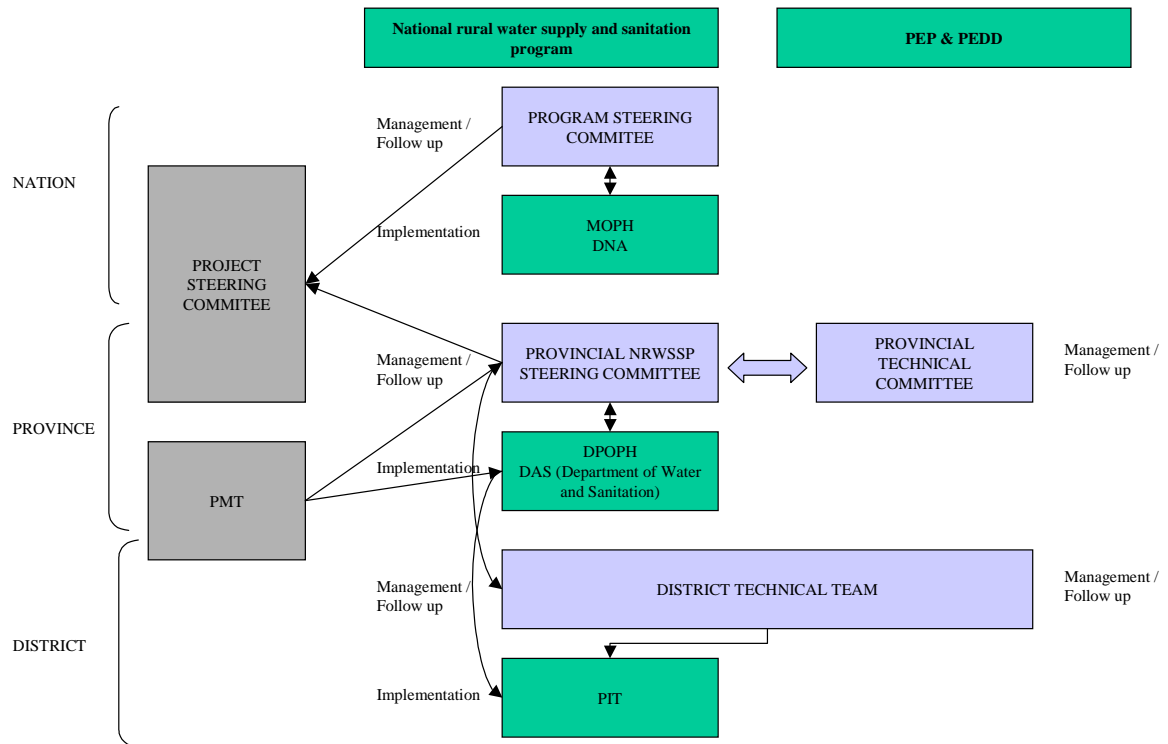
5. 1. 2. The project management team

A project management team (PMT) will be located in Xai-Xai, within the Water and Sanitation Department (DAS) of the DPOPH. The director of the DAS will be the Project Director. An international Technical Assistant recruited by BTC will be the co-director. The Project Director and the ITA will co-manage the project. They will be assisted by an expert in institutional development RWSS, a financial and administrative officer and if required a project accountant.

The project management team will assume the operational & financial follow-up of the project activities as defined by the TFF. Among other tasks, the PMT will:

- draft a project implementation manual for approval by the steering committee;
- assure that the monitoring mechanisms of PRONASAR are adhered to;
- organise and coordinate the project activities as specified in the approved project work plans;
- assure the good governance of all project resources (material, financial and human) in conformity with the project implementation manual;
- timely submit operational & financial reports to the steering committee;
- timely submit budgeted action plans to the steering committee for approval. However budget modifications of less than 10% compared to the budget line of the TFF have to be reported but do not need prior approval by the steering committee.
- Tender for the procurement of works, goods and services in conformity with applicable regulations;
- draft Tor for audits and provide follow-up on audit and evaluation recommendations;
- Provide administrative support to the steering committee (secretariat, agenda, documents, minutes; dissemination of minutes). It shall assure that minutes of the steering committee are drafted and signed directly after the meetings.

