



Ministry for Higher Education,
Science and Culture
(MESCC)

FDCH



Human Capital Development Fund
(FDCH)

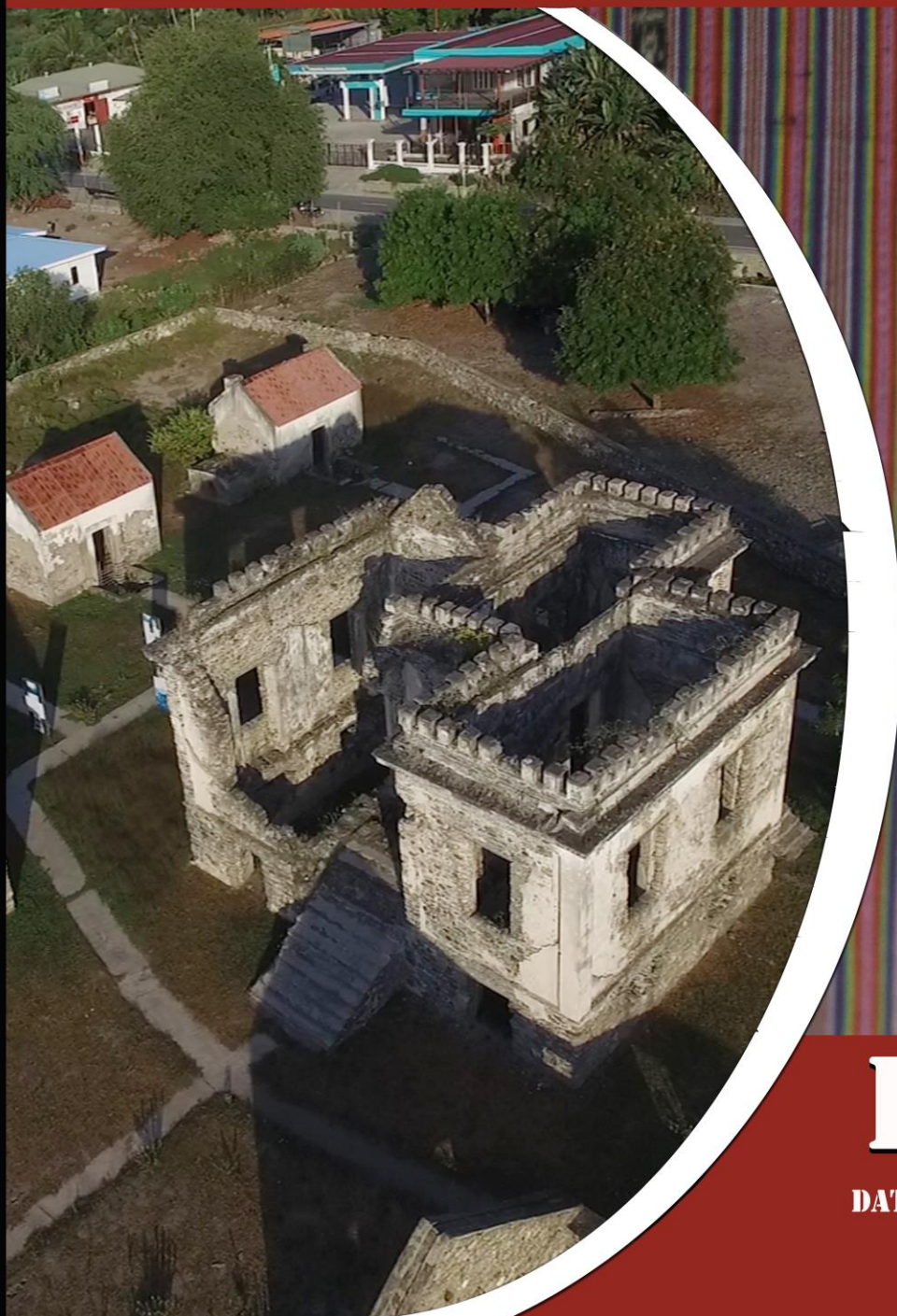
RESULT OF THE DATA SURVEY OF THE EXISTING **HUMAN RESOURCES** AND MAIN KEY AREAS OF TRAINING

**LIQUIÇA
MUNICIPALITY**

LD RHE

DATA COLLECTION OF EXISTING
HUMAN RESOURCES

LD RHE REPORT 2018



Result of Data Collection of Existing Human Resources and The Main Key Areas of Training

Municipality of Liquiça

Fundo do Desenvolvimento do Capital Humano (FDCH)

(Human Capital Development Fund – HCDF)

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ACKNOWLEDGMENTS

First of all, it is necessary to point out that, thanks to the political orientation and vision of the Administration Council of the Human Capital Development Fund (AC-HCDF/CA-FDCH-acronym in Portuguese language) to the staff of the Technical Secretariat of the Human Capital Development Fund (TS-HCDF/ST-FDCH-acronym in Portuguese language) this LDRHE documentation (Data Collection for Existing Human Resources in East Timor).

Through this opportunity we would like to extend our gratitude to:

- To the VI Constitutional Government in the person of SE the Minister of Planning and Strategic Investment (MPIE-official acronym) for the trust that has been deposited with the FDCH team in the realization of this program and to be able to materialize its publication in this VIII Constitutional Government;
- To the Administrators of the 12 Municipalities, including the President of RAEOA - Oecusse as well as the Municipal Directors and Regional Secretaries of RAEOA for the provision of time and provision of necessary resources in the monitoring of data collection and the active participation in the consultation process on the Municipal Powers and of RAEOA held in the month of March to April 2018;
- To Director of VISES (Victoria Institute for Strategic Economic Studies) of Victoria University in Melbourne – Australia, Professor Bruce Rasmussen and Dr Peter Sheehan and Mr Jim Lang for the contribution to assist FDCH in analysis of the raw datas as well as the National Population 2015 data;
- To Academics of all Universities for the contribution and information as well as General Secondary Schools and Vocational Technical Schools throughout Timor-Leste;
- To the youth group, Organization of Women and the people with disability, National NGOs, National and Foreign Enterprises including foreign citizens residing in East Timor for the contribution and information relevant to the realization of this report;

- To the Organization of the Chamber of Commerce and Industry (CCI), organizations and companies of the private sector for the contribution of ideas, data and information necessary for the same purpose;
- To all Timorese from East to West for the contribution and information provided through answers to the questions asked in this questionnaire;
- To the Technical Secretariat of FDCH (ST-FDCH) Team for the effort and excellent work, mutual understanding and good coordination from the beginning of the work begun in September 2016 until April 2018, drawing, compiling, analyzing and preparing the written questionnaire for consultation;
- To the General Director of Statistics (DGE- official acronym) of the Ministry of Finance for all the hard work and technical expertise in leading the team for data cleaning and data analysis;
- To the Ministry of State Administration (MAE) for the guidance of working with the communities, local authorities and all stakeholders in the Municipalities;
- Team of the National Program for Village Development (PNDS – official acronym) to carry out the study together with the enumerators recruited in each village of all municipalities in Timor-Leste;
- To all the enumerators, for the collection of data, the correction and the cleaning of the data team to the 546,555 people represented by 82.7% of the population interviewed in this data collection process, that at the end of the process only 522,979 persons could be used, representing a total of 79 % of the population with 662,285 people over the age of 17 according to the result of the Population Census in 2015;
- Dr Afonso Almeida for his compassion, knowledge and skills contributed to the writing of the report together with the team despite of the challenges in time and information gathered;
- Lastly to the team of translators who have contributed the time and wisdom to translate into three (3) languages, from Tetum to Portuguese and English, thus enabling all people in Timor-Leste including development partners to have access and read the Current Human Resources Data Collection document (LDRHE-official project name).

Thank you.

MESSAGE FROM THE MINISTER



I am grateful for the honor bestowed on me in this report entitled "Data Collection of Existing Human Resources in Timor-Leste". It is a fundamental work where it provides information pertinent to the formulation of the National Strategic Plan for the Development of Human Resources of the Country. It will contribute to know, understand and strengthen the capacity of the Human Capital Development Fund (FDCH) in terms of identifying the existing human resources and try to bridge the gaps through greater awareness of budgeting based on the country's real needs.

Achieving the goals and targets outlined in the Strategic Plan for National Development 2011-2030 requires a commitment from all. It requires forming partnerships, focusing on areas of greatest need, improving the effectiveness of actions. I am convinced that this report will make a significant contribution to our effort to mobilize resources and engage in partnerships and collaboration with all segments of society in order to achieve the objectives set out efficiently and effectively.

The current social and economic environment characterized by increasing globalization and technological advances requires a society composed of competent and qualified individuals capable of responding to the unpredictability of the market, characteristics of changing contexts and innovation.

The pertinence of this report emerges from the relevance attributed to ongoing training and development in the current context of individual institutions or organizations, societies and individuals. It is in this context that FDCH plays a pivotal role in the development of human resources through training and capacity building to help people to acquire and systematically improve the skills and knowledge needed to carry out their professional functions and, consequently, and institutions or organizations to make the most of their human capital.

In this systematic search to optimize human capacity, training and continuous training of human capital emerge as strategies directly related to the construction of techniques and skilled labor, continuously adjusted to the demands of the surrounding contexts. Human resource development (HRD) is an intentional process necessary for people who are professionally active or who wish to enter the labor market to add value in an increasingly sustainable way to the social fabric of work, contributing to the economic, social and institutional or organizational prosperity of the Parents.

In this sense, it is fundamental that public and private institutions, labor market institutions, and the municipal economic and social system, develop strategies for human resource development so that they can manage their workforce in an organized way and in line with their missions and goals.

The data presented in the report indicate that some specialized training areas of existing human resources remain limited, such as agriculture, construction, hospitality and tourism, the private sector, technical and vocational education and training (TVET) and adult education, especially for women, and workplace training.

The integration of these priority areas into a National Human Development Strategy for Timor-Leste will ensure the development of appropriate government policy responses, civil society desires, educational institution programs, and the needs of business and industry work will be well aligned and work together in a coordinated way to increase the capabilities of all human resources.

It is hoped that this report will become an instrument that should be part of everyone's daily life for those who seek to contribute to the training, education and improvement of the different categories of personnel required, by optimizing opportunities within or outside the country and promoting planning of human resources, namely in relation to the needs of the Municipalities and the Country as a whole.

Finally, to promote equity in attention to human resources training, reduce training inequalities, increase the availability of training actions, guaranteeing universal access to the most affected of social inequalities, gender, race, ethnicity, generation, vulnerable are the challenges posed so that the right ceases to be more declarations and becomes part of the daily life of the Timorese.

Dili, December 2018

A handwritten signature in blue ink, consisting of stylized initials and a surname, is written over a horizontal line.

Longuinhos dos Santos, M.M.

Minister of Higher Education, Science and Culture (MESCC)

MESSAGE FROM THE EXECUTIVE SECRETARY OF FDCH

In order to assist the Government in implementing the Policy Based Evidence, the Council of Administration of Human Capital Development Fund (CA-FDCH: acronym in Portuguese language) directed to the Technical Secretariat of Human Capital Development Fund (ST-FDCH: acronym in Portuguese language) in May 2016 to conduct a study throughout the country to identify the number of human resources existence in Timor-Leste.

After sufficient preparation with adequate budget and trained staff, ST-FDCH immediately coordinated with the General Directorate of Statistics of the Ministry of Finance and with the joint work team of the Ministry of State Administration (MAE - acronym in Portuguese language) and the National Program for Village Development team (PNDS-acronym in Portuguese language) in the training of the team of enumerators for each village with a minimum of 5 people out of 452 Village (Suco) in Timor-Leste.

The process of data collection has undergone several challenges due to the geographical area that must be overcome to remote areas throughout Timor-Leste. Residences distanced from each other crossing mountains, rivers and streams from one village to another. As well as the difficulty the team has faced in collecting data, especially in rainy weather and other challenges. Due to the challenges mentioned, the team took a few months to complete and was finally completed in February to March 2017.

In April 2017, the team began the data cleaning process that took 3 to 4 months and ended in the month of August until September 2017, then the data reconciliation was done by the team together with the General Directorate of Statistics of the Ministry of Finance.

Later ST-FDCH Office began to analyze the data and to prepare the report, as a result of this survey, the office saw that it still needed more information, consulting the Municipalities to know better which potentials exist in each Municipality including RAEOA-Oecusse. And what are the aspirations, ideas or suggestions

coming from Youth, Women, Disabled People and all stakeholders presented through discussions in groups running through the country. The Program was held from March to April 2018, due to the budget constraints that was only available at the beginning of the fiscal year of 2018, as well as after coordination between the ST-FDCH and PNDS team and the Municipal Authorities and RAEOA-Oecusse.

In the end, the report was prepared in Tetum as the official language, and translated into Portuguese as well as English.

Finally, let us hope that the data, information and the analysis developed in this report will be useful in common, as this information will be useful to assist the government, the private sector and all parties such as public, private, civil, police and military organizations. The international development partners they can use for appropriate planning and better implementation in Timor-Leste in achieving the National Strategic Development Plan 2011-2030.

My deep appreciation for the attention, collaboration and teamwork with the goal of developing and strengthening human resources in Timor-Leste for the well being of the people and for the contribution of the stability and prosperity of this noble nation.

Dili, Dezembro 2018

A blue ink signature of Isménio Martins da Silva, written in a cursive style.

Isménio Martins da Silva

Secretary of HCDF/ FDCH-MESCC

EXECUTIVE SUMMARY

Justification of the important of the subject

This report has two complementary lines of work, the first one based on the data collection of human resources existing in each municipality carried out by the Human Capital Development Fund (HCDF/FDCH) and the second, the identification of the natural resources and the economic potential of the Municipality, the priority programs related to their potential based on the four pillars of the Municipal Strategic Plan (MSP/PEM) and key human resources that need training in the development of priority programs.

The key to the effective development of the Municipality's human resources is not only to identify the natural and economic potential for development and priority areas of training, but also to have prior knowledge of existing human resources and to segment appropriate funds for the needs of Development of Human Resources (DHR/HRD), ensuring different phases of MSP/PEM to be successfully implemented.

The formulation of a human resource development strategy requires an integrated and multifaceted understanding of a complexity of subjects such as population demographics, especially the current human resources of the municipality, development of the workforce in the public and private sector, vocational education or vocational education and system as well as capacity development, current and future labor market issues including the employer and market needs and the tertiary education system (higher education) and their ability to produce skilled human resources at all levels.

The lack of information on policies, plans, information systems and vocational training, availability, composition, distribution, density, sources of funding, labor market forces and many other aspects related to the development of human resources linked to the economic and natural resources available to the municipality are scarce and are often dispersed through many sources.

The integration of these issues into a human resources development strategy for the municipality will ensure the development of appropriate local government

(municipal) policy responses, civil society desires, educational institution programs, and the needs of business and industry will be well aligned and work together in a coordinated way to increase the capacities of all human resources.

The fact that the aforementioned subjects are not sufficiently integrated into a set of human resources development work programs and there is no comprehensive study on the subject is one of the reasons for this work.

Thus, this work was carried out with the aim of 1) identifying and analyzing the current human resources situation and its distribution in Sub District Administration, 2) identifying the natural resources and economic potential and priority programs of the Municipality based on the 4 pillars of the Municipality Strategic Plan (PEM), 3) identify key human resources that training need in the development of priority programs, and 4) also try to analyze and compare the existence of current human resources and the need for training or training required by the municipality based in their priority programs to allocate funding efficiently and effectively.

Methodology

The methodology is used and applied with following phases : in the first phase, the data were collected from individuals aged 17 years or over by census of the population living in Liquiça Municipality with a completion of questionnaire, carried out from 5 of September up to 5 of November 2016 and in the second phase, was done through the "Focus Group Discussion" (FGD) held on March 21, 2016 to the Municipal Administrators, Sub District Administrators, Administrative Officers and other assess the accuracy of the information given, but also the relevance of the programs identified as necessary for the development of the municipality's human resources.

Summary of Results

The data presented here show that the majority of the population respondents in Liquiça Municipality are young people aged 17-44 years. At the knowledge level, there are a large number of people with no education level (illiterate), followed

respectively by those with pre-secondary education and basic secondary education.

This dispersal of education, together with the rapid growth of the population in the relevant age groups, shows the essence of the challenge faced by Liquiça Municipality. One aspect of this challenge is the balance between those who have completed general secondary education and academic education are predominant compared to those who have completed vocational technical courses at both the secondary technical level and the higher technical level - polytechnics. The ideal balance between academic and technical education is a key issue in the development process. In addition, the data also indicate a very small number of people who had taken part in one of the vocational training courses with a skilled workforce prepared for self-employment or institutional strengthening.

Those who had already taken part in one of the short-term professional courses are mostly generic professional courses geared more towards administrative work and the public servant such as courses in leadership, administration, finance, planning, management and languages, which in practical technical terms do not support the creation of their own jobs (self-employment).

It is further aggravated by a large number of job seekers, including those who have completed a degree program in Law, Medicine - Medical Clinic (General Practice), Accounting, Mathematics, Private Law and more graduates in other areas. (see table 15), without being exploited in the labor market. The work preference of the graduates is in the public sector while the non-graduates are have preference in the non-public sector such as agriculture, domestic work, industrial activity and civil construction.

Analyzing the training preference based on the priority programs (Table 25) with the current human resources (Table 5), the data show that the Liquiça Municipality has a high number of graduates in several areas. However, it is verified that there are still deficiencies in some specialized areas. In relation to the current human resources, the question is how to take advantage of and employ them. However, it is important to note that there are still serious concerns about quality not only in technical knowledge but also in language skills and this can become a challenge.

Language training activities are intended to provide the beneficiaries with fluency in reference languages and to enable them to be more effective in carrying out their tasks in particular when traveling to work overseas. In this sense, it is important to unite language training with the additional training at postgraduate level directed at the priority technical areas and professional internship program.

Another challenge demonstrated in the work presented was the existence of a large number of public and private employees, including entrepreneurs with very low levels of education. This may possibly imply a lack of productivity and competitiveness in companies or organizations. It is evident that with this very low level of qualification the municipality will not be able to overcome the serious problems that it faces nor the future challenges.