5. 2. COORDINATION MECHANISMS



5. 2. 1. Coordination with PRONASAR

In every district a five year strategic district development plan is available, which include a chapters on food security and on water supply. These plans will be finetuned in the following years and are yearly translated in annual PESODs. The responsibility to coordinate the implementation of PRONASAR with the district and provincial development plans is shared amongst the respective District Technical Teams and a Provincial Technical Committee. The project management team will report to the Provincial Supervisory Committee.

The project management team will coordinated project implementation plans with the implementation teams for the RWSS at district level (PIT). The PITs are chaired by the head of SDPI and consist of members from this unit, the SDMAS and the district secretary's office, supported by contracted staff where necessary and available.

At national level, the project management team may participate in the Water and Sanitation Working Group (GAS), a forum for exchange and policy debate among development partners in the water sector. The project will underwrite the Code of Conduct (CoC) for the Water Sector.

In the framework of PRONASAR, yearly sessions are organised in Maputo to discuss planning (June) and outputs (November). The project management team will share lessons learned with PRONASAR while project implementation modalities will be aligned, to the extent possible, to the implementation modalities of PRONASAR.

5. 2. 2. Coordination with programme supported by the Belgian Fund for Food Security

In addition to the present project in the framework of the bilateral co-operation between Belgium and Mozambique, Belgium will also support the 6 districts of northern Gaza province by a contribution of the Belgian Fund for Food Security. The latter programme will be implemented by multilateral organisations (i.e. FAO, UNCDF & WFP) and Belgian NGOs.

Both programmes will be monitored and coordinated by the national Technical Secretariat for Food Security and Nutrition (SETSAN) who will assure synergetic complementarity of both programs in improving food security. At least 2 meetings will be organised in Maputo, to monitor and coordinate all interventions funded by Belgium in the six districts of Gaza. Representatives of DGD and BTC will take part in these meetings. DGD will represent the Belgian Fund for Food Security while BTC will represent the bilateral intervention in water. At these meetings the follow-up of the indicators will be discussed.

At provincial level, SETSAN is also represented where it assures that the district strategic development plans adequately focus on food security.

5. 3. MANAGEMENT MODALITIES

5. 3. 1. Human Resources

BTC will recruit the International Technical Assistant with the consent of DNA.

BTC will recruit the institutional development expert, the financial and administrative officer, the accountant and the driver with the consent of DAS.

The 6 rural development engineers will be recruited according to the procedures and conditions specified by Pronasar, with the consent of BTC.

5. 3. 2. Financial management

The financial management of the project will be assured directly by BTC, based upon action and financial plans previously approved by the steering committee. This is in line with the demand of DNA, to avoid excessive work load for the available provincial staff.

In order to facilitate the start-up of the project, expenses may be made prior to the approval of the first action plan by the steering committee and the signature of the contact between BTC and the Belgian State, to a maximum amount of 100,000 Eur.

5.3.2.1. Bank accounts

After the signature of the CS BTC will open at a commercial bank a specific bank account in euro named "WSM project – Regie' –. These funds follow the internal rules and procedures of BTC. If necessary, an additional account in local currency can be opened.

5.3.2.2. Funds transfer

The Project director and co-director will introduce requests for fund transfers to the BTC Resident Representative. A first tranfert will be made after the opening of the project's Regie account. Subsequent requests will be based on action and financial plans approved by the steering committee.

The amount of the transfer equals the estimated needs of funds for the following three months with a reserve. The transfer of funds by BTC is normally done at the beginning of the quarter. However following prerequisites have to be met:

- The accounting for the project must be up to date and must have been transmitted to the BTC Representative;
- The financial planning of the current quarter has been transmitted to BTC Representative;
- The amount of the request does not exceed the budget balance;

In addition, intermittent urgent cash calls may be submitted but must be properly motivated.

5.3.2.3. Financial planning

Quarterly, the project directors and co-director will send a financial planning to the BTC Representation based upon six monthly action plans approved by the steering committee. This planning will be done in accordance with BTC procedures.

5.3.2.4. Accounting

The accounting of the project will be conducted using the BTC accounting tool.

The co-director validates the accounting and send it to the BTC Resident Representative.

The following must be forwarded by the project to the BTC Resident Representative:

- Electronic account files.
- Bank statements and signed petty cash statements.
- All supporting documents & invoices

Strict thresholds for petty cash use and payments will be set in the project manual, (developed by the PMU and approved by the Steering committee as mentioned above).