Private sector growth is constrained by skill gaps in the workforce of both employers and workers. The private sector contributes to economic development by generating jobs and income, as well as through investment, new technologies, knowledge transfer and increased productivity. This has been observed in some countries in Asia, where much of the recent success in poverty reduction is due to robust economic growth stimulated by the private sector. In this sense, it is crucial to strengthen the private sector by promoting the development and the adequacy of the qualification of workers and employers, with a view to improving their employability and increasing the productivity and competitiveness of the business.

Equipping workers with certain skills will allow them to continue to seize opportunities for growth expansion in a non-agriculture in the private sector. A high school diploma or higher is increasingly an indicator of employment opportunities in the urban private sector.

Liquiça Municipality identified skills shortages in the following sectors: Electronics Engineering, Health, Tourism, Aviation, Manufacturing, Waste Treatment and Financial Services (banks, insurance and securities). It also identified a lack of skills in the following areas: english, nursing, pharmacy, hospitality, pilot training, accounting and auditing, machine operation, component manufacturing and assembly, engineering (design and development), literacy, programming or software engineering and management (decision making,

leadership, delegation, motivation). Thus, it is considered that academic ability and professional technical training should be provided for the most crucial areas in the implementation of its priority program as shown in table 25.

Based on the data presented above it becomes evident the need for training and the development of ability peoples as a means to provide qualitative and quantitative benefits.

It is important to emphasize that skills development can not be seen only as formal technical and vocational education and training. It comprises skills acquired through all levels of education and training, taking place in formal, non-formal and vocational training contexts, enabling individuals in all sectors of the economy to engage fully and productively in livelihoods and to be able to further enhance and adapt their skills to meet new demands and opportunities in the economy and the labor market. Skills development should not be characterized by the source of education or training itself, but by the skills that are acquired through this process.

With regard to people with disabilities, data show that there are quite a large number of people with disabilities and many of them have stopped in primary and secondary education, due to various difficulties, and this causes a difficulty to find a job, to earn a higher salary of than the benefit they receive from the government. Employers have some concerns about hiring people with disabilities because they feel they may not have adequate professional qualifications. This issue can be minimized if there are some inclusive policies such as developing initial and continuing vocational training for people with disabilities and disabled people to enable them to acquire the knowledge and skills necessary to obtain a vocational qualification to help overcome the concerns of employers so that they can have more opportunities and their entry into the labor market is easier.

The data also point out the need to reduce or combat illiteracy by creating opportunities and mobilizing municipal managers to increase literacy provision for all young people, adults and older people who did not have access or stay in elementary education, especially the small people and medium-sized enterprises and farmers. Education and training for entrepreneurship is also key to encouraging creativity and the realization of new local economic initiatives.

Intensive training, in service and or postgraduate (specialization), should be intensified as key elements for the quality of the human resources currently possessing the Secondary and Bachelor's level of education.

It also reveals the need for a demand-driven secondary vocational education and demand-driven post secondary technical education area of secondary and post secondary education.

And finally, in the scope of preparation of human resources for the creation of municipalities, it is important to strengthen the training in the areas of Urbanization and Regional Planning, Planning and Territorial Planning.

Conclusion and Recommendations

Based on the data presented and discussed above, it is concluded that, in developing human capital resources and achieving sustainable development in the future, the Liquiça Municipality needs to pay more attention to the development opportunities identified in the Municipality Development Planning (MDP) to the following five dimensions: 1) economic (increased efficiency of the production system), 2) social (improvement of income distribution levels of the population), 3) ecological (preservation of the environment), 4) spatial (balance in distribution and occupation of rural population and urban) and 5) cultural (respect to the ways of thinking and acting of the society, with focus in the construction of an environmental conscience linked to the consumption).

According to the results obtained, it is considered pertinent to conclude and recommend the following:

- a) The commitment to education obtained results, it is considered pertinent to conclude and recommend the following: focusing more on the opening of vocational training centers (or Polytechnic institutes) to the detriment of the opening of more universities;
- b) Complementary to academic training centers (or Polytechnic institutes) to the detriment of the opening of more universities sustainable and non formal.

Based on the data analyzed, we reinforce the need to train other areas where there are notable shortages of qualified human resources and areas of greater importance according to the priority programs found in table 25.

Most respondents wish to work in the non-public (private) sector than in the public sector. The desire for the private sector was slightly higher among young people aged 17-36 and the preference for work is mainly in the area of agriculture, household chores, industry and construction.

The graduates and post-graduates with the highest number of job seekers “unemployment” are in the field of Law, Medicine - Medical Clinic (General Medicine), Accounting, Mathematics, Private Law and more in other areas (table 15).

Intensive training in service and postgraduate (specialization), should be intensified as key elements for the quality of the human resources currently possessing the Secondary and Bachelor's level of education.

There are a large number of people with disabilities of productive age who are looking for work and have inadequate professional qualifications, or very limited practical professional knowledge. It is recommended the need to develop initial and continuing vocational training for people with disabilities and incapacity, especially gestural training for those with visual and hearing disabilities, so that they can have more opportunities in the labor market.

To complete this general conclusion, we highlight five main points:

- 1) Education and training opportunities remain limited in some of the major areas highlighted by the SDP, such as agriculture, construction and hospitality and tourism. The following areas should be more focused on human capital development:
 - **Agriculture** is the heart of the municipality's economy and critical to the well-being of its people. A sustainable agricultural development path will require greater investment in building innovation and skills on small-scale farms through many routes: training and technology transfer; a strong expansion of the number and skills of extension workers; through better

education and training for members of rural families, including women; and increased investment in vocational and tertiary education programs and Research and Development (R & D) centers, closely related to the needs of agriculture in the Liquiça Municipality.

- **The construction** with a limited infrastructure inherited from the Indonesian government period and the continuous needs to consolidate the infrastructures namely the roads thus offering the population of the benefited region, better conditions of transport, easy access and allows local farmers to transport their products to the market quickly and effectively.
 - **Tourism** in the City of Liquiça remains a future opportunity, but taking advantage of this opportunity will require the development of a trained workforce, from the entry level team to senior managers, as well as investment in R & D, development and policy planning and capacity planning.
- 2) **Private Sector** - Survey data show that private sector growth is constrained by skill gaps in the workforce both employers and workers. In this sense, it is crucial to strengthen the private sector by promoting the development and adequacy of the qualification of workers and employers with a view to improving their employability and increasing the productivity and competitiveness of the business;
- 3) **Technical and vocational education and training (TVET)**. FDCH's study shows a lower level of TVET qualifications than university qualifications in the municipality, and increased investment in the expansion of TVET should be a high priority. This expansion should cover technical secondary schools, the polytechnic system, and the community-based non-formal vocational training system. In doing so, it is important that the boundary between academic and technical education remains fluid, with easy articulation between the two areas;
- 4) **Adult education** (literacy for all young people, adults and the elderly), especially for women, and on-the-job training. In our view, these three areas

are of considerable importance for the future. In particular, the increasing role of women, especially in agriculture, and with a higher skill level due to improved training, may contribute to the growth of household and national income, and to more jobs in general;

- 5) In the preparation of human resources for the creation of the municipality (decentralization process) it is important to strengthen the training in the areas of Urbanization and Regional Planning, Planning and Territorial Planning;
- 6) It also reveals the need for demand-driven secondary vocational education and demand-driven post secondary technical education area-level provision of secondary and post-graduation education.

PART A: INTRODUCTION, OBJECTIVES AND METHODOLOGY

1. Introduction, Objectives and Methodology

1.1. General Introduction

The Liquiça Municipality is located on the north coast of the country, and is known to be a beautiful place. The beaches of Liquiça are rocky but beautiful. The river flowing into the mountain sea during the dry season has no water except during the rainy season.

It shares borders to the east with the Municipality of Dili, to the southeast with the Municipality of Aileu, to the south with the Municipality of Ermera, to the southwest with the Municipality of Bobonaro. To the northwest of Liquiça lies the Savu Sea (Strait of Ombai, Flores, Indonesia) and has a total area of 549 km².

Liquiça Municipality is located 36 km from the western part of the capital, Dili. Astronomically located longitude 8°34' - 8°44' and latitude 125°03' - 125°30'.

In 2015, the population was estimated at 71,927 inhabitants, of whom 36,436 were men and 35,491 women, and the number of households was 11,885.

The dominant religion in the territory of Liquiça Municipality is the Catholic religion followed by 95% of the population and 5% practice other religions; being the most widely spoken languages in which 64% of the population speak Tokodede, 18% speak Mambai, 16% Tetum and 2% Bunak and other languages.

Sub District Administration, Villages and Sub Villages

Liquiça Municipality is divided into 3 Sub District Administrations, 23 Villages and 134 sub villages scattered throughout the territory according to the table below:

Sub District Administration Area

Sub District Administration	Superficie km ²	(%)
Bazartete	187.53	34.04
Liquica	98.58	17.89
Maubara	264.84	48.07
Total	550.95	100

Sub District Administrations, Villages and number of Sub Villages

Bazartete Sub District Administration consists of 9 Villages and 45 Sub Villages.

Liquiça Sub District Administration consists of 7 Villages and 39 sub Villages.

Maubara Sub District Administration consists of 7 Vilages and 50 Sub Villages.

Climate, Relief and Hydrography

The climatic situation of Liquiça Municipality is essentially characterized by two main stations, a dry season and a rainy season.

More than 75% of the topography of Liquiça Municipality is mountainous zone, dominant in the east, south and west regions, extending from Tibar juice to Guico juice. While the plains zone, has only 25% that extends in the northern region from the Tibar, Ulmera, Dato, Vaviquinia, Vatuboro, and Guico juice.

Economic Potentials and Natural Resources for the Development of Liquiça Municipality

a) Agriculture

The central government encourages the agricultural sector to be stronger and able to guarantee and promote food security, minimize unemployment, increase economic incomes and reduce poverty by stimulating agricultural development in rural areas, providing the private sector and the driver of agriculture-related industries and the nonfarm rural economy.

There are several stages of stimulation in the agricultural sector, starting with promoting the production of food security for the domestic market, increasing the income of the local community for domestic consumption and possible export of agricultural products.

The agricultural powers to be developed in the Liquiça Municipality are floriculture such as flowers during the year (permanent), flowers (temporary), and horticulture coconut, cassava, corn, sweet potatoes, vegetables, tomato, eggplant and baria. Other potentials of great importance for development in the Liquiça Municipality are the livestock sector, fisheries and forest that will be described next.

b) Livestock

Livestock in Liquiça Municipality is characterized by family exploitation and is an important complement to the income of households in rural areas. Most rural families are engaged in raising cows, buffaloes, sheep, goats, poultry and pigs (pigs). For the development of the livestock sector, the government has developed integrated livestock systems and will develop cattle with higher production and reduce animal diseases that may come to infect other animals. Pilot programs implemented by local government such as pig breeding cooperatives and 500 cows in Guíço Juice, Suco Vatuboro and Loes.

For this program to continue, the local government must ensure the maintenance of animal husbandry, establish laws, guarantee and facilitate credit and promote training for farmers who wish to raise animals.

c) Fishery

Due to its geographic location, the Liquiça Municipality has enormous potential in the fishing sector that it intends to develop to promote the local economy, increase the internal revenues and income of the local population and that will consequently support the national economy. However, there are still many challenges in the development of this sector, namely;

- The local government still does not pay more attention to this sector - and therefore should pay more attention through training and use of fishing technologies to the farmers working in the área
- Lack of investment by the private sector in the fisheries sector
- Fishery equipment and technologies are very limited
- Lack of market coordination and integration

However, it turns out that farmers continue to fish traditionally just to meet their daily needs.

d) Forest

Liquiça Municipality has forest resources and various types of wood such as red and white teak, *Ai mahoni*, *Ai-tranbesi*, *Ai-seria*, Sandalwood and Bamboo. The

central government in cooperation with the local government conducted a "feasibility study" for the production of timber - (*Ai-to'os*) because it is very useful for the furniture industry. The local government is conserving all types of wood that are beneficial to the economic value, including the creation of coffee nursery in all areas of Liquiça Municipality.

e) Tourism

Tourism is a very important industrial sector for regional development because the Liquiça Municipality is one of the districts which possesses a variety of heritage tourism such as beautiful nature reserves, cultural and historical heritage. Tourism has the economic development value of the municipality as the creation of employment (reduction of unemployment).

Liquiça Municipality has several tourist objects, among others, the Tasi Tolu Lagoon, the Pope John Paul II Monument, Uma Adat Tasi Tolu, ancient buildings and benteng as heritage left by the Portuguese and panoramas of Liquiça Beach.

f) Trade and Industry

The central government has supported the local government in the development of several local industries that is in Liquiça Municipality. The potential of the municipality's resources that can be produced for domestic consumption in the future, increase the income of the local population and possible export, and provide useful economic value to the community, such as:

- Production of bamboo industry for furniture;
- Organic coffee industry;
- Brick industry made of "*Rai Mean*"
- The ethanol industry made by "*Tua na metan*" *tua tali* and *Nu'u* "

g) Natural Resources

The potential natural resources of Liquiça Municipality consist of gold, lead and zinc, sand and gravel, garbo, kaolin, halite. There are other natural resources such

as existing riverbanks that local businesses have begun to use for the construction of buildings and bridges in the territory of Timor-Leste.

Anticipating the implementation of the process of decentralization and creation of the municipality, it was identified as the main challenge of the economy: increasing the competitiveness of the economy through diversification of the economy; bets on the poles of development; investment in human capital, in infrastructure and in research and innovation. The challenge is also the need to develop 4 fundamental pillars, namely:

- 1) Human capital development (market-oriented training, institution and expansion of vocational education and improvement of health and social protection standards).
- 2) Development of production-based infrastructures (infrastructure investment and planning: industrial parks, EEZs, aquaparkes, thermal power stations, roads, ports, definition of housing areas and state reserves).
- 3) Research, innovation and technological development (creation of specialized R & D centers in the following areas: agriculture, livestock and fisheries, energy, mineral resources, water resources management and information and communication technology (ICT)).
- 4) Articulation, and institutional coordination (improvement of public institutions, improvement of coordination and intersectoral coordination, reform of legislation and creation of institutions that serve the industrialization strategy - eg Development Bank).

In order to materialize the challenges inherent in the priority areas of economic development, we identified two main instruments: (1) private sector development, with an emphasis on mobilizing resources for investment in the development of small and medium-sized enterprises; and (2) mechanisms for financing public investment. For the development of the Private Sector are considered crucial factors to create a business environment favorable to the municipal private sector and the mobilization of resources for private investment. Developing financial instruments that improve funding conditions and facilitate access to municipal private sector financing is essential.

In this context, the development of human resources in public and private sector institutions is indispensable in increasingly knowledge-based and globalized economies of the world (Analoui, 2007).

It is imperative to build local capacities of Sub District Administrations as the vanguard of the municipal strategic development agenda. The lack of necessary skills and well-run public and private institutions for long-term sustainable growth is a priority to be included in all development activities in Liquiça because of their implications for improving governance and development management.

Given the importance of human resources as an engine of economic development, it is fundamental and strategic to identify priority areas for training and the number of people in the public and private sector. In this sense it is necessary to make a survey of existing human resources data at the municipal level.

The key to the effective development of human resources should not only identify priority training areas but also prior knowledge of existing human resources and segmentation of funds appropriate to the identified HRD needs, ensuring different phases of the strategic development plan to be successfully implemented in the future.

The fact that there is **no human resources survey in Liquiça Municipality** is one of the reasons for this work.

1.2. The Objectives

The overall objective of this study is to identify and analyze the current human resources situation and its distribution throughout the territory. Some specific objectives were stipulated in order to achieve this.

1. Describe the current situation of the municipality's human resources and each Sub District Administration;
2. Inform the number of graduates seeking work or unemployed;
3. Promote the planning of human resources, particularly with regard to the needs of the municipality;

4. Contribute to the training and improvement of different categories of personnel, through the optimization of opportunities inside and outside the country; and
5. Strengthen cooperation between the public and private sectors and professional associations.
6. Promote an efficient allocation of fdch funding for human resources development programs in priority areas in the coming years;
7. Identify strategic occupations and strategic areas for training; and
8. Identify economic potential, natural resources and related priority programs.

Thus, through the achievement of the objectives, it is intended to obtain relevant results that will strengthen and clarify the issue under study.

1.3. Methodology

The research methodology that supports the theme developed basically from a comprehensive analysis of primary data, and was essentially focused on two vectors of the quantitative and qualitative methodological approach. The first one, the data were collected from individuals aged 17 years or over by census of the resident population in Liquiça Municipality with the completion of a questionnaire, carried out between September 5 and November 5, 2016, and the second was made through the Focus Group Discussion (FGD) held on March 9, 2018.

The population census is the only source of information on the life situation of the population in Sub District Administrations and villages. The census produces information essential for the definition of public policies of the state at the level of Sub District Administrations and for decision-making in relation to the investment, whether they come from private initiative or any level of government.

The data in the questionnaires collected were complemented with the FGD method with discussion questions (Annex 1) based on the 4 development pillars according to the National Development Strategic Plan (PEDN 2011-2030), to Municipal Administrator, Administrative Officers, Directors (list of participants in Annex 2), with a view to assessing the accuracy of the information given, but also the

relevance of the programs identified as necessary for the development of human resources in the municipality.

To simplify the analysis, we also collected additional secondary data for the study. The documentary source was made through the review of several documents related to the development of human resources and decentralization. The primary data collected based on the instruments answered by the respondents were tabulated and analyzed statistically, as well as the secondary data collected from the documentation analysis. The data were treated with specialized CS-Pro software for this area.

PART B: ANALYSIS AND RESULTS FOUND

This part of the report intends to analyze the results of the FDCH survey and other relevant data and elaborate its implications for the development of the human resources strategy of the municipality of Liquiça, continues in four sections.

Section 1 is mainly based on the FDCH survey to analyze the current situation of Liquiça Municipality's human capital in various dimensions as a basis for the development of a human resources strategy.

Section 2 starts from the four pillars of the municipality's Strategic Development Plan, outlining the priority programs and the main training areas.

Section 3 briefly discusses and analyzes the data presented here.

Section 4 provides conclusions and recommendations.

2. Overview the Human Capital of Liquiça Municipality

2.1. Presentation and Analysis of data

This section briefly reviews data on the existing level of human resources in Liquiça of Municipality and its distribution to Sub District Administrations, as well as providing a basis for human resource strategy decisions. The main source of information presented here is the result of the FDCH survey and statistical data from the General Directorate of Statistics (DGE-official acronym in Portuguese language).

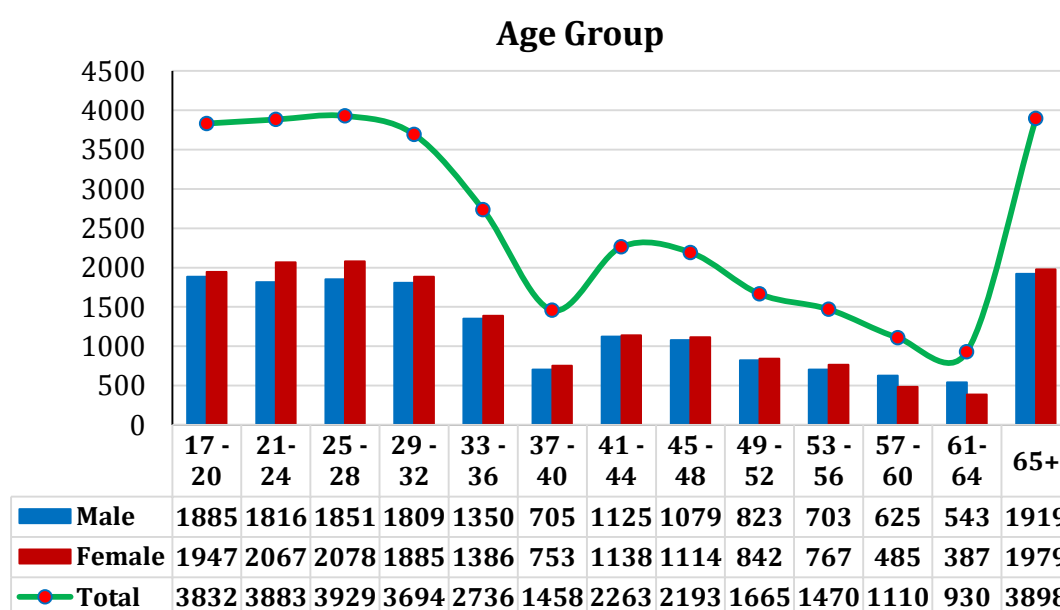
2.2. Profile of Respondents

The first part of the collection tool outlined the profile of the respondents as shown below, the results were represented in percentage graphs. Parallel to the graphical presentation of these results an analysis of the obtained data is made, aiming to reach the objectives already listed initially.

The survey involved 33,061 respondents, of which 49.1% were male and 50.9% were female. The other aspects of the profile are arranged in the graphs below.

The majority are between 17 and 44 years of age in both sexes, accounting for 65.9%, followed by the age group from 45 to 64 years, with 22.3% of those surveyed and 11.8% with more than 65 years. The female sex is the largest number in almost all age groups, except in the age group between 57 - 60 years (Figure 1).

Figure 1. Distribution of respondents by age group and sex



2.3. People with disability

Table 1 shows the distribution of the existence of people with disabilities in Liquiça municipality. A total of 745 disabled respondents were registered, corresponding to 2.3% of the total number of respondents distributed by 3 Sub District Administrations (table 1):

Table 1. Distribution of the existence of people with disabilities by Sub District Administration

Sub District Administration	Disability?		TOTAL
	YES	NO	
Bazartete	261	12791	13052
Liquiça	274	8900	9174
Maubara	210	10625	10835
LIQUIÇA	745	32316	33061
Percentage (%)	2,3	97,7	100,0

The number of people with disabilities registered among the three Sub District Administrations does not present significant differences (Table 2).

Table 2. Distribution of people with disabilities by Sub District Administration

Sub District Administration	Frequency	Percentage (%)
Bazartete	261	35
Liquiça	274	37
Maubara	210	28
Total	745	100

Among of the 745 people with disabilities, the main difficulties were physical mobility (46.5%), vision / eyes (19.6%), hearing loss (13.6%), psychosocial / mental disability) and cognitive (1.7%) (Table 3).

Table 3. Distribution of the disabled by type of disability and Sub District Administration

Sub District Administration	Tipy of Disability					Total
	Physics / Mobility	View	Deaf/ Mute	Psychosocial / Mental	Cognitive / Intellectual	
Bazartete	124	61	18	54	3	260
Liquiça	138	43	42	45	10	278
Maubara	86	43	42	40	0	211
Total LIQUIÇA	348	147	102	139	13	749
Percentage (%)	46,5	19,6	13,6	18,6	1,7	100,0

2.4. Education Level

As for the level of education of illiterate respondents, adult literacy and incomplete basic education occupy 48.9% of the total respondents. Basic (primary) and pre-secondary education represent 26.4% and secondary education accounts for 20.1%. Technical vocational education and other levels of education occupy 0.7% and 1.2%, respectively. At the tertiary or higher level, 2.6% of the respondents have the level of higher education (Table 4).

Among of the 876 (2.6%) of the respondents, 72% had a bachelor's degree followed by Diploma III / Bachelor's degree 20.7%, Diploma II (2.7%) and Diploma I (2.4%). Other academic levels have a percentage lower than 2% (Table 4).

Table 4. Distribution by level of education and by Sub District Administration

Level of Education	LIQUIÇA	Bazartete	Liquiça	Maubara
Can not read / write	14.103	4.728	3.553	5.822
Do not read / write (did not finish primary)	2.066	752	561	753
Sub Total	16,169	5,480	4,114	6,575
Primary	4,075	1,580	1,207	1,288
Pre-secondary	4,664	2,196	1,237	1,231
Secondary	6,660	3,241	2,079	1,340
Professional Technical High School	219	106	72	41
Others	166	11	108	47
Sub Total	15,784	7,134	4,703	3,947
1 st. Cycle (1st class - 4th class)	201	24	125	52
2º. Cycle (1st Year, 2nd Year)	18	3	13	2
3º. Cycle (3rd year - 9th year / 3rd year up)	13	3	8	2
Sub Total	232	30	146	56
Diploma I (DI)	21	5	11	5
Diploma II (DII)	24	14	6	4
Diploma III (DIII)	181	71	58	52
Diploma IV (DIV)	6	4	2	0
Bachelor's Degree (S1)	631	297	234	100
Master degree (S2)	12	6	5	1
PhD (S3)	1	0	0	1
Sub Total	876	397	316	163
Total	33,061	13,041	9,279	10,741

Regarding the distribution of the knowledge of the respondents by study area (study program) and by Sub District Administration, of the 876 who hold the higher degree only 420 (48%) answered this question. Details of the data can be seen in table 5, below.

Table 5. Distribution of education level of respondents by study program and by Sub District Administration

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Total	13	11	87	3	298	7	1	420	278	142
Law	-	-	-	1	33	-	-	34	25	9
Education	-	1	1-	-	8	-	-	19	11	8
Medical Doctor - Medical Practice (General Practitioner)	-	-	2	-	16	-	-	18	8	10
Human Resource Management	-	-	3	-	14	1	-	18	9	9
Portuguese Language	1	2	11	-	2	-	-	16	12	4
Management	-	1	6	-	9	-	-	16	12	4
Mathematics	-	-	5	-	10	-	-	15	13	2
Civil Engineering - Civil Construction	-	-	-	-	14	1	-	15	12	3
Economy	-	-	1	-	12	-	-	13	7	6
Mathematics of Teaching	-	-	6	-	6	-	-	12	12	-
Public Health	1	-	4	-	6	-	-	11	6	5
Accounting	-	-	-	-	11	-	-	11	5	6
Agronomy	1	1	-	-	7	-	-	9	6	3
Computer Technology Engineering (Computer)	-	-	2	-	7	-	-	9	5	4
Public Policy	-	-	-	-	9	-	-	9	7	2
Mechanical Engineering	-	-	-	-	8	-	-	8	8	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Nursing	1	2	5	-	-	-	-	8	5	3
Midwife	5	1	-	-	1	-	-	7	-	7
Agro-Business	-	-	-	-	7	-	-	7	4	3
Philosophy	-	-	-	-	5	-	1	6	5	1
Pharmacy	1	-	3	1	1	-	-	6	6	-
Production of livestock	-	-	1	1	4	-	-	6	3	3
Economics of Finance or Financial Management - Banking Economics	-	-	-	-	5	1	-	6	3	3
Mining Engineering	-	-	1	-	4	-	-	5	4	1
Political Science	-	-	1	-	4	-	-	5	2	3
Aquaculture	-	-	1	-	4	-	-	5	4	1
Pedagogical Biology	-	-	1	-	4	-	-	5	2	3
Teacher Training	-	-	4	-	1	-	-	5	2	3
Theology	-	-	1	-	3	-	-	4	1	3
English Language	-	-	1	-	2	1	-	4	2	2
Computer Science	1	-	1	-	2	-	-	4	3	1
Food Technology	-	-	-	-	4	-	-	4	4	-
Physics of Teaching	-	-	-	-	4	-	-	4	4	-
History and Geography	-	-	1	-	1	1	-	3	2	1
Geology	-	-	-	-	3	-	-	3	2	1
Industrial Economics	-	-	-	-	3	-	-	3	3	-
Business Administration	-	-	-	-	3	-	-	3	2	1
Education Sociology	-	-	-	-	3	-	-	3	1	2
Pre-Primary and Primary	-	1	2	-	-	-	-	3	1	2
Physics Education	-	-	1	-	1	-	-	2	2	-
Pharmacology	1	-	1	-	-	-	-	2	-	2
Architecture	-	-	-	-	2	-	-	2	2	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Engineering										
Ore Treatment	-	-	-	-	2	-	-	2	2	-
Agricultural Engineering	-	-	-	-	2	-	-	2	1	1
Food Science and Technology	-	-	-	-	2	-	-	2	2	-
Mineralogy	-	-	-	-	1	1	-	2	2	-
Dentist	-	-	1	-	1	-	-	2	1	1
Forestry Techniques And Operations	-	-	-	-	2	-	-	2	2	-
Fishing Engineering	-	-	-	-	2	-	-	2	2	-
Public Law	-	-	-	-	2	-	-	2	1	1
Economy - Cooperative - Marketing	-	-	-	-	2	-	-	2	1	1
Teaching Chemistry	-	-	-	-	2	-	-	2	1	1
Education Psychology	-	-	-	-	2	-	-	2	2	-
Special Education	-	-	2	-	-	-	-	2	1	1
Chemistry	-	-	-	-	1	-	-	1	-	1
General - Environmental Biology	-	-	-	-	1	-	-	1	1	-
Genetics	-	-	-	-	1	-	-	1	-	1
Immunology	-	-	-	-	1	-	-	1	1	-
Electrical Engineering	-	1	-	-	-	-	-	1	1	-
Mechanical Engineering	-	-	1	-	-	-	-	1	1	-
Pathological Anatomy And Clinical Pathology	-	-	-	-	1	-	-	1	1	-
Specialist in Gastroenterology Surgery	-	-	-	-	1	-	-	1	1	-
Specialist in Orthopedic Surgery	-	-	1	-	-	-	-	1	1	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Specialist in Pediatric Surgery	-	-	-	-	1	-	-	1	1	-
Forestry and Forest Resources	-	-	-	-	1	-	-	1	1	-
Management	-	-	-	-	1	-	-	1	1	-
Sociolinguistics and Dialectology	-	-	-	-	1	-	-	1	-	1
Applied Linguistics	-	-	1	-	-	-	-	1	-	1
Korean Language	-	-	-	-	1	-	-	1	1	-
Spanish Language	-	-	-	-	1	-	-	1	1	-
Hospital Administration	-	-	1	-	-	-	-	1	1	-
Religious Career	-	1	-	-	-	-	-	1	-	1
Geodesy	1	-	-	-	-	-	-	1	1	-
Chemical Engineering	-	-	-	-	1	-	-	1	-	1
Transport and Telecommunications Engineering	-	-	-	-	1	-	-	1	1	-
Physical Education or Sports Education	-	-	-	-	1	-	-	1	1	-
Nutrition	-	-	1	-	-	-	-	1	1	-
Environmental Health	-	-	1	-	-	-	-	1	1	-
Forestry Management	-	-	-	-	1	-	-	1	1	-
Water and Soil Engineering	-	-	-	-	1	-	-	1	1	-
Preventive Veterinary Medicine	-	-	-	-	1	-	-	1	1	-
Marine Fisheries Resources	-	-	-	-	1	-	-	1	1	-
Business Administration	-	-	-	-	1	-	-	1	1	-
Public Administration	-	-	-	-	1	-	-	1	1	-
Development	-	-	-	-	1	-	-	1	1	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Studies										
Communication - Journalism and Publishing	-	-	1	-	-	-	-	1	-	1
Social Work (Including Gravedigger)	-	-	1	-	-	-	-	1	-	1
Domestic Economy	-	-	-	-	1	-	-	1	-	1
Philosophy Education	-	-	-	-	1	-	-	1	-	1
Economics of Education or Management of Education	-	-	-	-	1	-	-	1	-	1
Government or Comparative Government Systems	-	-	-	-	-	1	-	1	1	-
International, Bilateral and Multilateral Relations	-	-	-	-	1	-	-	1	-	1
Moral Theology	-	-	-	-	1	-	-	1	-	1
Artistic Education	-	-	-	-	1	-	-	1	1	-
Engineering of Topography	-	-	-	-	1	-	-	1	-	1
Public Relations	-	-	-	-	1	-	-	1	1	-
Politic Education	-	-	-	-	1	-	-	1	-	1
Training of Primary and Pre-Secondary Teachers	-	-	1	-	-	-	-	1	1	-
Others	-	-	-	-	4	-	-	4	4	-
Bazartete										
Total	2	6	26	2	128	4	-	168	114	54
Law	-	-	-	1	19	-	-	20	17	3
Human Resource Management	-	-	3	-	7	1	-	11	6	5
Mathematics	-	-	-	-	8	-	-	8	7	1

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Accounting	-	-	-	-	7	-	-	7	3	4
Management	-	-	3	-	4	-	-	7	5	2
Economy	-	-	1	-	5	-	-	6	5	1
Public Health	-	-	2	-	4	-	-	6	4	2
Medical Doctor - Medical Practice (General Practitioner)	-	-	-	-	6	-	-	6	3	3
Public Policy	-	-	-	-	6	-	-	6	5	1
Teaching Mathematics	-	-	2	-	3	-	-	5	5	-
Political Science	-	-	1	-	3	-	-	4	1	3
Portuguese Language	1	1	2	-	-	-	-	4	3	1
Production of Livestock	-	-	-	-	4	-	-	4	2	2
Mining Engineering	-	-	-	-	3	-	-	3	2	1
Education	-	-	2	-	1	-	-	3	2	1
English Language	-	-	-	-	2	1	-	3	2	1
Nursing	-	2	1	-	-	-	-	3	1	2
Economics of Finance / Financial Management - Banking Economics	-	-	-	-	3	-	-	3	2	1
Physics of Teaching	-	-	-	-	3	-	-	3	3	-
Architecture Engineering	-	-	-	-	2	-	-	2	2	-
Agronomy	-	-	-	-	2	-	-	2	-	2
Philosophy	-	-	-	-	2	-	-	2	1	1
Theology	-	-	-	-	2	-	-	2	-	2
Mineralogy	-	-	-	-	1	1	-	2	2	-
Computer Technology Engineering	-	-	1	-	1	-	-	2	2	-
Mechanical Engineering	-	-	-	-	2	-	-	2	2	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Pharmacy	-	-	1	1	-	-	-	2	2	-
Midwife	1	1	-	-	-	-	-	2	-	2
Industrial Economics	-	-	-	-	2	-	-	2	2	-
Pre-Primary and Primary Education	-	1	1	-	-	-	-	2	1	1
Teacher Training	-	-	1	-	1	-	-	2	-	2
Physics	-	-	-	-	1	-	-	1	1	-
Chemistry	-	-	-	-	1	-	-	1	-	1
Genetics	-	-	-	-	1	-	-	1	-	1
Civil Engineering - Civil Construction	-	-	-	-	1	-	-	1	1	-
Ore Treatment	-	-	-	-	1	-	-	1	1	-
Electrical Engineering	-	1	-	-	-	-	-	1	1	-
Specialist in Orthopedic Surgery	-	-	1	-	-	-	-	1	1	-
Forest Resources and Forestry Engineering	-	-	-	-	1	-	-	1	1	-
Agricultural Engineering	-	-	-	-	1	-	-	1	1	-
History and Geography	-	-	-	-	1	-	-	1	-	1
Applied Linguistics	-	-	1	-	-	-	-	1	-	1
Korean Language	-	-	-	-	1	-	-	1	1	-
Spanish Language	-	-	-	-	1	-	-	1	1	-
Hospital Administration	-	-	1	-	-	-	-	1	1	-
Computer Science	-	-	-	-	1	-	-	1	-	1
Environmental Health	-	-	1	-	-	-	-	1	1	-
Agro-Business	-	-	-	-	1	-	-	1	1	-
Forestry Management	-	-	-	-	1	-	-	1	1	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Forestry Techniques and operations	-	-	-	-	1	-	-	1	1	-
Food Technology	-	-	-	-	1	-	-	1	1	-
Business Administration	-	-	-	-	1	-	-	1	1	-
Development Study	-	-	-	-	1	-	-	1	1	-
Social Work (Including Gravedigger)	-	-	1	-	-	-	-	1	-	1
Domestic Economy	-	-	-	-	1	-	-	1	-	1
Economy - Cooperative - Marketing	-	-	-	-	1	-	-	1	1	-
Pedagogical Biology	-	-	-	-	1	-	-	1	1	-
Chemistry of Education	-	-	-	-	1	-	-	1	1	-
Economics of Education or Management of Education	-	-	-	-	1	-	-	1	-	1
Governmental Sciences	-	-	-	-	-	1	-	1	1	-
International Relations, Multilateral Bilateral	-	-	-	-	1	-	-	1	-	1
Moral Theology	-	-	-	-	1	-	-	1	-	1
Educational Psychology	-	-	-	-	1	-	-	1	1	-
Liquiça										
Total	9	2	33	1	125	3	-	173	110	63
Education	-	1	5	-	6	-	-	12	8	4
Civil Engineering - Civil Construction	-	-	-	-	10	1	-	11	9	2
Law	-	-	-	-	11	-	-	11	5	6
Medical Doctor - Medical Practice (General Practitioner)	-	-	1	-	9	-	-	10	5	5