5.3.2.5. Budget management

The project management team must document all budget modifications according to BTC rules even if it is not presented to the steering committee. Any budget change must be reported following the BTC procedures.

The project direction has to assure a strict follow-up of the commitments.

5. 3. 3. Procurement

Procurement of goods, works and services will follow the Belgian regulations for public tendering.

In order to ensure transparency of project procurement practices, all members of the steering committee, upon request, will have access to all administrative, financial and technical documentation regarding project procurement.

5. 3. 4. Monitoring & Evaluation

A base line will be established and should provide, amongst others, base line data and indicators aligned with the PRONASAR performance framework.

An external mid-term review (MTR) will be performed after 30 months of project implementation. This mid-review will verify the project progress, and may propose adaptations to the project results and geographical area covered when appropriate. The MTR final report will be submitted to the steering committee for endorsement of the proposed recommendations.

Follow-up missions from BTC (internal or external personnel) will be performed during the course of the project. These missions can coincide with other missions of the program but stay independent and may contribute to the steering committee.

At the end of the project, an external final evaluation of the project will take place. This evaluation mission will perform a check of compliance with results listed in this TFF and will capitalise lessons learned. The final evaluation will compare the indicators to the baseline indicators as gathered during the needs assessments.

The Project Management Team will facilitate and support the missions needed to perform the above-mentioned exercises.

5. 3. 5. Financial Audit

The project accounts are subject to external audits, to assess.

- whether the accounts of the project reflect reality
- the existence of procedures and their application by the project
- the economic and efficient use of funds (value for money)

BTC will draft terms of references of the audits that will inform the steering committee. The external auditor, contracted by BTC has to be a certified independent company either national or international. The audit company must abide by international standards of auditing.

The project must be audited after one year of implementation and during the third year of implementation.

The audit report has to include recommendations which will be presented to the steering committee. The project management team will draft a follow-up action plan related to the recommendations of the audit and submit these to the steering committee. The steering committee can order additional audits if necessary. The audits reports will be shared with the Administrative Tribunal (AT) and the Inspeção General de Finanças (IGF)

Each year an Audit Committee reviews the accounts of BTC. Within this framework, the Audit Committee may also carry out audits of programmes in Mozambique. The Audit Committee of BTC may also request that BTC's internal auditor to audit the project.

5. 3. 6. Taxes and Duties

The personal properties of the BTC staff and their families, provided they are not Mozambicans, and equipment or services purchased under this Agreement shall be granted exemptions from all taxes and import duties (Article 8 of the General Agreement on cooperation between the Kingdom of Belgium and the Republic of Mozambique).

The Government of Mozambique, through the National Directorate of Water / Provincial Directorate of Public Works and Housing will ensure payment or exemption of all taxes and duties levied on the purchase of goods and services required by Mozambican legislation. This is considered as part of the Mozambican contribution to the programme.

5. 3. 7. Closure of the project

The project will be closed at the latest six years after the signature of the Specific Agreement.

Six months before the end of the project, a financial report will be elaborated by the Project Management Team and presented to the steering committee. BTC will launch the external final evaluation of the project at that time.

Beyond the validity of the Specific Agreement, no expenditure will be accepted except if related to commitments entered into force before the expiry date, endorsed by minutes of the steering committee's minutes.

5. 4. REPORTING

The quality (reliability, timeliness, completeness) of the reporting will determine the future disbursements for the project. Unsatisfactory documented explanations may result in the suspension of funds transfer until further notice.

Operational reporting

The project management team will be responsible for the elaboration of budgeted action plans and progress reports, according to agreed reporting formats and within agreed deadlines.

The project management team will submit to the steering committee:

- i) six-monthly progress reports, including
 - overview of activities executed and results achieved
 - highlighting issues that require attention
 - list which reflects all signed contracts, their value and how much have been disbursed under each as at the report date;
 - list which reflects all committed amounts for the next six months.
- ii) action plans for the following 6 months (compiling information regarding operations, procurement and financial planning);

Financial reporting

The project management team will submit every six months a financial report to the steering committee. It will include among others:

- A budget overview showing expenditures by main budget lines;
- A narrative highlighting & explaining deviations with the previous planning;
- Supporting schedules showing actual expenditures, unpaid commitments and planned expenditures until the end of the project;
- Cash forecasts for the following six months;
- A comprehensive operational and financial risk analysis.