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Economy	-	-	-	-	7	-	-	7	2	5
Computer Science Engineering (Computer)	-	-	-	-	6	-	-	6	3	3
Management	-	-	3	-	3	-	-	6	5	1
Agronomy	1	-	-	-	4	-	-	5	4	1
Mechanical Engineer	-	-	-	-	5	-	-	5	5	-
Agro-Business	-	-	-	-	5	-	-	5	2	3
Mathematics	-	-	2	-	2	-	-	4	3	1
Nursing	1	-	3	-	-	-	-	4	3	1
Public health	1	-	1	-	2	-	-	4	2	2
Aquaculture	-	-	1	-	3	-	-	4	3	1
Pharmacy	1	-	1	-	1	-	-	3	3	-
Midwife	2	-	-	-	1	-	-	3	-	3
Accounting	-	-	-	-	3	-	-	3	1	2
Human resource Management	-	-	-	-	3	-	-	3	1	2
Business Administration	-	-	-	-	3	-	-	3	2	1
Mathematics Teaching	-	-	2	-	1	-	-	3	3	-
Pharmacology	1	-	1	-	-	-	-	2	-	2
Mining engineering	-	-	1	-	1	-	-	2	2	-
Food Science and Technology	-	-	-	-	2	-	-	2	2	-
History and geography	-	-	1	-	-	1	-	2	2	-
Computer science	1	-	1	-	-	-	-	2	2	-
Geology	-	-	-	-	2	-	-	2	1	1
Production of Livestock	-	-	1	1	-	-	-	2	1	1
Fishing engineering	-	-	-	-	2	-	-	2	2	-
Food Technology	-	-	-	-	2	-	-	2	2	-
Education Sociology	-	-	-	-	2	-	-	2	-	2

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Public policy	-	-	-	-	2	-	-	2	1	1
Physics	-	-	1	-	-	-	-	1	1	-
General - Environmental Biology	-	-	-	-	1	-	-	1	1	-
Immunology	-	-	-	-	1	-	-	1	1	-
Mining Engineering	-	-	-	-	1	-	-	1	1	-
mechanical Engineering	-	-	1	-	-	-	-	1	1	-
Specialist in Pediatric Surgery	-	-	-	-	1	-	-	1	1	-
Agricultural engineering	-	-	-	-	1	-	-	1	-	1
Management	-	-	-	-	1	-	-	1	1	-
Philosophy	-	-	-	-	1	-	-	1	1	-
Political science	-	-	-	-	1	-	-	1	1	-
Sociolinguistics and Dialectology	-	-	-	-	1	-	-	1	-	1
Portuguese language	-	-	1	-	-	-	-	1	1	-
English language	-	-	1	-	-	-	-	1	-	1
Religious Career	-	1	-	-	-	-	-	1	-	1
Geodesy	1	-	-	-	-	-	-	1	1	-
Chemical engineering	-	-	-	-	1	-	-	1	-	1
Telecommunications Engineering	-	-	-	-	1	-	-	1	1	-
Dentist	-	-	1	-	-	-	-	1	1	-
Physical Education or Sports Education	-	-	-	-	1	-	-	1	1	-
Nutrition	-	-	1	-	-	-	-	1	1	-
Forestry Techniques And Operations	-	-	-	-	1	-	-	1	1	-
Engineering Services	-	-	-	-	1	-	-	1	1	-
Marine Fishing	-	-	-	-	1	-	-	1	1	-

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Resources										
Public Law	-	-	-	-	1	-	-	1	-	1
Public administration	-	-	-	-	1	-	-	1	1	-
Industrial Economics	-	-	-	-	1	-	-	1	1	-
Communication - Journalism And Publishing	-	-	1	-	-	-	-	1	-	1
Economics of Finance or Financial Management - Banking Economics	-	-	-	-	-	1	-	1	1	-
Economy - Cooperativa – Mercado	-	-	-	-	1	-	-	1	-	1
Pedagogical Biology	-	-	1	-	-	-	-	1	-	1
Physics Teaching	-	-	-	-	1	-	-	1	1	-
Philosophy Education	-	-	-	-	1	-	-	1	-	1
Artistic education	-	-	-	-	1	-	-	1	1	-
Surveying Engineering	-	-	-	-	1	-	-	1	-	1
Educational Psychology	-	-	-	-	1	-	-	1	1	-
Politic Education	-	-	-	-	1	-	-	1	-	1
Education (Teaching) Pre-Primary And Primary	-	-	1	-	-	-	-	1	-	1
Others	-	-	-	-	2	-	-	2	2	-
Maubara										
Total	2	3	28	-	45	-	1	79	54	25
Portuguese language	-	1	8	-	2	-	-	11	8	3
Education	-	-	3	-	1	-	-	4	1	3
Human resource	-	-	-	-	4	-	-	4	2	2

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Management										
Mathematics Teaching	-	-	2	-	2	-	-	4	4	-
Mathematics	-	-	3	-	-	-	-	3	3	-
Civil Engineering - Civil Construction	-	-	-	-	3	-	-	3	2	1
Law	-	-	-	-	3	-	-	3	3	-
Philosophy	-	-	-	-	2	-	1	3	3	-
Management	-	1	-	-	2	-	-	3	2	1
Pedagogical Biology	-	-	-	-	3	-	-	3	1	2
Fashion Accessories	-	-	3	-	-	-	-	3	2	1
Agronomy	-	1	-	-	1	-	-	2	2	-
Theology	-	-	1	-	1	-	-	2	1	1
Medical Doctor - Medical Practice (General Practitioner)	-	-	1	-	1	-	-	2	-	2
Midwife	2	-	-	-	-	-	-	2	-	2
Economics Finance or Financial Management - Banking Economics	-	-	-	-	2	-	-	2	-	2
Special education	-	-	2	-	-	-	-	2	1	1
Pathological Anatomy And Clinical Pathology	-	-	-	-	1	-	-	1	1	-
Specialist In Gastreterology Surgery	-	-	-	-	1	-	-	1	1	-
Computer science	-	-	-	-	1	-	-	1	1	-
Geology	-	-	-	-	1	-	-	1	1	-
Computer Science Engineering (Computer)	-	-	1	-	-	-	-	1	-	1
Mechanical Engineer	-	-	-	-	1	-	-	1	1	-
Dentist	-	-	-	-	1	-	-	1	-	1

Program Study	Level of Education							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor (S1)	Master's Degree (S2)	PhD (S3)		Male	Female
Nursing	-	-	1	-	-	-	-	1	1	-
Pharmacy	-	-	1	-	-	-	-	1	1	-
Public health	-	-	1	-	-	-	-	1	-	1
Agro-Business	-	-	-	-	1	-	-	1	1	-
Preventive Veterinary Medicine	-	-	-	-	1	-	-	1	1	-
Aquaculture	-	-	-	-	1	-	-	1	1	-
Food Technology	-	-	-	-	1	-	-	1	1	-
Public Law	-	-	-	-	1	-	-	1	1	-
Accounting	-	-	-	-	1	-	-	1	1	-
Chemistry Teaching	-	-	-	-	1	-	-	1	-	1
Education Sociology	-	-	-	-	1	-	-	1	1	-
Public policy	-	-	-	-	1	-	-	1	1	-
Public relations	-	-	-	-	1	-	-	1	1	-
Elementary & Pre-Secondary Teacher Training	-	-	1	-	-	-	-	1	1	-
Others	-	-	-	-	2	-	-	2	2	-

2.5. Vocational Training Certificate Level I - Certificate IV

Among of the 33,061 respondents who participated in this research, about 1.6% who had already participated in one of the Certificate I - Certificate IV courses. Those who completed the certificate courses, 48.7% completed the Cert I course, 41.5% cert II, 12.5% cert III and 16.2% cert IV (Table 6). The predominant areas of the formation of Cert I - Cert IV are Computer Course, Portuguese Language, and English Language. Other areas of training represent very little. The data also show lack of qualifications in some areas, which requires more attention and investment (Table 6). However the investment of training of human resources should be adjusted with the local need. The data details of Certificate I training - Certificate IV can be seen in table 6.

Table 6. Number and areas of Certificate I-IV training by Sub District Administration

Municipality/ Sub District Administration	Total	Cert. (I)	Cert. II	Cert. III	Cert. IV	Training area requiring more attention
LIQUIÇA						
Total	530	258	120	66	86	<ul style="list-style-type: none"> ○ Physiotherapy / Massage
Computer	169	92	38	19	20	<ul style="list-style-type: none"> ○ Rural water supply
Portuguese Language	105	40	25	12	28	<ul style="list-style-type: none"> ○ Solar production
English Language	66	34	20	8	4	<ul style="list-style-type: none"> ○ Coffee production
Agriculture or Horticulture	19	9	3	2	5	<ul style="list-style-type: none"> ○ Hospitality (food production)
Information Technology (IT)	14	8	4	2	-	<ul style="list-style-type: none"> ○ Tourist and Tourist Guide
General Office Administration	10	5	1	1	3	<ul style="list-style-type: none"> ○ Training and evaluation
Carpentry	7	4	2	-	1	<ul style="list-style-type: none"> ○ (Diploma) in Training and Evaluation
Electricity	6	4	2	-	-	<ul style="list-style-type: none"> ○ Hair Stylist / Hairdresser
Public communication to the study of the public sector (SEFTEK);	4	1	-	3	-	<ul style="list-style-type: none"> ○ Aesthetic Course (Manicure and Pedicure)
Improve business	3	2	1	-	-	<ul style="list-style-type: none"> ○ Piano and music course
Hospitality Management (General)	3	2	-	-	1	<ul style="list-style-type: none"> ○ Painter of arts, paintings, tattoos
Financial Services (Micro Finance and Banking);	3	1	1	-	1	
Business Construction (General)	2	1	-	1	-	
Automotive and Maintenance	3	3	-	-	-	
Construction (General)	2	1	1	-	-	
Tailor / Seamstress	2	1	1	-	-	
Agriculture	2	1	1	-	-	
Training for Contractors	1	-	1	-	-	
Small machine	1	1	-	-	-	
Bricklayer	1	1	-	-	-	

Municipality/ Sub District Administration	Total	Cert. (I)	Cert. II	Cert. III	Cert. IV	Training area requiring more attention
Public Office Administration	1	1	-	-	-	
Welding	1	-	1	-	-	
Plumbing	1	1	-	-	-	
Photographer	1	-	1	-	-	
Police Investigation	1	-	-	1	-	
Management for Policy	1	-	-	1	-	
Che	1	1	-	-	-	
Fishing	1	-	1	-	-	
Others	99	44	16	16	23	
Bazartete						
Total	260	130	58	28	44	
Computer	92	47	24	10	11	
Portuguese language	56	24	8	6	18	
English Language	33	16	12	3	2	
Technological information	6	5	-	1	-	
Agriculture or Horticulture	6	1	2	1	2	
Carpentry	5	2	2	-	1	
General Office Administration	4	3	-	-	1	
Electricity	4	2	2	-	-	
Improve Business	2	1	1	-	-	
Hospitality Management (General)	2	2	-	-	-	
Automotive and Maintenance.	2	2	-	-	-	
Training for Contractors	1	-	1	-	-	
Small machine	1	1	-	-	-	
Public communication to the study of the public sector (SEFTEK);	1	-	-	1	-	
Bricklayer	1	1	-	-	-	
Public Office Administration	1	1	-	-	-	
Financial Services (Micro Finance and Banking);	1	1	-	-	-	
Construction (General)	1	1	-	-	-	
Automotive and Maintenance.	1	1	-	-	-	
Police Investigation.	1	-	-	1	-	
Tailor / Seamstress	1	1	-	-	-	
Culinary	1	1	-	-	-	

Municipality/ Sub District Administration	Total	Cert. (I)	Cert. II	Cert. III	Cert. IV	Training area requiring more attention
Agriculture	1	1	-	-	-	
Others	36	16	6	5	9	
Liquiça						
Total	139	71	32	20	16	
Computer	53	31	10	6	6	
Portuguese language	24	8	11	4	1	
English Language	16	10	3	2	1	
Agriculture / horticulture	6	3	-	1	2	
Public Office Administration	3	-	1	1	1	
Public communication to the study of the public sector (SEFTEK);	3	1	-	2	-	
Financial Services (Micro Finance and Banking);	2	-	1	-	1	
Improve business	1	1	-	-	-	
Business Construction (General)	1	1	-	-	-	
Technological information	1	1	-	-	-	
Welding	1	-	1	-	-	
Carpentry	1	1	-	-	-	
Agriculture	1	-	1	-	-	
Others	26	14	4	4	4	
Maubara						
Total	131	57	30	18	26	
Portuguese language	25	8	6	2	9	
Computer	24	14	4	3	3	
English Language	17	8	5	3	1	
Information Technology (IT)	7	2	4	1	-	
Agriculture or Horticulture	7	5	1	-	1	
Public Office Administration	3	2	-	-	1	
Electricity	2	2	-	-	-	
Hospitality Management (General)	1	-	-	-	1	
Business Construction (General)	1	-	-	1	-	
Construction (General)	1	-	1	-	-	
Plumbing	1	1	-	-	-	
Carpentry	1	1	-	-	-	
Photographer	1	-	1	-	-	

Municipality/ Sub District Administration	Total	Cert. (I)	Cert. II	Cert. III	Cert. IV	Training area requiring more attention
Management for Police	1	-	-	1	-	
Tailor / Seamstress	1	-	1	-	-	
Fishing	1	-	1	-	-	
Others	37	14	6	7	10	

2.6. Professional Occupations in the Public Sector

2.6.1. Permanent Public Servants

Table 7 shows that public servants and teachers are the main occupations of the public sector and together account for 81.5% of positions. 34.5% of teachers held their positions between 6 - 10 years, 32% more than 15 years, 21.6% between 11 - 15 years and less than 6 years corresponds to 11.7%. As for public servants, the data indicate that most maintained their services between 1-5 years and 6-10 years.

Table 7. Distribution of permanent public servant occupation and years of services

Occupation	<1 Year	1-5 Years	6 - 10 Years	11-15 Years	>15 Years	Total	Percentage (%)
Teachers	5	42	139	87	129	402	50,82
Public Servants	5	75	78	52	33	243	30,72
Doctor / Medical Specialist	-	21	2	2	7	32	4,05
Chief of Department	-	4	9	7	7	27	3,41
General Director	-	-	2	2	4	8	1,01
National Director	-	-	1	1	3	5	0,63
Public Defenders / Judges	-	1	1	1	1	4	0,51
Others	2	22	22	13	11	70	8,85
Total	12	165	254	165	195	791	100,00

As for the grade / level of respondents, the majority are in the positions between grade F (level 1, & 2) - grade C / level 5, together corresponds to 93.8%. The servants with level above 6 are very few, registering about 3.1% and those with special regime 3.02% (Table 8).

Table 8. Grade and Level of permanent public servants interviewed

Grade/ Level	Frequency	Percentage (%)
Grade A / Level 7	10	1,26
Grade B / Level 6	15	1,89
Grade C / Level 5	55	6,92
Grade D / Level 4	197	24,78
Grade E / Level 3	391	49,18
Grade F / Level 1, 2	103	12,96
Special Regime	24	3,02
Total	795	100,00

2.6.2. Temporary Public Servants

Table 9 shows temporary public servants by occupation and years of service. The occupational pattern is similar to the permanent public servants with the mastery of teachers and staff. Teachers and staff are those who have a high number of temporary public servant. Both represent 83.6% of the temporary public servant while hiring the specialized technicians only 1.7%. As for the standard of length of service is similar to permanent public servant, the highest proportion are those who have maintained the public servant between 1-5 years and 6-10 years and together represent 81.1% compared to those who maintained the service more than 10 years (5.4%).

Table 9. Distribution of temporary public servant by occupation and years of service.

Years of Services	Public servants	Specialized Technical	Teachers	Others	Total	Percentage (%)
<1 Year	17	1	11	5	34	11,6
1-5 Years	57	4	70	18	149	51,0
6 - 10 Years	38	-	35	15	88	30,1
11-15 Years	9	-	-	4	13	4,5
>15 Years	5	-	2	1	8	2,7
Total	126	5	118	43	292	100,0
Percentage (%)	43,2	1,7	40,4	14,7	100,0	

2.7. Level of Education of Temporary Public Servant

At the level of education, 58.1% of temporary public servant have a secondary level of education, Bachelor's Degree with 22.2%, Pre-secondary (7.6%), Diploma III (3.9%) and Primary (3.4%). Other levels of education have a percentage less than 3% (Table 10).

Table 10. Distribution of temporary public servants by levels of education

Education Level	Number of Public Servants	Percentage (%)
Primary	12	3,4
Pre-secondary	27	7,6
Secondary	207	58,1
Professional Technical High School	10	2,8
Others	4	1,1
Diploma I (DI)	1	0,3
Diploma II (DII)	1	0,3
Diploma III (DIII)	14	3,9
Diploma IV (DIV)	1	0,3
Bachelor degree (S1)	79	22,2
Master degree (S2)	-	0,0
PhD (S3)	-	0,0
Total	356	100,0

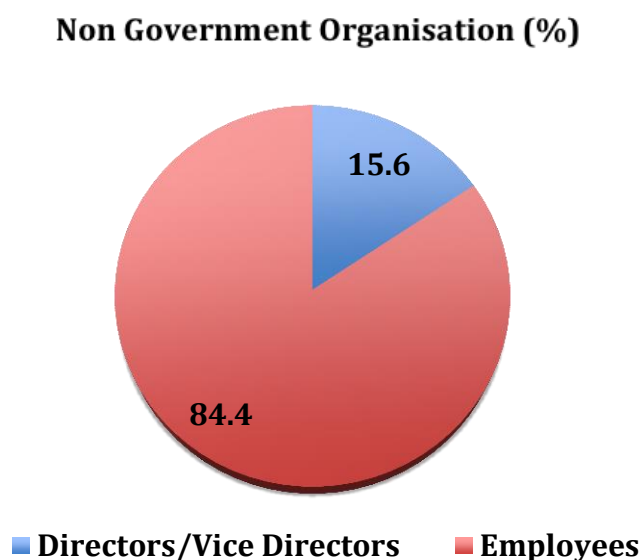
2.8. Non-Public Sectors (Private Sector)

The non-public sector (private sector) in Liquiça Municipality still remains small in compared to the public sector. This despite the growth of the non-public sector being one of the government's main goals and the majority of those who do not currently work have expressed their interest working in the non-public sector. However, despite the desire to work in the non-public sector, much of this work requires good educational qualifications. The result of this work provides several relevant evidence.

2.8.1. Non-Governmental Organizations (NGOs) and Private Universities

Figure 2 shows data for staff working in Non-Governmental Organizations (NGOs). among the 45 respondents, 15.6% hold positions as Director or Deputy Directors of the organizations and the highest 84.4% are employees.

Figure 2. Staff of Non-Governmental Organizations (NGOs) by position

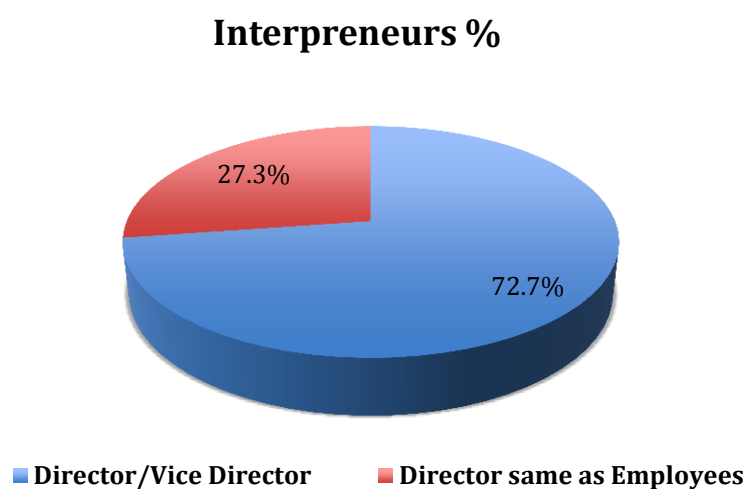


2.8.2. Interpreneurs or Businessman

Entrepreneurs play an important role through their investments, increasing the prosperity of the population in the municipality. Thus, citizens have the opportunity to take a job through investment, services and increased trade, in addition to the municipality grow economically. In this sense, it is fundamental to understand the human resources involved in this process and try to train them efficiently and effectively.

Figure 3 shows the distribution of the personnel involved in the company by level of education and by position in which it currently assumes. 72.7% of the respondents are employed as Director / Vices Directors and 27.3% assume function as Director simultaneously as an employee of the same company.

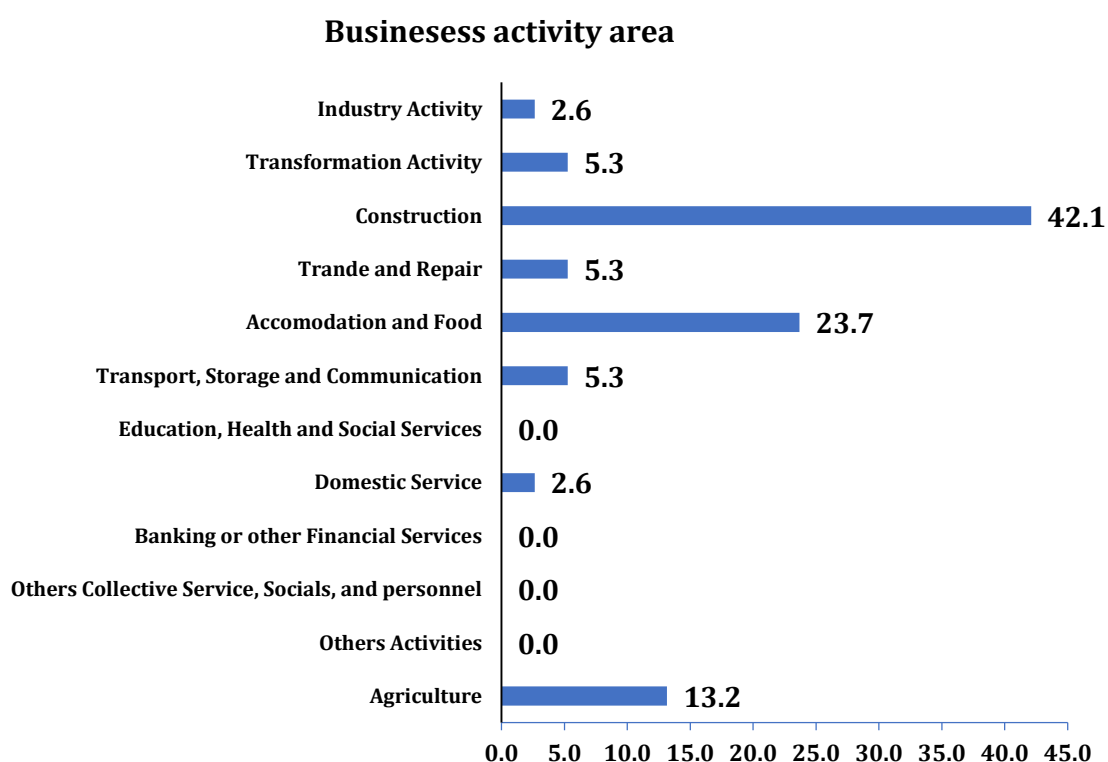
Figure 3. Distribution of entrepreneurs by position



2.8.3. Activity Sectors

The largest proportion of the companies areas of activity are related to Construction, Accommodation - Food and Agriculture. Other sectors of activity are less than 10% (Figure 4).

Figure 4. Distribution of the areas of entrepreneurs' activities



2.8.4. Education Level of Entrepreneurs

The data also show that most of the people involved have no level of education (62.5%), secondary education (13.5%), pre-secondary (9.5%) and basic education (8.1%). . Other levels of education have a percentage less than 5% (Table 11).

Analyzing the presence of entrepreneurs and their qualifications is essential for the growth of the Municipality of Liquiça. Increasing the level of education, the municipality inserts its citizens into a productive economy, giving them the opportunity to be entrepreneurs or innovators, through a good education. Thus, the presence of entrepreneurs and the trained of qualified employees are crucial for the municipality.

Table 11. Distribution of entrepreneurs and level of education

Level of Education	Number of entrepreneurs	Percentage (%)
Can not read / write	5975	62,5
Secondary	1288	13,5
Pre-secondary	905	9,5
Primary	774	8,1
Does not read / write (did not finish primary)	420	4,4
Bachelor's Degree (S1)	114	1,2
1 st . Cycle (1st Grade - 4th Grade)	55	0,6
Secondary School	20	0,2
Diploma III (DIII)	17	0,2
Secondary School Agriculture	11	0,1
Others	11	0,1
Secondary Technical School	8	0,1
2 ^o . Cycle (1st Grade, 2nd Grade)	7	0,1
3 ^o . Cycle (3rd Grade - 9th Grade / 3rd Grade)	7	0,1
Diploma I (DI)	3	0,0
Secondary School for Social Assistances	1	0,0
Diploma II (DII)	1	0,0
Master's Degree (S2)	1	0,0
Secondary School of Nursing	-	0,0
Secondary School of Sports	-	0,0
Diploma IV (DIV)	-	0,0
PhD (S3)	-	0,0
Total	9618	100,7

2.9. Preferred Working Areas

This data collection process also asked people aged 17 or over who never worked in what sector they wanted to work in and where they would like to work if they could get a job. The responses in table 12 show that the majority opted for the non-public sector (private sector) with 80.9% compared to the public sector 19.1%. The Sub District Administration of Liquiça has a higher percentage of individuals seeking employment in the non-public sector as well as in the public sector (Table 12).

Table 12. Number of total respondents in Liquiça Municipality looking for a job and intends to work in the public or private sector

Sub District Administrations	Public Sector	Percentage (%)	Private Sector	Percentage (%)	Total	Percentage (%)
Bazartete	132	10,6	1828	34,6	1960	30,1
Liquiça	1019	82,0	2005	38,0	3024	46,4
Maubara	92	7,4	1444	27,4	1536	23,6
Total	1243	100,0	5277	100,0	6520	100,0

2.10. Business Sector preference to work in

Table 13 indicates that, in the private sector, the preference is mainly for agriculture (55.4%), household tasks (16.3%) and construction (5.9%). Other sectors of activity have a percentage less than 5%.

Table 13. Distribution of areas of activity where respondents wish to work

Activity Sectors	Sub District Administrations			Total	Percentage (%)
	Bazartete	Liquiça	Maubara		
Agriculture	1,258	2,386	1,228	4,872	55,4
Industry Activity	143	148	30	321	3,7
Transformation industry	52	127	14	193	2,2
Construction	217	265	33	515	5,9
Trade and repair	125	160	38	323	3,7
Accommodation and Food	94	61	54	209	2,4
Transport, Storage and Communication	103	32	15	150	1,7
Education, Health and Social Work	288	63	26	377	4,3
Domestic Service	387	507	538	1432	16,3
Bank or other financial services	33	33	20	86	1,0
Other collective, social and personal services	45	198	37	280	3,2
Other activities	7	21	4	32	0,4
Total	2,752	4,001	2,037	8,790	100
Percentage (%)	31,3	45,5	23,2	100,0	

2.11. Age group of respondents who are looking for a job

Regarding the age group, the largest number of respondents seeking employment are young people aged between 17-36 years, representing about 71.4% (Table 14).

Table 14. Age group of respondents who are looking for a job

Age Group	Public Sector	Percentage (%)
17 - 20	539	10,2
21 - 24	880	16,7
25 - 28	931	17,6
29 - 32	840	15,9
33 - 36	582	11,0
37 - 40	272	5,2
41 - 44	335	6,3
45 - 48	274	5,2
49 - 52	145	2,7
53 - 56	111	2,1

Age Group	Public Sector	Percentage (%)
57 - 60	92	1,7
61- 64	72	1,4
65+	204	3,9

2.12. Graduates in job search "Unemployment"

The data also provide information on the number and qualifications of people with higher education in job search (Table 15). The figure shows that among the 102 graduates respondents, 66.7% intend to work in the public sector and 34.3% intend to work in the non-public (private) sector. Graduates intend to work more in the public sector than in the private sector.

The areas of higher education courses with the highest number of graduates looking for employment "Unemployment" in the areas of Law, Civil Engineering - Civil Construction, Engineering Industry, Management and Human Resources Management. Graduates in other areas are less than 5%, so this data is critical for municipal officials, employers and other employers to know how to take advantage and employ them.

Table 15. Number and areas of knowledge of higher education courses in job search and where wish to work.

Nu.	Study Program or Area of Especialization	Do not work and want to work?		Total	Percentage (%)
		Public Sector	Non- Public Sector		
1	Law	6	1	7	6,9
2	Civil Engineering - Civil Construction	4	2	6	5,9
3	Industry Engineering	5	1	6	5,9
4	Management	2	4	6	5,9
5	Human resource Management	5	1	6	5,9
6	Private Law	3	2	5	4,9
7	Medical (General)	4	1	5	4,9
8	Public Health	1	3	4	3,9
9	Agronomy	2	1	3	2,9

Nu.	Study Program or Area of Especialization	Do not work and want to work?		Total	Percentage (%)
		Public Sector	Non- Public Sector		
10	Computer Technology Engineering	3	-	3	2,9
11	Accounting	2	1	3	2,9
12	Business Administration	2	1	3	2,9
13	Mathematics	2	-	2	2,0
14	Pharmacology	2	-	2	2,0
15	Mining engineering	-	2	2	2,0
16	Philosophy	-	2	2	2,0
17	Theology	1	1	2	2,0
18	Agro-business	2	-	2	2,0
19	Animal Production (Livestock)	-	2	2	2,0
20	Food Technology	1	1	2	2,0
21	Teaching Mathematics	2	-	2	2,0
22	Education Sociology	-	2	2	2,0
23	Teacher Training	2	-	2	2,0
24	Chemistry	-	1	1	1,0
25	Genetics	-	1	1	1,0
26	Immunology	1	-	1	1,0
27	Architecture Engineering	1	-	1	1,0
28	Pediatric Surgery Specialist	1	-	1	1,0
29	Public Law	1	-	1	1,0
30	Education	1	-	1	1,0
31	Computer Science	-	1	1	1,0
32	Geology	1	-	1	1,0
33	Transportation Engineering and Telecommunication	1	-	1	1,0
34	Nursing	1	-	1	1,0
35	Pharmacy	1	-	1	1,0
36	Midwife	-	1	1	1,0
37	Marine Fishing Resources	1	-	1	1,0
38	Fishing engineering	1	-	1	1,0
39	Industrial Economics	1	-	1	1,0
40	Communication - Journalism and Publishing	1	-	1	1,0

Nu.	Study Program or Area of Especialization	Do not work and want to work?		Total	Percentage (%)
		Public Sector	Non- Public Sector		
41	Domestic Economy	1	-	1	1,0
42	Teaching Biology	-	1	1	1,0
43	Teaching Physics	1	-	1	1,0
44	Teaching Chemistry	-	1	1	1,0
45	Politic Education	1	-	1	1,0
46	Pre-primary and Primary Education	1	-	1	1,0
Total		68	34	102	100

2.13. Number and areas of study of students who are currently attending courses

Table 16 shows the number of students surveyed in Liquiça Municipality who are currently attending higher education in different study programs. The numbers show that some areas of study, where their graduates have more "unemployment" (Table 15), still remain areas with higher numbers of students (Table 16). It is hoped that with the decentralization of local power that will be implemented by the government and the development of the private sector in the municipality there will be opportunities to absorb the graduates in the labor market. If this does not happen, it may possibly increase the number of job seekers in particular in the areas identified above in table 15.

Table 16. Distribution of the number of students who are currently attending courses in higher education

Nu.	Study Areas	Frequency	Percentage (%)
1	Management	73	13,3
2	Civil Engineering - Civil Construction	34	6,2
3	Public health	32	5,9
4	Computer technology engineering	30	5,5
5	Portuguese language	29	5,3
6	Education	27	4,9
7	Law	20	3,7

Nu.	Study Areas	Frequency	Percentage (%)
8	Economy of Finance or management of finances - Banking Economics	19	3,5
9	Agronomy	18	3,3
10	Tourism and Hospitality	17	3,1
11	International, Bilateral and Multilateral Relations	17	3,1
12	Accounting	16	2,9
13	English language	12	2,2
14	Development Study	12	2,2
15	Mining Engineering	11	2,0
16	Medical Doctor - Medical Practice (General Practitioner)	11	2,0
17	Architecture Engineering	8	1,5
18	Public Law	8	1,5
19	Animal Production (Livestock)	8	1,5
20	Public policy	8	1,5
21	Mathematics	7	1,3
22	Chemistry	7	1,3
23	Sociology	7	1,3
24	Engineering Industry	7	1,3
25	Computer science	6	1,1
26	Human Resource Economics	6	1,1
27	Public Administration	5	0,9
28	Agricultural Engineering	4	0,7
29	Philosophy	4	0,7
30	Political Science	4	0,7
31	Geology	4	0,7
32	Nursing	4	0,7
33	Midwife	4	0,7
34	Communication - Journalism and Publishing	4	0,7
35	Government Science	4	0,7
36	General - Environmental Biology	3	0,5
37	Mechanical Engineering	3	0,5
38	Specialist Gastroenterology Surgery	3	0,5
39	Physical Education or Sports Education	3	0,5

Nu.	Study Areas	Frequency	Percentage (%)
40	Economy - Cooperativa - Mercado	3	0,5
41	Computer Management	3	0,5
42	Teaching Mathematics	3	0,5
43	Physics	2	0,4
44	Electrical Engineering	2	0,4
45	Environmental Health	2	0,4
46	Aquaculture	2	0,4
47	Government Planning and Policy	2	0,4
48	Teaching biology	2	0,4
49	Study of Peace	2	0,4
50	Teacher training	2	0,4
51	Geosciences	1	0,2
52	Environmental Ecology	1	0,2
53	Anesthetist	1	0,2
54	Forest Resources and Forestry Engineering	1	0,2
55	Food Science and Technology	1	0,2
56	Religious Career	1	0,2
57	Statistic	1	0,2
58	Agro-business	1	0,2
59	Agricultural Product Processing Engineering	1	0,2
60	Fishing Engineering	1	0,2
61	Food Technology	1	0,2
62	Economics of education	1	0,2
63	Business Administration	1	0,2
64	Education Sociology	1	0,2
65	Theater	1	0,2
66	Tetum language	1	0,2
67	Educational Technology	1	0,2
68	Training of Primary and Pre-Secondary Teachers	1	0,2
69	Others	5	0,9
Total		547	100,0

2.14. Year the course ends

Regarding the estimation of the number of higher education students who will graduate or finish their courses in the next 6 years, the data in Table 17 shows that the areas of Management, Civil Engineering - Civil Construction, Portuguese Language, Engineering, Technology informatics, Public Health and Education are the ones that have the most graduation numbers. Other areas have few graduation numbers per year so it is important to highlight the need to anticipate not to contribute more to the number of unemployed graduates.

Table 17. Distribution of the number of students who are currently attending the courses and prediction of the year in which the course will end.