The template will be defined in the project manual and will complement the operational reporting.

Annual report

Not later than 45 days after the end of the year, the project team will present a consolidated report of the operations, budget and planning follow-up to the steering committee, BTC and DGD.

This report will put in perspective strengths and weaknesses of the project, including lessons learned. It will detail the actions that will be put in place to allow the achievement of the objectives within the set timeframe and the economic and efficient use of funds.

Reporting Summary

Reports	Responsible	Content	Destination
Monthly accounting	Co-director	Expenditures statements, bank accounts statements	BTC
Quarterly progress report and	Project co-director	Progress reporting and planning (activities, finance,	BTC

operational planning		tenders, ...)	project director
6-monthly progress report and action plan	Project Director and co-director	Progress reporting and activity and financial planning	steering committee
Annual Report	Project Director and co-director	Annual progress report (results, activities, budget)	steering committee / BTC/ DGD
external audit reports	Auditing firm	Financial audit + value for money	steering committee / BTC
MTR report	External consultant	External Mid term review	steering committee BTC
Final Evaluation report	External consultant	Final Evaluation	steering committee BTC
Final report	Project Director and co-director	Provisional acceptance of program activities	steering committee BTC

The reporting that need to be provided by the Districts, will be detailed in the execution agreements.

6. CROSS CUTTING THEMES

6.1. ENVIRONMENT

In the **Limpopo River Basin**, it can be observed that all settlements are close to the river valleys, indicating the influence of the aridity in the Basin which encourages people to settle close to the stream banks. Under the framework of the Territorial Planning Law, the National Directorate of Territorial Planning (DINAPOT) advises on high and low risk settlement areas; however people often prefer to settle in flood prone areas, as they are fertile lands. In general though, and particularly for the intervention zone, dry land cover conditions are predominant in the Basin, while irrigated and wetland ecosystems occupy 0.9% and 2.8% respectively of the Basin area.

The table below analyses the structural vulnerability of each District of Gaza Province, which occupy most of the Limpopo Basin within Mozambique, using the following categories: (i) Severe risk of drought, i.e. less than 600 mm annual rainfall; (ii) Moderate risk of droughts, i.e. more than 600 mm annual rainfall; (iii) Risk of flood, i.e. areas experiencing periodic flooding that can be detrimental to crop production; (iv) Self-sufficiency, measuring the local production from the two agricultural seasons; (v) Structural vulnerability is determined by combining different data including climatic, agricultural production, livestock, sources of income, access to markets, and coping

Districts of Gaza Province	Severe risk of drought	Moderate risk of drought	Risk of Flood	Self-sufficiency (months)	Structural vulnerability
Xai-Xai		X	X	10-12	None
Bilene- Macia		X	X	10-12	None
Manjacaze		X	X	10-12	None
Chokwe	X		X	10-12	None
Chibuto	X		X	10-12	None
Guija	X			7-9	Slight
Massingir	X			7-9	Slight
Mabalane	X			5-6	Economic
Massangena	X			5-6	Economic
Chicualacuala	X			5-6	Economic
Chigubo	X			3-4	Food Insecure

strategies.

Water resources within the Limpopo Basin are heavily utilised by all four riparian states, including groundwater. Abstractions upstream (i.e. outside Mozambique) are increasing because water demand is growing, hence there is currently a greater investment in storage facilities.

Due to the unpredictable nature of rainfall and runoff in the Basin, irrigation directly from a river usually only occurs when flow is stabilised by a large dam on the watercourse. In many areas high silt loads carried by the river that would quickly fill any impoundment prevent the development of new storage dams and irrigation schemes. Furthermore, the

rainfall variability has a significant effect on the reliable supply of irrigation water, even from a large storage dam.