Areas of Study	Year the course ends							Total
	2017	2018	2019	2020	2021	2022	2023	
Management	23	9	13	11	1	-	-	57
Civil Engineering - Civil Construction	11	8	4	10	-	-	-	33
Portuguese language	11	6	6	3	2	1	-	29
Computer Technology Engineering	3	10	5	6	2	-	-	26
Public Health	9	5	5	1	2	-	-	22
Education	5	3	3	6	3	-	-	20
Economics of Finance or Financial Management - Banking Economics	8	3	3	4	-	-	-	18
Agronomy	4	3	3	5	-	-	-	15
Tourism and Hospitality	3	6	1	2	2	1	-	15
International, Bilateral and Multilateral Relations	5	3	3	1	2	-	-	14
Law	4	3	2	-	3	-	-	12
Mining Engineering	1	3	4	1	1	-	-	10
Medical Doctor - Medical Practice (General Practitioner)	2	3	2	1	1	-	1	10
Development Study	3	3	2	2	-	-	-	10
Accounting	1	3	2	3	-	1	-	10
English Language	4	3	-	-	1	-	-	8
Animal Production (Livestock)	2	1	1	4	-	-	-	8

Areas of Study	Year the course ends							Total
	2017	2018	2019	2020	2021	2022	2023	
Public policy	1	3	1	2	1	-	-	8
Chemistry	-	3	1	-	3	-	-	7
Engineering Architecture	2	-	2	3	-	-	-	7
Public Law	3	1	1	1	1	-	-	7
Mathematics	1	3	-	1	1	-	-	6
Sociology	1	4	-	1	-	-	-	6
Computer science	3	1	2	-	-	-	-	6
Philosophy	1	-	2	1	-	-	-	4
Political Science	2	1	-	1	-	-	-	4
Nursing	1	-	1	2	-	-	-	4
Midwife	1	1	1	1	-	-	-	4
Governmental Sciences	1	1	2	-	-	-	-	4
General Environmental Biology	1	-	-	1	1	-	-	3
Mechanical Engineering	2	1	-	-	-	-	-	3
Specialist Gastroenterology Surgery	1	2	-	-	-	-	-	3
Agricultural Engineering	2	-	1	-	-	-	-	3
Geology	1	2	-	-	-	-	-	3
Engineering Industry	2	-	1	-	-	-	-	3
Public Administration	1	-	1	1	-	-	-	3
Human Resource Economics	1	1	-	1	-	-	-	3
Communication - Journalism and Publishing	1	-	1	1	-	-	-	3
Teaching Mathematics	1	1	1	-	-	-	-	3
Physics	-	-	1	1	-	-	-	2
Electrical Engineering	-	1	1	-	-	-	-	2
Others	1	-	1	-	-	-	-	2
Physical Education or Sports Education	1	-	-	-	1	-	-	2
Economy – Cooperative Marketing	-	-	1	1	-	-	-	2
Computer Management	-	1	-	1	-	-	-	2
Teaching Biology	1	-	-	1	-	-	-	2
Study of Peace	1	-	1	-	-	-	-	2
Teacher Training	1	-	-	1	-	-	-	2
Geosciences	-	-	-	1	-	-	-	1

Areas of Study	Year the course ends							Total
	2017	2018	2019	2020	2021	2022	2023	
Environmental Ecology	1	-	-	-	-	-	-	1
Forest Resources and Forestry Engineering	-	-	-	1	-	-	-	1
Statistic	-	1	-	-	-	-	-	1
Environmental Health	-	-	-	-	1	-	-	1
Others	-	1	-	-	-	-	-	1
Agro-Business	1	-	-	-	-	-	-	1
Agricultural Product Processing Engineering	1	-	-	-	-	-	-	1
Aquaculture	1	-	-	-	-	-	-	1
Fishing Engineering	1	-	-	-	-	-	-	1
Food Technology	-	-	1	-	-	-	-	1
Government Planning and Policy	-	-	1	-	-	-	-	1
Economics of education	-	-	-	1	-	-	-	1
Business Administration	1	-	-	-	-	-	-	1
Theater	-	1	-	-	-	-	-	1
Others	1	-	-	-	-	-	-	1
Tetum Language	-	-	-	-	1	-	-	1
Educational Technology	-	1	-	-	-	-	-	1
Training of primary school teachers and pre-secondary education	-	-	-	1	-	-	-	1
Total	141	106	84	86	30	3	1	451

2.15. The demand of training for personal and institutional

2.15.1. Training in areas of generic and specialized competences

One of the fundamental results of this work is that the data show a considerable level of professional development activity in several training areas in Liquiça Municipality. Table 18 below indicates the size of the professional development training performed by training area and the duration of the course. In response to this question, respondents were asked to select up to three options for the courses taken, so the table refers to the number of courses taken and not to trainees.

The 2,458 respondents represent a substantial level of training activity, since 46.5% have a duration of 1 - 6 months, 46.3% less than one month and 7.2% have been for more than 6 months. It is also notable that the main courses were in the areas of Leadership, Finance and Planning. Other areas of training have a percentage of less than 10%. There are no indications of training in areas considered as priority areas for the municipality of Liquiça, such as agriculture, construction and hospitality and tourism.

Table 18. Professional development courses carried out by training area and duration of the course.

Training Areas	Duration				Total	Percentage (%)
	Less than 1 Month	1 - 6 Months	7 Months-1 year	More than 1 year		
Leadership	324	228	23	20	595	24,2
Business	167	165	15	12	359	14,6
Planning	152	126	15	10	303	12,3
Management	90	79	10	6	185	7,5
Human Resources	93	107	5	8	213	8,7
Information Technology (IT)	67	161	4	6	238	9,7
Procurement and Logistics	27	37	3	3	70	2,8
Administration	89	105	18	5	217	8,8
Information System and Business Management	51	36	1	1	89	3,6
Media and Public Relations	9	4	-	-	13	0,5
Specialized Technician	27	28	2	2	59	2,4
Others	47	62	5	3	117	4,8
Total	1,143	1,138	101	76	2,458	100,0
Percentage (%)	46,5	46,3	4,1	3,1	100,0	

2.15.2. Languages Training

Table 19 shows the proportion of vocational training in language areas and the duration of the course. There are a remarkable number of people who have already taken part in a language course. As expected, the Portuguese language as the official language has the participation with the highest percentage (59.7%) followed by the English language with 31%. The Tetum language has a

participation of 5.6% of the respondents and other languages with a participation of less than 3%. 77.9% of the courses have duration between 1 - 6 months, 3.5% less than one month and 18.6% more than 7 months. The Portuguese language and English language courses are the main courses conducted by respondents in Liquiça Municipality.

Table 19. Language training and course duration

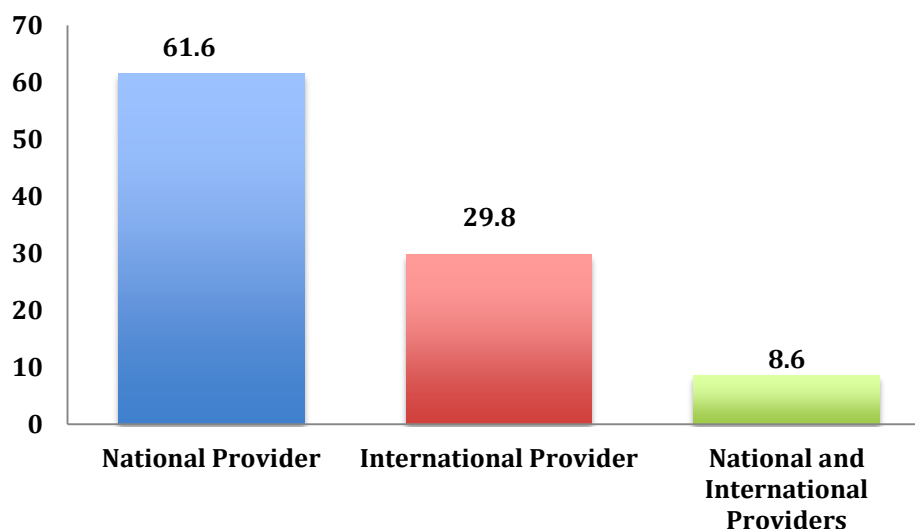
Type of Trainings	Duration				Total	Percentage (%)
	Less than 1 month	1 - 6 Months	7 Months- 1 Year	More than 1 year		
Portuguese	46	1202	139	149	1536	59,7
English	30	656	64	47	797	31,0
Tetum	7	85	25	27	144	5,6
Indonesia	3	29	10	15	57	2,2
Korea	1	19	-	-	20	0,8
Others	2	15	3	-	20	0,8
Total	89	2006	241	238	2574	100,0
Percentage (%)	3,5	77,9	9,4	9,2	100,0	

2.16. Institution Provider and Financing

As for the institutions that provide language training, 61.6% of the training providers are national institutions, 29.8% provided by foreign institutions and 8.6% promoted by national and foreign institutions (Figure 5).

Figure 5. Institution Provider and Language Training

Who are the Training Provider ? (%)



2.17. Training Financing

Among the total number of respondents who have already done the language training, 58.6% was financed by the trainee himself, by the government 23.2% and the training supported by the private sector 10.9%. Training with government support in cooperation with international partners and only by international partners accounts for 5.3% and 2.0%, respectively (Table 20).

Table 20. Funders of language training

Sub District Administrations	Government	Private Sector	Self Account	Government and International Partners	International Partners	Total
Bazartete	246	146	486	53	10	941
Liquiça	143	54	596	33	25	851
Maubara	140	49	252	35	10	486
Total	529	249	1334	121	45	2278
Percentage (%)	23,2	10,9	58,6	5,3	2,0	100,0

2.18. Future Training Plan

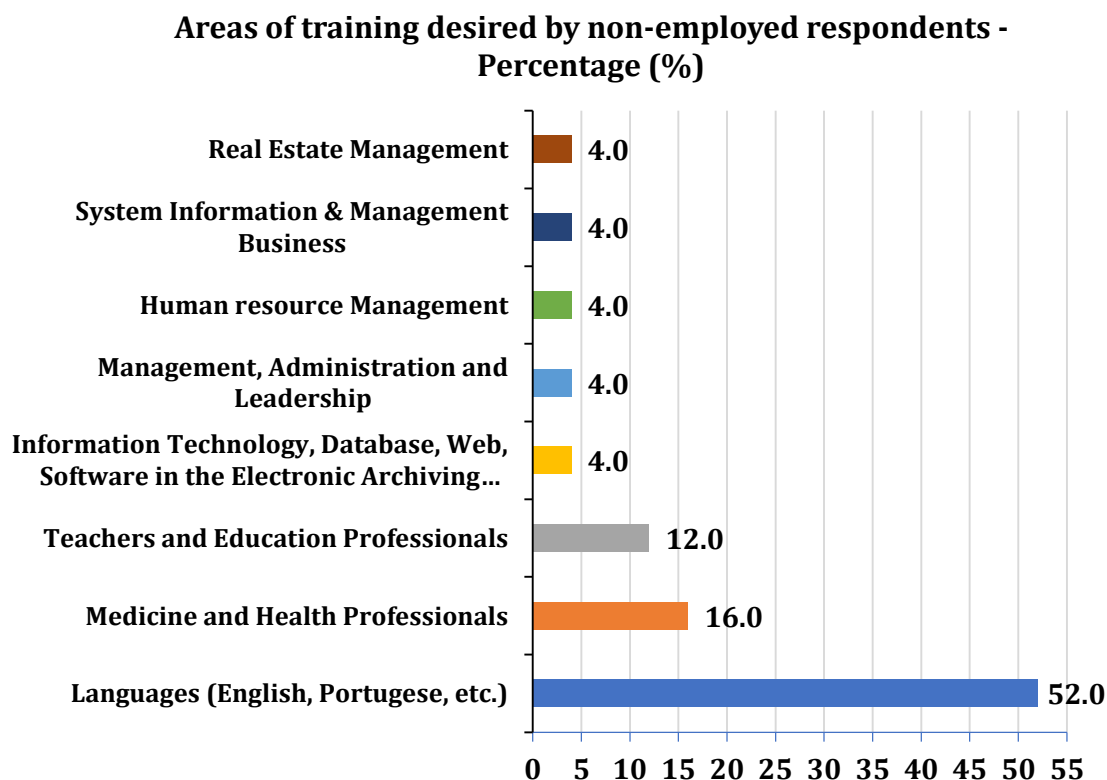
2.18.1. Personal Development Training

The training plan for the future desired by the respondents was also the subject of an investigation in this work. In order for the training to generate capital gains, it is necessary to respond to the needs of the municipality and, consequently, the needs of the trainees themselves. For this, it is important to make a study of the training needs, before starting the investment. The study of training needs is one of the most common ways to identify the needs of the municipality, since it allows, on the one hand, to see if the training is the answer to the problems and, on the other hand, to identify which type of training which serves to fill them. In addition, it allows identifying the individual training needs, particularly those that do not yet have and are seeking employment.

In the context of the desire for training for the future, two questions were asked for those who are not yet employed or looking for a job and those who are already employed in the public or non-public sector. In relation to the first, they asked what type of training they want to do in order to increase their personal skills, to obtain a greater job opportunity and to facilitate their job search. The data in Figure 6 shows that the majority of respondents wish to raise their knowledge in Languages (English, Portuguese), Medicine and Health Professionals and Teachers and Education Professionals.

The longing for training in specific areas such as agriculture, tourism, fisheries, livestock, in industries was found in few respondents compared to generic training areas. This is due, of course, to the lower number of employees in this area and a lack of knowledge on the part of respondents about the importance of training for self-employment. It is found that training to broaden general knowledge are more preferred compared to specialized areas.

Figure 6. Areas of training desired by non-employed respondents



2.18.2. Development training and institutional strengthening

As regards the second question - the personal development training and institutional or organizational strengthening applied to the employed respondents, the data in Table 21 shows that the areas of training such as Languages (English, Portuguese) and Teacher and Professional Training of education are areas of higher preference desired by respondents while in other training areas the desire was less than 10% (Table 21).

Table 21. Training areas desired by non-employed respondents

Nu.	Area of Training	Frequency	Percentage (%)
1	Languages (English, Portuguese, etc.)	77	25,6
2	Teachers and Education Professionals	77	25,6
3	Management, Administration and Leadership	21	7,0
4	Varieties *	21	7,0
5	Medicine and Health Professionals	18	6,0
6	Information Technology (IT), Database, Web, Software and Electronic Filing (registration) – computer	17	5,6

Nu.	Area of Training	Frequency	Percentage (%)
7	Finance, Budget, Accounting and Planning	17	5,6
8	Police, Defense, Security (employee training)	16	5,3
9	Human resource Management	10	3,3
10	Agriculture	8	2,7
11	Production of Livestock	5	1,7
12	Information System & Business Management;	4	1,3
13	Mediation Technique, Conflict Analysis, Conciliation and Sensitive Cases	2	0,7
14	Professional, Research and Development Knowledge (based on the operating sector)	2	0,7
15	General Skills Development- Induction	1	0,3
16	Training of trainers	1	0,3
17	Law and Justice	1	0,3
18	Procurement, Logistics and Estate Management	1	0,3
19	Fisheries	1	0,3
20	Hospitality and Tourism	1	0,3
Total		301	100,0

*) Areas that by their nature could not be classified in a category of their own. This category includes all data that could not be integrated into any of the training categories, as well as very specific training.

2.19. Category and Academic Degree of Training

2.19.1. Vocational/Academic Training

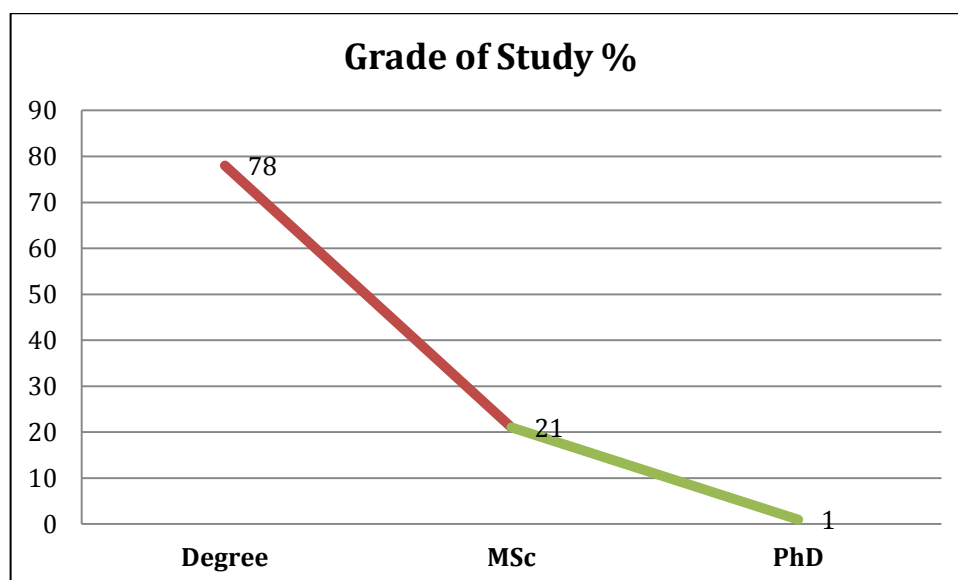
When asked about the category of training, out of the total of 4,423 respondents, 72.1% of the respondents intend to develop their knowledge through the vocational or professional training course and 27.9% in the academic - higher education course (Table 22). The Subdistrict Administrative of Liquiça has a larger number of those who wish to have vocational or professional training.

Table 22. Training category - Academic or Vocational Training

Sub District Administration	Academic / Universitary	Vocational/ professional Training	Total
Bazartete	504	1067	1571
Liquiça	443	1772	2215
Maubara	285	352	637
Total	1,232	3,191	4,423
Percentage (%)	27,9	72,1	100

Among of the 1,232 (27.9%) respondents who wish to take the course in higher education, 78% plan to increase their knowledge in the Bachelor's degree (S1), 21% Master degree (S2) and 1% PhD (S3) (Figure 7).

Figure 7. Grade of studies that wish to pursue



The details of the training areas and the academic degrees desired can be seen in table 23.

Table 23. Academic degrees and areas of study that wish to pursue

Nu.	Areas of study	Academic level courses (University)			Total
		Bachelor (S1)	Master's Degree (S2)	PhD (S3)	
1	Professional, Research and Development Knowledge (based on the operating sector)	25	5	-	30
2	Varieties *	22	4	-	26
3	Languages (English, Portuguese, etc.)	8	2	-	10
4	Management, Administration and Leadership	5	2	-	7
5	Medicine and Health Professionals	4	1	-	5
6	Fisheries	3	2	-	5
7	Information Technology (IT), Database, Web, Software and Electronic Filing (registration) – computer	1	2	1	4
8	Marketing, Communication, Journalism and Media	3	-	-	3
9	Law and Justice	2	-	-	2
10	Monitoring and Evaluation	2	-	-	2
11	Production of Livestock	1	1	-	2
12	Finance, Budget, Accounting and Planning	1	-	-	1
13	Mediation Technique, Conflict Analysis, Conciliation and Sensitive Cases	-	1	-	1
14	Training of trainers	-	1	-	1
15	Information System & Business Management;	1	-	-	1
Total		78	21	1	100
Percentage (%)		78,0	21,0	1,0	100,0

*) Areas that by their nature could not be classified in a category of their own. This category includes all data that could not be integrated into any of the training categories, as well as very specific training.

3. Development of Human Resources within the Strategic Development Plan of the Municipality

3.1. The four pillars of the Municipality's Strategic Plan (PEM)

The Liquiça Municipality Strategic Plan (*PEM*), aligned with the Timor-Leste Government's Strategic Development Plan for 2011-2030, aims to promote the progress and sustainable development of the territory, defining strategies and guidelines, creating conditions of competitiveness, innovation and modernity, ensuring the public interest through an efficient, transparent and rigorous management and allocation of resources. Like the PEDN, the PEM is built around four pillars:

- i. 1). Social capital: health, education and social protection.
- ii. 2). Infrastructure: transport, telecommunications, energy and water supply and sanitation.
- iii. 3). Economic fundamentals: targeting three sectors for development - agriculture, tourism and petrochemicals - to generate growth, jobs and new sources of public revenue beyond oil.
- iv. 4). Institutional framework: focus on macroeconomic management and improvement of the capacity and effectiveness of government institutions.

The development of the municipality's human resources must take into account these four pillars and also the current situation of the economy and society as a whole. In addressing key human resource developments, this section builds on the four pillars and begins with a summary of the municipality's economic structure and the recent growth in various sectors.

The Liquiça Municipality identified the following needs for generic training areas in order to develop the capacity and competence of its human resources to implement its strategic priority programs and municipal development, in line with the strategic development objectives.

Social Capital (health, education and social protection)	
Education and Training	<ol style="list-style-type: none"> 1. To build, equip and maintain pre-school education establishments, primary and secondary schools guaranteeing the development and requalification of the school park in the municipality and conditions for the quality training of Liquiça youth. 2. Ensure that children 3 to 5 years old are enrolled in quality preschool. 3. Ensure quality basic education. 4. Establish general rules for primary and secondary schools. 5. Support the development of complementary activities of educational action in pre-school education and primary to secondary education promoting and integrating initiatives in the area of culture, art and sports, among others. 6. Assuring also the conditions for the teaching of students with special needs with the introduction of sign language among other supports. 7. Participate in the support for out-of-school education by creating a mobile library service that can take reading and culture to the most remote and isolated places in the territory, serving all citizens. 8. To manage non-teaching staff in pre-school and primary education by training them for their support and follow-up functions. 9. Ensure the creation and management of cafeterias of pre-school and basic education establishments under a direct or concession regime, guaranteeing a quality service and a careful diet for young students attending the schools of the municipality. 10. Approve and implement the municipal plan for recurrent education,

	<p>guaranteeing the population's literacy also for dropping out of school.</p> <ol style="list-style-type: none"> 11. Establish technical schools and their training plans. 12. Build new school infrastructure for the addition of equipped classrooms. 13. Provide scholarships for students, young people and civil servants who have the capacity, namely in the area of science and education.
Health	<p>In the Health sector, Liquiça Municipality identified the programs of training priorities, categorizing them into two areas, training programs for employees and scholarships for medical professionals. The programs are listed below:</p> <ol style="list-style-type: none"> 1) Ensure access to quality health care for all citizens 2) Training program in the development of knowledge in the area of the Promotion of Mother and Child Health and Family Planning 3) Develop the SISCAs program 4) TBC and MHRs elimination program 5) Training in hospital nursing management 6) Allocate health personnel, such as midwives and nurses in each village. 7) Control general hygiene and health in the public area (restaurant, market, shop, etc.) 8) To build, rehabilitate and maintain the infrastructure of health posts.
Social Protection (Inclusion)	<ol style="list-style-type: none"> 1. Increase people's capacity through peacebuilding and social cohesion, improve technical assistance, and increase people's capacity to support domestic violence centers by providing effective and available support to participate in various related areas (Training in resolution conflict formation, conflict awareness training, training in monitoring and evaluation, training in dialogue and mediation and among others) and lastly gender equality

	<p>training.</p> <ol style="list-style-type: none"> 2. Identify people in need and provide social assistance. 3. Provide social security for the people with disability, the elderly, widows and orphans. 4. Implement a food aid program for the needy. 5. Provide social benefit to combat veterans of liberation, national independence and rewards to their families. 6. Establish social housing for the elderly and people with disability
<p>Youth and Sport</p>	<ol style="list-style-type: none"> 1) Rehabilitate the soccer field, volleyball and basketball in full. 2) Establish sports facilities at each Sub District Administration 3) Establish a sports federation for the selection of the best players in the various competitions at the national and municipal levels.
<p>Environment</p>	<ol style="list-style-type: none"> 1. To promote people's knowledge in the areas of climate change and biodiversity, pollution control, environmental impact analysis, waste recycling and improve service centers in the area of climate change at municipal level and Sub District Administrations. 2. Establish regulations for the protection of the environment and traditions in each village. 3. Protect environment to anticipate or avoid the possibility of landslide in the rainy season and also forest fires in the dry season. 4. Protection of flora and fauna

Floresty	<ol style="list-style-type: none"> 1) Socialize information to the community about the importance and benefits of the forest 2) Create local regulations to regulate illegal logging and hunting of wild animals
Culture and Haritage	<ol style="list-style-type: none"> 1) Provide knowledge in the area of cultural arts and creative industries, museum development and libraries, identification and rehabilitation of cultural heritage. 2) Develop culture as original identity and national unity. 3) Establish cultural center for the presentations of songs and dances for the municipal festivals. 4) Establish a cultural institution at the municipal level for the development of identity and science.
<p>Infrastructure (transport, telecommunications, energy and water supply and sanitation).</p> <p>In the area of Infrastructure, the Liquiça Municipality identified the following priority training programs:</p>	
Road and Bridges	<ol style="list-style-type: none"> 1. Rural and Urban Roads Development Program 2. Roads Maintenance Program 3. Housing and Buildings Development Program 4. Establish, rehabilitate and maintain drainage 5. Establish, rehabilitate and maintain parks or urban gardens 6. Check the conditions of the roads as well as the rules of public transport.
Water and Sanitation	<ol style="list-style-type: none"> 1. Rural and Urban Drinking Water Development Program 2. Potable Water Maintenance and Facility Program (Urban and Rural)

	<ol style="list-style-type: none"> 3. Basic Sanitation Program and its facilities 4. Program System Drinking water supply, including the installation of hydrometer with list of water use for the general public 5. Drinking water plan program 6. Human Resources Management Program
Eletricity	<ol style="list-style-type: none"> 1. Program Installing electricity in rural and urban áreas 2. Electricity Maintenance Program (Protection and Maintenance of power distribution lines) 3. Prepaid system program 4. City Street Lighting Program 5. Ensure adequate and sustainable supply of electricity to the community.
Maritime Port	<ol style="list-style-type: none"> 1. Maritime Port Development Program in Liquiça 2. Maritime Transport Management Program for trade, oil and fisheries. 3. Program port security and establish customs. 4. Enable and manage the maritime port as a center of transaction of products for import and export. 5. Involve and regulate the use of seaport.
Comunication and Telecomunication	<ol style="list-style-type: none"> 1. Establish, rehabilitate and maintain the land transport terminals in the municipality of Liquiça 2. To establish a system of management of transport terminals 3. Establish regulations for the use of

	<p>terminal transport facilities</p> <ol style="list-style-type: none"> 4. Telecommunications network in rural areas in urban áreas 5. Ensure that the community has access to quality telecommunications and cheap price 6. Develop a modernization program for public administration with a computer technology system.
Economic fundamentals - targeting three sectors for development - agriculture, tourism, rural development and the private sector.	
Rural Desenvolvimento	<ol style="list-style-type: none"> 1. Construct the rural Extracts 2..Building drinking water in rural areas 3.Building the Rural Market 4.Building Rural Electricity 5.Build Rural Health Post 6.Small Industries Development Program
Agriculture	<ol style="list-style-type: none"> 1. Improve River Loes irrigation to increase rice and maize production to ensure food security 2. Introduce methods and irrigation systems according to existing and diversified crops for rice production, corn grains in Suco Faulara, Lisadila, Guiço, Vatuboro and Ermeta. 3. Provide assistance and initiatives to increase production and promote groups of farmers in Suco Leorema (Ecapo), Suco Motaulun (village Classo), Suco Vaviquinia, Suco Maubaralisa (Barcão); 4. Provide the help and maintenance, and give the value of fruit production to the juice or soft drink industry. 5. Implementation of reforestation activities according to existing systems in forest agencies involving communities, students, youth groups, cooperative groups, local and national NGOs.

<p>Tourism</p>	<ol style="list-style-type: none"> 6. Rehabilitate the coffee industry in the village Darulate (Pahata), Maubaralisa (Malae Mate), Gugleur (Vilavista) and Hatuquesi (Dauberkala) 7. Establish agricultural and breeding centers, such as poultry, pork, buffalo for the production of cow's milk. 8. Implement a quality development plan to increase the amount of coffee production and rehabilitate old coffee. 9. Extend spaces for horticultural production, which will be a potential daily activity and will create jobs for the communities and earn money to improve the family economy. 10. Reforestation periodically in coffee production sites. 11. Livestock - Poultry breeding program and dairy cow production 12. Forest Plants and Industry 13. Food Production (Agriculture) 14. Comparative study program in Agriculture <ol style="list-style-type: none"> 1. Survey Program and conduct research for historical sites of culture 2. Program historical and customary protection and development through the creation of regulation 3. Training in tourism, hospitality and English for young people who become translators by providing information on the condition of tourism in the municipality of Liquiça. 4. Provide information to relevant institutions, such as the Ministry of Tourism Art and Culture, electronic media journals to attract tourism to visit the municipality of Liquiça. 5. Promote lagoon ecotourism in the village of Vatuvou from the Sub District
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Private Sector	<p>Administration of Maubara, the waterfall Maumrai in the village of Metagou and the waterfall Ecapo which lies between village Leorema and Darulete.</p> <p>6. Protect and conserve the riches of the historical memorials in the colonial Ruins, in the old aipelu prison, in the old Sub District Administration of Boebau, in the old residence of Pahata, Portaleza Holanda Maubara</p> <p>7. Creating employment opportunities for young people working in the area of tourism and hospitality</p> <p>1) Development of the cooperative sector</p> <p>2) Increase knowledge and train employees in the following areas:</p> <ul style="list-style-type: none"> ○ Strategies to develop the cooperative sector; ○ Training of trainers in the area of cooperatives; ○ Training in management of cooperatives; ○ Training in audit of cooperatives; ○ Formation in decrees-law and statute of the cooperative society. <p>3) Development of micro and small enterprises</p> <p>4) Increase knowledge in micro and small businesses to support entrepreneurs in running their business in the future:</p> <ul style="list-style-type: none"> ○ Training of SME trainers; ○ Training in accounting and business administration; ○ Training in family business plan; ○ Training in business software (IT).
Institutional framework - focus on macroeconomic management and	

improvement of the capacity and effectiveness of government institutions.

Public Sector Governance and Good Governance	<ol style="list-style-type: none"> 1) Establish the necessary legal framework for the development of the Municipality 2) Accelerate the implementation of local power by empowering the Municipality, bringing the public service closer to citizens and promoting public service professionalism in the municipality; 3) Ensure implementation of the land and property law 4) To reinforce the performance and the attendance services of the sucos authorities 5) Promote the favorable business environment to attract investment within the municipality; 6) Strengthen the presence of community policing in juices 7) Promote continuous dialogue for conflict prevention 8) Ensure public order, environmental health, Laws and freedom of expression of all people. 9) Strengthen the implementation of the PNDS & MDP program 10) Strengthen Local Government Administration- Public Administration through training: <ul style="list-style-type: none"> ○ Supply management ○ File Management ○ Accounting Management ○ Human Resource Management ○ Territory Planning
Justice	<ol style="list-style-type: none"> 1) Training for private lawyers, Notaries, Registration and lawyers 2) Training for magistrates and defense lawyers Specific training for magistrates and public defense lawyers 3) Management of public administration for employees involved in social / community development. 4) Digital archive training in the area of logistics

	5) Training for Civil Justice Officers 6) Training in the language area (Portuguese and English).
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3.2. Main Areas of Training

Liquiça Municipality presented the following distribution of the training needs per training area required for each pillar and development sector in relation to the immediate period of 2019-2022, and then in relation to the period 2023-2025 and in the long term to end of 2030. Training needs were subdivided into two categories: the first refers to scholarships for vocational and technical education, bachelor's, master's and doctorate degrees, and the second refers to professional development through participation in workshops, seminars and development in a work context. Data from the main training areas are presented only as table 24 below taking into account the short, medium and long term priorities.

Table 24. Distribution of training needs in the short, medium and long term.

Main Areas of training	Category of training wish to pursue (Academic / Professional)		Training Priorities		
	Academic	Professional Technician	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (to 2030)
Develops Fisheries	√	√	√	√	√
Fish and shrimp farming	√	√	√	√	√
Fish Processing	√	√	√	√	√
Training in the Maritime area	√	√	√	√	√
Aquaculture	√	√	√	√	√
Horticulture	√	√	√	√	
Fishing Technology	√	√	√	√	
Agronomy Plants	√	√	√	√	
Forests	√	√	√	√	
Agricultural laboratory	√	√	√	√	√
Toponymy / Science solo	√	√	√	√	√
Agricultural Extension	√	√	√	√	√
Coffee Production Timor	√	√	√	√	√
Community industry	√	√	√	√	√
Agricultural Industry	√	√	√	√	√
Production of sardines	√	√	√	√	√
Production of salt	√	√	√	√	√
Community tourist	√	√	√	√	
Historic tourism	√	√	√	√	
Tourist Heritage	√	√	√	√	
Develops coastal area	√	√	√	√	
Management accounting Audit and leadership	√	√	√	√	
Carpentry		√	√		
Bricklayer		√	√		
mechanical		√	√		
Plumber		√	√		
Electrician		√	√	√	

Main Areas of training	Category of training wish to pursue (Academic / Professional)		Training Priorities		
	Academic	Professional Technician	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (to 2030)
Urbanization and Urban Planning					
Cooking	√	√	√	√	√
Receptionist	√	√	√	√	√
Language	√	√	√	√	√
Historian	√	√	√	√	√
Management accounting Audit and leadership	√	√	√	√	√
Forest technician, Fisheries	√	√	√	√	√
Drawing Technician (cropping architecture)	√	√	√	√	√
Planning		√			
Accounting		√	√	√	√
Management	√	√	√	√	√
Audit	√	√	√	√	√
Evaluation and monitoring	√	√	√	√	√
Leadership	√	√	√	√	√
Promotion in merchandise	√	√	√	√	
Administration and Finance	√	√	√		
TOT	√	√	√		
Form person in commercial law	√	√	√		
Agronomy	√	√	√	√	√
SOSEK	√	√	√	√	√
Post Harvesting and Processing	√	√	√	√	√
Protection plants (from insects)	√	√		√	√
Civil Technician	√	√	√	√	√
Agricultural Technician (Mechanism)	√	√	√	√	√
Soil Science (Geology)	√			√	√
Agricultural Extension	√			√	√
Fishing Technology	√			√	√

Main Areas of training	Category of training wish to pursue (Academic / Professional)		Training Priorities		
	Academic	Professional Technician	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (to 2030)
Aquaculture	√	√	√	√	√
Fish Processing	√	√	√	√	√
Laboratory	√		√	√	√
Management of fisheries resources and marine biology	√		√	√	√
Animal husbandry technology	√			√	√
Animal health	√	√	√	√	√
Laboratory	√	√	√	√	√
Agronomy of Plants (Perkebunan)	√			√	√
Forest	√			√	√
Planning		√	√	√	√
Administration	√	√	√	√	√
Business	√	√	√	√	√
Accounting	√	√	√	√	√
Management	√	√	√	√	√
Monetary policy and evaluation		√	√	√	
Leadership		√	√	√	
Logistics	√	√	√	√	√
IT	√	√	√	√	√
Internist	√	√	√	√	√
Pediatric	√	√	√	√	√
Gynecologist	√	√	√	√	√
Radiologist	√	√	√	√	√
Psychiatry	√	√	√	√	√
Emergency	√	√	√	√	√
Cardiologist	√	√	√	√	√
* Midwife (BEONC)	√	√	√	√	√
* Nursing					
Anesthesia	√	√	√	√	√

Main Areas of training	Category of training wish to pursue (Academic / Professional)		Training Priorities		
	Academic	Professional Technician	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (to 2030)
Mental	√	√	√	√	√
* Pharmaceutical	√	√	√	√	√
* Nutritionist	√	√	√	√	√
* Technical laboratory (Microbiology)	√		√	√	√
* Technical Electromedicine	√		√	√	√
* Administration (IT, Language, Archive)					
IT	√	√	√	√	√
Language	√	√	√	√	√
Archive	√	√	√	√	√
Portuguese, English and Tetum	√	√	√	√	√
Physics, Biology, Chemistry and Mathematics	√	√		√	√
Tourism, Hospitality, Agricultural, Informatics, Commerce and accounting					
Alvanamor and Equivalence		√	√		
Administration and Archive		√	√	√	
Business		√	√	√	
Human Resources		√	√	√	
Library		√	√	√	
Portuguese, English and Tetum		√	√	√	
Own teacher	√			√	√
Geography, Anthropology, History linked to the Enough Book	√			√	√
Pedagogical and Curricular		√	√	√	√
Education Data (Emis)		√		√	√
Infrastructure		√		√	√
Administration					
Archive					
Data base					
Archive	√	√		√	√

Main Areas of training	Category of training wish to pursue (Academic / Professional)		Training Priorities		
	Academic	Professional Technician	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (to 2030)
Library	√	√		√	√
Anthropology	√	√		√	√
Archeology	√	√		√	√
Architecture	√	√		√	√
Story	√	√		√	√
Music	√			√	√
Dances	√			√	√
Civil technician	√			√	
* Chemical Technician	√	√	√		
* Technical Giz (Environmental technician)		√	√		√
* Environmental technician		√	√	√	
B. Electro technician	√	√	√		
* Electro technician		√	√		
* Environmental technician		√	√		
C. Public Health	√			√	√
* Chemical Technician	√	√	√	√	√
* Civil / environmental technician	√		√	√	√
* Public / Environmental Health		√	√		√
Civil Construction in the area	√				
- Roads and	√				
- Bridges	√				
* Technical Laboratory	√				
- Architecture	√				√
Chemistry Degree	√				
- Training for Supervisor	√	√	√		
Electronic installation engineering	√		√		
civil Engineering	√		√		
IT engineering IT	√		√		

Main Areas of training	Category of training wish to pursue (Academic / Professional)		Training Priorities		
	Academic	Professional Technician	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (to 2030)
Management and Leadership	√	√	√		
Logistics and IT	√	√	√		
Archive	√	√	√		
Protocol	√	√	√		
Accounting	√	√	√	√	
Financial Management	√	√	√	√	
Rates	√	√	√	√	
Tax	√	√	√	√	
Control	√	√	√	√	
Audit	√	√	√	√	
Inspection	√	√	√	√	
Investigation	√	√	√	√	
Production of Livestock	√	√	√	√	
Rural Planning	√	√	√	√	
Drawing	√	√	√	√	
Auto Cad	√	√	√	√	
Judiciary	√	√	√	√	
Lawyer	√	√	√	√	
Defender	√	√	√	√	
Business Management	√	√	√	√	
Micro Industry Management	√	√	√	√	
Cooperative	√	√	√	√	
Revenue	√	√	√	√	

4. Discussion and Analysis

This study has two complementary lines of work, the first being the identification of the distribution of existing human resources at the Municipal level and Sub District Administrations. With the data collected, analysts from later levels of education and areas of study, occupations and their intentions of training and employment in the desired areas. The second is to identify the priority programs of the municipality based on the four pillars of the Municipal Strategic Plan (MSP/PEM) and the key human resources needed for training in the development of the same priority programs. Review compare and the existence of current human resources and training or training need required by the municipality based on its priority programs to allocate funding efficiently and effectively.