The impacts of **climate change** on the hydrological and water resource systems of the Limpopo River Basin were analyzed at large. Significant reductions of annual rainfall and water availability by 2030 are found for all climate change scenarios. Changes in river hydrology can reduce irrigation water supply and reliability, adding an additional constraint for future irrigation development in the basin. Even small, permanent changes in precipitation patterns need to be incorporated in water resource and agricultural planning as they will require changes in crop varieties, planting dates, and cropping patterns; placing new requirements on both agricultural research and development and extension services. Improvement in water infrastructure and management can potentially mitigate the adverse effects of climate change, although the mitigation effects may not compensate for the effects caused by climate change. Assessing hydrological impacts of climate change is crucial given that expansion of irrigated areas has been postulated as one key adaptation strategy for Sub-Saharan Africa.

Data from the 2009 INGC Synthesis Report on Climate Change confirm the Limpopo River Basin studies. While river flows are expected to increase in all basins in the South, when water usage is taken into account the situation becomes much less attractive. The population of the Limpopo basin is expected to rise from about 14 million in 2000 to about 46 million in 2050. Even with a 15% increase in natural river flows, this would imply a 64% drop in per capita water availability by 2050. Also, salt water intrusion will increase as a result of lower river flows combined with ocean tidal activity, probably aggravated by sea level rise after 2030, impacting on agricultural land in the Limpopo estuary. In terms of agriculture, the modeling undertaken here suggests that the zones most affected by loss of suitable area will generally be those that already struggle from the impacts of irregular and extreme climate events, including the mixed arid-semiarid systems in the Gaza.

The Government of Mozambique adopted the Disaster Management Policy in 1999, which emphasizes preparedness (to floods). Importantly, the policy promotes community participation and encourages the development of alternative mitigation measures. The National Institute for Disaster Management (INGC) is the institution tasked with day-to-day implementation of the policy directives. There is also a Coordination Council for Disaster Management (CCGC), which is comprised of other Ministries and is chaired by the Prime Minister. If a disaster occurs, this unit springs into action for coordinating relief work. The National Institute of Meteorology (INAM) is responsible for maintaining the early warning system, while the National Directorate of Water Affairs (DNA) has the task of monitoring river flows.

The national action plan for adaptation to climate change (NAPA) is coordinated by MICOA, and includes four initiatives for various economic and social development sectors, with special emphasis on the prevention of natural disasters and Alert and Early Warning Systems; the agricultural, fisheries, energy, environmental and water sectors; coastal zones; and erosion control. With regard to water resources management, the plan aims improving the level of control and evaluation capacity of river water flows for the purposes of reducing the impacts of droughts and floods within hydrological basins.

An Agreement constitutes the legal framework that established the Limpopo Basin Permanent Technical Committee (LBPTC) with delegations of the 4 riparian countries. The mandate of this institution is to advise the 4 riparian countries on water management and development measures to be undertaken at the Basin level for addressing issues such as: (i) division of flows; (ii) aspects related to droughts, floods and pollution; (iii) programmes and activities that jointly benefit the 4 countries.

6. 2. GENDER

Gaza has seen profound processes of socio-economic change, including an extensive male labour migration, a commodification and 'feminisation' of agriculture, a cultural impact of 'modernity' from Mozambique's urban hub, Maputo, and a very high HIV/AIDS infection rate. Women have found themselves with increasing responsibilities for the upkeep of themselves and their children, and have also increasingly taken on political roles, albeit still primarily at the lower levels of village communities. Important implications of these developments are the very large proportion of female-headed households in the province; a high level of participation, primarily in agriculture and the informal economy; and near gender equality in education enrolment.

In fact, the main gender disparities in Gaza province seem to be primarily class related, with poor women with no economic independence being susceptible to continued control under the patrilineal system and patriarchal ideology. The continued importance of *lobolo* and an extensive pattern of sexual relationships – contributing to the spread of HIV/AIDS in Gaza – can be seen as ways to maintain control, by men who see their power threatened by the reduced income earning opportunities in South Africa, the increasing presence of women in local politics and in the local economy, and the increasing number of women who establish their own households – with the exception of the very poorest who tend to be marginalized both as poor and as women.

With regard to PRONASAR, gender mainstreaming is encouraged through policy, processes, and capacity building. Equitable participation by women in WSC will be encouraged. However, more important than achieving numerical targets is the need to facilitate active participation by women in decision-making through capacity building. PEC contractors are responsible for using participatory methodologies at community level to identify factors that encourage or limit participation in decision-making by women and the most vulnerable groups. Capacity building will focus on building self-esteem, strengthening capacity to analyze problems and make equitable and gender-sensitive decisions, and capacity to negotiate, argue and persuade directed at women and vulnerable groups.