The data presented here show that the majority and respondent population in the municipality of Liquiça are young people aged 17-44 years. At the level of knowledge, there is a high number of persons with no education (illiterate), followed by those with pre - secondary education and complete primary and secondary education respectively.

This dispersion of education level, together with the rapid growth and population in the relevant age groups, shows the essence of the challenge faced by the municipality of Liquiça. One aspect of this challenge is balance between completed general secondary education and academic education are predominant in comparison to the brightest the professional technical courses either of secondary technical level professional or medium technical superior - polytechnics. The ideal balance between academic and academic education is a key issue in the development process. In addition, they indicated a very small number of people who had taken part in one of the vocational training courses with a skilled workforce prepared for self-employment or institutional strengthening.

Those who have already participated in one of the short-term professional courses in most are generic professional courses guided plus administrative work and the function publishes as courses of leadership, administration, finance, planning, management and languages, which in practical technical terms do not support creation of their own jobs (self-employment).

There are a large number of job seekers, including those who have completed their degree course in Law, Civil Engineering-Civil Construction, Engineering Industry, Management, Human Resources Management and more graduates in other areas. (see table 15), as well as being used in the labor market. The work preference of the sector has not. In the non-public sector such as agriculture, domestic work, industrial activity and civil construction,

Analysis of the preference for training based on the priority programs (Table 24) with current human resources (Table 5), the data show that the municipality of Liquiça has a high number of such emergencies, however it is verified that ex-system in some areas specialized companies. With regard to current human resources, the question is how to harness and employ them. However, it is important to note that there are still serious concerns about quality not only in technical knowledge but also in language skills and this can become a challenge. The training actions are aimed at providing the beneficiaries with an academic fluency and are more effective in their work in the field of international missions. In this sense, it is important to unite the training in all with the additional training at postgraduate level directed to the priority technical areas and professional stages.

Another challenge demonstrated in the work presented was the existence of a large number of public and private employees including entrepreneurs with very low levels of education. This may possibly imply a lack of productivity and competitiveness in companies or organizations. It is clear that with this very low level of education of the municipality will not be able to overcome the serious problems it faces today nor the future challenges.

The private sector growth is constrained by skills gaps in the workforce of both employers and workers. The private sector contributes to economic development by generating jobs and income, as well as through investment, new technologies, knowledge transfer and increased productivity. This has been observed in some countries in Asia, where much of the recent success in poverty reduction is due to robust economic growth stimulated by the private sector. In this sense, it is crucial to strengthen the private sector by promoting development and the adequacy of

the qualification of workers and employers, with view to improving their employability and increasing the productivity and competitiveness of the enterprise.

Based on the data presented above it becomes evident the need for training and the development of people's ability as a means to provide qualitative and quantitative benefits.

It is important to emphasize that skills development can not be seen only as formal technical and vocational education and training. It comprises skills acquired through all levels of education and training, taking place in formal, non-formal and vocational training contexts, enabling individuals in all sectors of the economy to engage fully and productively in livelihoods and have the capacity to further refine and adapt their skills to meet new demands and opportunities in the economy and the labor market. Skill development should not be characterized by the source of education or training itself, but by the capabilities that are acquired through this process.

With regard to people with disabilities, data show that there are a large number of people with disabilities and many of them have stopped at primary and secondary level due to various difficulties, and this leads to difficulty in finding a job than the benefit they receive from the government. Employers have some concerns about hiring people with disabilities because they feel they may not have adequate professional qualifications. This issue can be minimized if there are some inclusive policies including developing initial and continuing vocational training for people with disabilities to enable them to acquire the knowledge and skills necessary to obtain a vocational qualification to help overcome the concerns of employers so that they can have more opportunities and their entry into the labor market is easier.

The data also point out the need to reduce or combat illiteracy through the creation of opportunities and mobilization of municipal managers to increase literacy provision for all young people, adults and elderly people who did not have access or stay in basic education, especially small and medium-sized businesses

and farmers. Education and training for entrepreneurship is also key to encourage creativity and the realization of new local economic initiatives.

Intensive training in service and postgraduate (specialization), should be intensified as key elements for the quality of the human resources currently possessing the Secondary and Bachelor's level of education.

It also reveals the need for a demand-driven secondary vocational education and demand-driven post secondary technical education area of secondary and post secondary education.

And finally, in the scope of preparation of Human Resources for the creation of municipalities, it is important to strengthen the training in the areas of Urbanization and Regional Planning, Planning and Territorial Planning.

PART C: CONCLUSION AND RECOMMENDATIONS

5. Conclusions and Recommendations

Based on the data presented and discussed above, it is concluded that, in developing human capital resources and achieving sustainable development in the future, the Municipality of Liquiça needs to pay more attention to the development opportunities identified in the PDM and to the following five dimensions : 1) **economic** (increase efficiency of the production system), 2) **social** (improvement of the levels of income distribution of the population), 3) **ecological** (preservation of the environment), 4) **spatial** (balance in distribution and occupation of population rural and urban) and 5) **cultural** (respect to the ways of thinking and acting of society, focusing on the construction of an environmental conscience linked to consumption).

According to the results obtained, it is considered pertinent to conclude and recommend the following:

- a) The commitment to education should give priority to technical and professional training on academic, focusing more on the opening of vocational training centers (Polytechnic Institutes) to the detriment of the opening of more universities.
- b) Complementary to academic training, the creation of specialization courses can increase the employability and professional capacity of those who finish the formal education.

Based on the data analyzed, we reinforce the need to train other areas where there are notable shortages of qualified human resources and areas of greater importance according to the priority programs established in table 24.

Most respondents wish to work in the non-public (private sector) than in the public sector. The desire for the private sector was slightly higher among young people aged 17-36 and the preference for work is mainly in the area of agriculture, household chores, industry and construction.

The graduates and postgraduates with the highest number of job seekers, "unemployment", are in the areas of Law, Civil Engineering - Civil Construction,

Engineering Industry, Management, Human Resources Management and more graduates in other areas (table 15).

Intensive training, in service and postgraduate (specialization), should be intensified as key elements for the quality of the human resources currently possessing the Secondary and Bachelor's level of education.

There are a large number of people with disabilities of productive age who are looking for work and have inadequate professional qualifications, or very limited practical professional knowledge. It is recommended the need to develop initial and continuing vocational training for people with disabilities and especially gestural training for those with visual and hearing disabilities, so that they can have more opportunities in the labor market.

To complete this general conclusion, we highlight five main points:

1) Education and training opportunities remain limited in some of the major areas highlighted in the ENDP/PEDN, such as agriculture, construction and hospitality and tourism. The following areas should be more focused on human capital development:

- **Agriculture** is the heart of the municipality's economy and critical to the well-being of its people. A sustainable agricultural development path will require greater investment in building innovation and skills on small-scale farms through many routes: training and technology transfer; a strong expansion of the number and skills of extension workers; through better education and training for members of rural families, including women; and increased investment in vocational and tertiary education programs and R & D centers, closely related to the needs of agriculture in the municipality of Liquiça.

- **The construction** with a limited infrastructure inherited from the Indonesian government period and the continuous needs to consolidate the infrastructures namely the roads thus offering the population of the benefited region, better conditions of transport, easy access and allows local farmers to transport their products to the market quickly and effectively.

- Tourism in the municipality of Liquiça remains a future opportunity, but taking advantage of this opportunity will require the development of a trained workforce, from entry-level staff to senior managers, as well as investment in R & D, development and planning policies and planning capabilities.

2) Private Sector - Data from the study shows that private sector growth is constrained by skill gaps in the workforce both employers and workers. In this regard, it is crucial to strengthen the private sector by promoting the development and adequacy of the qualification of workers and employers with a view to improving their employability and increasing the productivity and competitiveness of the business.

3) Technical and vocational education and training (EFTP). FDCH research shows a lower level of TVET qualifications than university qualifications in the municipality, and increased investment in the expansion of TVET should be a high priority. This expansion should cover technical secondary schools, the polytechnic system, and the community-based non-formal vocational training system. In doing so, it is important that the boundary between academic education and technique remain fluid, with easy articulation between the two areas.

4) Adult education (literacy for all young people, adults and the elderly), especially for women, and training in the workplace. In our view, these three areas are of considerable importance. In particular, the increasing role of women, especially in agriculture, and with a higher skill level due to improved training, may contribute to the growth of household and national income, and to more jobs in general.

5) In the preparation of Human Resources for the creation of municipalities (decentralization) it is important to strengthen the training in the areas of Urbanization and Regional Planning, Planning and Territorial Planning.

6) It also reveals the need for a demand-driven secondary vocational education and demand-driven post secondary technical education area of secondary and post secondary education.

6. Bibliography References

- Survey of Existing Human Resources in Timor-Leste 2016 - Human Capital Development Fund (FDCH), 2016.
- General Directorate of Statistics - Ministry of Finance, Census of Population and Housing, 2010.
- General Directorate of Statistics - Ministry of Finance, Census of Population and Housing, 2015.
- Strategic Plan for National Development from the year 2011-2030.
- Strategic Plan for Municipal Development 2016.

Annex 1. Questions for group discussion

QUESTIONS FOR GROUP DISCUSSION - GROUP I – GENERAL QUESTIONS

Identify Potential (Natural Resources) that Liquisa Municipality has as priorities to develop!	Related to the Existing potential (natural resources), What kind of HR you want to form (training) to develop the existing potential?	What level of Human Resources do you want to training?		Training priority for (Short, Medium and Long Term)		
		Academic	Professional Technical	Short Term (2019-2021)	Medium Term (2022-2025)	Long Term (2026 - 2030)
Tourism						
Agriculture						
Identify other potential						

QUESTIONS FOR GROUP DISCUSSION - GROUP II - SOCIAL CAPITAL

Social Capital	What are the priority programs relating to the sectors below that Liquisa Municipality have to develop? Describe according to each sector!	Related to the existing potential (natural resources) , What kind of HR you want to form (training) to develop the existing potential?	What level of Human Resources do you want to training?		Training priority for (Short, Medium and Long Term)		
			Academic	Professional Technique	Short Term (2019-2021)	Medium Term (2022-2025)	Long Term (2026 - 2030)
EDUCATION AND TRAINING							
HEALTH							
SOCIAL INCLUSION							
ENVIRONMENT							
CULTURE AND HERITAGE							

QUESTIONS FOR GROUP DISCUSSION - GROUP III - ECONOMIC DEVELOPMENT

Economic development	What are the priority programs related to the sectors below that the Municipality / RAEOA-Oecusse has to develop? Describe according to each industry!	Related to the Natural Resources that exists, What kind of Human Resources do you want to training to develop the existing potentialities?	What level of Human Resources do you want to training?		Training priority for (Short, Medium and Long Term)		
			Academic	Professional Technical	Short Term (2019-2021)	Mid Term(2022-2025)	Long Term (2026 - 2030)
DESENVOLVIMENTO RURAL							
AGRICULTURE							
PRIVATE SECTOR							

QUESTIONS FOR GROUP DISCUSSION - GROUP IV - INFRASTRUCTURE DEVELOPMENT

INFRASTRUCTURE DEVELOPMENT	What are the priority programs related to the sectors below that the Municipality / RAEOA-Oecusse has to develop? Describe according to each industry!	Related to the Natural Resources that exists, What kind of Human Resources do you want to training to develop the existing potentialities?	What level of Human Resources do you want to training?		Training priority for (Short, Medium and Long Term)		
			Academic	Professional Technical	Short Term (2019-2021)	Mid Term (2022-2025)	Long Term (2026 - 2030)
ROADS AND BRIDGES							
WATER AND SANITATION							
ELECTRICITY							
MARITIME PORTS (if applicable)							
AIRPORT AND TELECOMMUNICATIONS							

QUESTIONS FOR GROUP DISCUSSION - GROUP V - INSTITUTIONAL FRAMEWORK

INSTITUTIONAL FRAMEWORK	What are the priority programs related to the sectors below that the Municipality / RAEOA-Oecusse has to develop? Describe according to each industry!	Related to the Natural Resources that exists, What kind of Human Resources do you want to training to develop the existing potentialities?	What level of Human Resources do you want to training?		Training priority for (Short, Medium and Long Term)		
			Academic	Professional Technical	Short Term (2019- 2021)	Mid Term (2022- 2025)	Long Term (2026 - 2030)
MANAGEMENT AND GOOD GONERNANCE OF THE PUBLIC SECTORS							
JUSTICE							

Annex 2. List attendance of the participants in the discussion of groups

List attendance of participants in the discussion of groups on identification of natural resources and economic potencies, related priority programs and key areas of training in the Municipality of Liquiça

Nu.	Name	Position	Institutions
1	Renato Alves Seixa	Sec.Municipiu Liquica	MAE
2	Isménio M.da.Silva	Secretário Executivo	FDCH
3	Mario da Silva	Diretor	Agrikultura
4	Carlito da Costa A.C.	Xefe Dep.	Agrikultura
5	Jacinto dos Santos	Xefe Dep.	Agrikultura
6	Bendito Correia Ribeiro	Xefe Dep.	MAP
7	Junior P.S. Carvalho	Xefe Dep.	MAP
8	Joao Alegria de Jesus	Diretor SAIM	MAE
9	Fernando Soares	Xefe Dep.	Educação
10	Carlos da Costa	Ponto Fokal	SEDPAC
11	Bernardino dos Santos	Xefe Dep.	Educasaun Municipiu
12	Francisco D.S.	Xefe DDG	MAE
13	Abel de Sousa	Cood.DSM	MAE
14	Yohanes Fernandes	Jornalista	GMN
15	Jacinto Xavier	Jornalista	Independente
16	Agapito de Deus	Jornalista	Timor Post
17	Ferdy Soares	Jornalista	GMN
18	Jose Lobato	Coodendor	RTTL
19	Cipriano de Fatima	Jornalista	RTTL
20	Domingos da Costa	Jornalista	RTTL
21	Alberto Rosa Gomes	CDO-Liquica	MAE

22	Laurindo Da Silva	Rep. Prog HIV	Saude Liquica
23	Fernando da Conceição	ETS	Saude Liquica
24	Joanico D.Guterres	Media	FDCH-MDRI
25	Fernando Gonsalves	Diretor PNDS	MAE
26	Ligia Alves	Staf	FDCH-MDRI
27	Ivo J.B.Belo	Xefe Dep.DESTI	FDCH-MDRI
28	Afonso de Almeida	Konsultor	FDCH-MDRI
29	Eusebio A.G.G. Barreto	Koord. GAPLO	FDCH-MDRI
30	Filomeno R.Dos Santos Lay	Koord.GAPPEFIV	FDCH-MDRI
31	Hermenegildo da Silva	Xefe Dep.DEPE	FDCH-MDRI
32	Maria Soares Rosa Pinto	Xefe Dep.DIPFIV	FDCH-MDRI
33	Henrique do Rosario	Koord. GAGESI	FDCH-MDRI
34	Aderito Soares	Xefe dep.DEPFOBE	FDCH-MDRI
35	Antonio Febu	Xefe dep. DEMEREP	FDCH-MDRI
37	Virgilio R.da Costa	Xefe dep. DERHI	FDCH-MDRI
38	Fernando do Nascimento	Responsvel Verifikasaun	FDCH-MDRI
33	Xaninha M.	Tekniko GAPPEFIV	FDCH-MDRI
34	Lucrecia dos Santos	Tekniko GAPPEFIV	FDCH-MDRI
35	Maria Godinho	Tekniko GAPPEFIV	FDCH-MDRI
36	Prudencio A.Dias Ribeiro	Tekniko GAPPEFIV	FDCH-MDRI
37	Atanasio Soares	Tekniko DEMEREP	FDCH-MDRI
38	Rui A.F.da S.Pinto	Tekniko GAPPEFIV	FDCH-MDRI