District governments are also responsible for promoting participation of women and vulnerable groups in the WSC and District Consultative Councils. Through RWSS activities the participation of dynamic women in the community shall be promoted so they become active members in participatory planning and monitoring meetings at district level. Another way to encourage participation by women is through active and competent female staff in the civil service and NGOs. The responsibility of NGOs, district governments, DPOPH, DNA and others partners is to encourage the equitable selection of staff involved in activities at all levels and by visits to / flagging of communities and districts where there is active participation by women and vulnerable groups.

6. 3. HIV / AIDS

The process towards greater female empowerment in Gaza comes with a price: Women are hardest hit by the HIV/AIDS pandemic, with an alarming 24 percent having the virus in Gaza province. The real challenge in handling the HIV/AIDS pandemic at the scale found in many communities in Gaza is that the disease has 'by necessity' become normalized and under-communicated. The districts benefit from support of the National AIDS Control programme.

7. ANNEXES

7.1. LOGICAL FRAMEWORK

	Logical of the intervention	Indicators	Sources of verification	Hypotheses
GO	<u>Global objective</u> The food security and nutrition of vulnerable households in Gaza province is improved			
SO	<u>Specific objective</u> The access to and control over water supply and sanitation in Gaza province is sustainably increased	Quantity of water used / day / person % of households that spend less than 60 minutes a day collecting water % of water sources in optimal working condition % of food insecure households in the villages Responsibilities in planning, procurement and support in management are carried out by local and regional actors % of water sources with pro-poor management rules and regulations % of water sources maintained and repaired by communities	RWSS indicators in PAF / PARP II PRONASAR annual reports District PES SETSAN programme monitoring reports Intervention baseline, MTR and evaluation	Government will increase the priority of and support to the RWSS sub-sector, while development partners maintain and increasingly coordinate and harmonize their support
R 1	<u>Result 1</u> Access to drinking water supply and sanitation facilities is increased in a sustainable manner	% of rural population with access to improved drinking water supply within 1.5 km % of women led families with access to improved drinking water supply within 1.5 km # of rehabilitated and new water sources built # of schools and health facilities with improved water and sanitation facilities	RWSS indicators in PAF / PARP II PRONASAR annual reports District PES Intervention annual reports	New technologies, products and services will continue to evolve in response to physical conditions and demands for improved quality, performance and cost-effectiveness

R 2	<u>Result 2</u> Access to complementary productive water facilities is enabled in a sustainable manner	# of productive water (in m3) available on annual basis % of agrarian households benefiting from assured access to surface water resources within 5 km	PEDSA indicators in PAF / PARP-II District PES Intervention annual reports	
R 3	<u>Result 3</u> Agencies at provincial, district and local level assume their role and responsibilities in planning and project management of water supply and sanitation	# of RWSS plans approved by district governments Actors at central and deconcentrated level are satisfied about the available information on the hydrosystems and its exploitation % of works following public procurement and realized within set timeframe Operational modalities of PRONASAR known and applied among actors at deconcentrated levels # of training days to technical staff of deconcentrated water agencies	PRONASAR annual reports PESOD Intervention annual reports Intervention baseline, MTR and evaluation	Government will continue to promote and support public sector reform and decentralization, including adequate budget allocations and human resources at district level DNA, DAS and district governments will increase their capacity and resources to enable them to fulfill their roles in the RWSS sub-sector
R 4	<u>Result 4</u> Water users and service providers manage water and sanitation infrastructure in a sustainable, effective and equal manner.	% of WSC with women in key positions % of female members of WSC % of WSC applying effective management mechanisms % of water sources with established maintenance strategy # of technical training days to water committees and local artisans	PRONASAR annual reports PESOD WSC reports Intervention annual reports Intervention baseline, MTR and evaluation	The public and private sectors are able to identify, establish and maintain effective supply chains for goods and services to sustain water supply facilities

7.2. IMPLEMENTATION CALENDAR

		Year 1				Year 2				Year 3				Year 4				Year 5			
		T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4
Planning																					
S0 01	Improve water supply and sanitation in selected districts in Northern Gaza province to enable food insecure households to meet their basic food and nutritional needs																				
	<i>Access to drinking water supply and sanitation is increased in a sustainable manner</i>																				
R 01	<i>Rehabilitate defect drinking water supply facilities</i>																				
A 01 01	Rehabilitate defect drinking water supply facilities																				
A 01 02	Optimize existing drinking water facilities																				
A 01 03	Construct and equipment new drinking water facilities																				
A 01 04	Construct demonstration sanitation facilities in schools																				
A 01 05	International Technical Assistance																				
R 02	<i>Access to complementary productive water facilities is enabled in a sustainable manner</i>																				
A 02 01	Construct and equipment new hydro-agricultural works																				
S0 02	Strengthen human resources and organisational capacity of government, civil society and community based service providers to promote, develop and support sustainable water infrastructure, management and maintenance																				
	<i>Agencies at provincial, district and local level assume their responsibilities in planning and management of water supply and</i>																				
R 03	<i>Strengthen human resources development</i>																				
A 03 01	Strengthen human resources development																				
A 03 02	Facilitate planning and information management																				
A 03 03	Research, design and supervise water and sanitation infrastructure																				
A 03 04	Support organisational development																				
A 03 05	Support coordination and capitalisation																				
A 03 06	Expert institutional development RWSS																				
R 04	<i>Water users and services providers manage water supply and sanitation in an effective and sustainable manner</i>																				
A 04 01	Establish the community education programme																				
Z	General Means																				
Z 01	<i>Personnel costs</i>																				
Z 01 01	Administrative and financial officer																				
Z 01 02	Accountant																				
Z 01 03	Driver																				
Z 02	<i>Investments</i>																				
Z 02 01	Vehicle PMT																				
Z 02 02	Office & ICT equipment PMT																				
Z 02 03	Office rehabilitation																				
Z 03	<i>Operating costs</i>																				
Z 03 01	Office rent																				
Z 03 02	Office operating costs PMT																				
Z 03 03	O&M vehicle PMT																				
Z 03 04	Missions costs																				
Z 04	<i>Audit, Monitoring and Evaluation, Follow-up</i>																				
Z 04 1	Financial audit																				
Z 04 2	Mid term review & final evaluation																				
Z 04 3	Backstopping BTC																				

7. 3. TOR LONG-TERM PERSONNEL

7. 3. 1. Project Director

Tasks

The project director will refer to the intervention steering committee and ensure that the members are well informed of project progress..

The specific tasks include:

- ✓ Providing overall leadership of the PMT and coordinate its activities with the ones of PRONASAR
- ✓ Organise, coordinate and supervise the implementation of project activities in accordance with the approved project work plans;
- ✓ Supervise the preparation and tendering of contracts for procurement of works, goods and services;
- ✓ Supervise financial management, accounting and timely compilation of six-monthly progress reports and budgeted work plans for the following period;
- ✓ Coordination and networking with other national and international partners;
- ✓ Supervise the preparation of six-monthly and annual progress reports;
- ✓ Supervise the monitoring and evaluation of the intervention implementation;
- ✓ Analyse and consolidate monitoring reports and prepare recommendations
- ✓ Organise and prepare the contents and agenda of bi-annual steering committee meetings;
- ✓ Be responsible for regular communication with BTC on the management and supervision of Project implementation;
- ✓ Ensure capitalisation and integration of lessons learnt and experience drawn in the implementation of project activities;
- ✓ Ensure coordination and exchange of experiences between the project and other related experiences;
- ✓ Assure the compilation of the project final report at the end of the project.

7.3.2. ITA : Senior Water Engineer

Tasks

The ITA will, in close collaboration with the project director :

- ✓ Analyse capacity building needs (training, IT, R&D)
- ✓ Strengthen the institutional capacity at district and provincial levels
- ✓ Provide links with other partners in the RWSS sector, in decentralised planning and finance, and with SETSAN;
- ✓ Assure the quality of planning and reporting documents for the steering committee;
- ✓ Assure administrative and financial management of the project funds (responsibility according to direct and co-management modalities)
- ✓ Support the development of RWSS plans and monitoring at district and provincial level
- ✓ Monitor the technical issues of the project activities, and more specifically:
 - ✓ quality standards for boreholes and equipment
 - ✓ technical specifications of tender documents
 - ✓ proper maintenance of the equipments
- ✓ Assure the overall quality control of the project activities.
- ✓ Assure the timely publication of quarterly progress reports and annual reports, as well as the final reports.
- ✓ Assure the implementation and vulgarization of the lessons learned (technical part of the program activities)
- ✓ Conduct regular field visits

Qualifications

A masters degree in water engineering or hydro-geology, or equivalent through experience

- ✓ Thorough experience in the water sector engineering and water resources management in rural areas,
- ✓ At least 10 years experience in planning, design and supervision of works in water supply and sanitation
- ✓ At least 5 years experience in working with national governments and international organisations, of which partly in sub Sahara Africa.
- ✓ A proven capacity for project management and coaching

- ✓ Team spirit and communication skills with colleagues and project partners of different social levels.
- ✓ An analytical mind and a good technical writing and reporting capacity
- ✓ Knowledge of common IT-applications, GIS-software
- ✓ Proficiency in English; a good command of Portuguese will constitute an important asset
- ✓ He/She is sensitive to relevant cross cutting issues of the Belgian co-operation (environment, gender, HIV/AIDS)

7. 3. 3. Expert Institutional Development RWSS

Tasks

- ✓ Analyses capacity building needs (training, IT, R&D)
- ✓ Strengthens the institutional capacity at district and provincial levels
- ✓ Supports the districts to apply DRA in RWSS planning, and set up of WSC
- ✓ Coordinates PEC activities;
- ✓ Assists in the preparation of planning and reporting documents for the Steering committee;
- ✓ Assists writing progress reports and annual reports

Qualifications

- ✓ A masters degree in social sciences, rural development or an equivalent experience
- ✓ At least 3 years of experience in the water sector
- ✓ A proven capacity in adult training and coaching, participatory planning, and community education
- ✓ Working experience with governments and/or international organisations
- ✓ Team spirit and communication skills with colleagues and project partners of different social levels.
- ✓ Knowledge of common IT-applications
- ✓ Fluency in Portuguese; good command of English; command of local languages used in Gaza is an asset
- ✓ He/She will be in good health, and accept frequent field visits to remote areas;
- ✓ He/She is sensitive to relevant cross cutting issues of the Belgian co-operation (environment, gender, HIV/AIDS)

7.3.4. Administrative and Financial Assistant

The administrative and financial officer is responsible for a variety of finance-related tasks including the ones listed below (this list is not exhaustive). He/she works under direct supervision of the ITA.

Tasks

- ✓ Ensure a correct, smooth and efficient organization of the financial administration;
- ✓ Ensure good communication, information and co-operation within the financial administration team;
- ✓ Supervise compliance with legal and administrative procedures and guidelines; this implies he/she studies, checks and reinforces financial guidelines and procedures of BTC, including the Specific Agreement, the TFF, the BTC quality handbook and any guidelines provided from Brussels or the Representation in Maputo;
- ✓ Ensure all instructions received from the representation or BTC headquarters are correctly followed-up and applied and that the requests are met within the deadline;
- ✓ Update guidelines and system of all types of payments in project, especially allowances;
- ✓ Update Administrative and Financial Manual, and ensure communication of new procedures to all admin/fin staff involved.
- ✓ Final responsibility for timely production of FIT statements;
- ✓ Produce financial reports whenever requested following format laid out (e.g. for steering committees), or develops customized formats for ad hoc reports;
- ✓ Follow up and update of budget; Compare budget and planning with actual expenses;
- ✓ Provide monthly overview of budget balance;
- ✓ Financial short-and long term planning: overall;
- ✓ Overall management of bank and cash accounts, prepare cash calls on basis of the financial planning.
- ✓ Audit and analyze project expenses monthly, report any inconsistencies or irregularities;
- ✓ Control supporting accounting documents on quality and completeness;
- ✓ Preparing and assisting internal and/or external financial audit missions;

Minimum profile

- ✓ University (graduate) degree in finance or business administration;
- ✓ Minimum 5 years experience in financial management and project administration;
- ✓ Management experience, and experience with an international organization or NGO;
- ✓ Proven capacity to process information with relevant and actual software;
- ✓ Proficiency in English;
- ✓ Mature, good communicator and team-player;
- ✓ Able to work under stressful conditions and and willing to travel at times across the province.