



Ministry for Higher Education,  
Science and Culture  
(MESCC)

# FDCH



Human Capital Development Fund  
(FDCH)

## RESULTS OF DATA COLLECTION OF EXISTING **HUMAN RESOURCES** AND THE MAIN KEY AREAS OF TRAINING

**LD RHE REPORT 2018**



**AINARO  
MUNICIPALITY**

# LD RHE

DATA COLLECTION OF EXISTING  
**HUMAN RESOURCES**

# **Results of Data Collection of Existing Human Resources and The Main Key Areas of Training**

## **Municipality of Ainaro**

***Fundo do Desenvolvimento do Capital Humano (FDCH)***

**(Human Capital Development Fund – HCDF)**

[www.fdch.gov.tl](http://www.fdch.gov.tl)

Council of Administration of Human Capital Development Fund (CA-FDCH)  
Former Office of Ministry of Finance, Building #5, 2<sup>nd</sup> Floor, Government Palace, Dili, Timor-Leste

Email: [info@fdch.gov.tl](mailto:info@fdch.gov.tl)

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

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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



**Longuinhos dos Santos, M.M.**

Ministro Ensino Superior, Ciência e Cultura - 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, December 2018

A blue ink signature of Isménio Martins da Silva, consisting of a stylized 'I' followed by a series of loops and a long horizontal stroke.

**Isménio Martins da Silva**

Secretário Executivo do 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 identified, ensuring different phases of MSP/PEM to be implemented successfully.

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 and training 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 resource 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/training required by the municipality based in their priority programs to allocate funding efficiently and effectively.

## Methodology

The methodology is used as follows: **in the first phase**, the data was collected from individuals aged 17 or over by means of a census of the resident population in the Municipality of Dili with the completion of a questionnaire, carried out from September 5 to 5 of November 2016 and **in the second phase**, was done through the "*Focus Group Discussion-FGD*" held on March 14, 2018 to the Municipal Administrators, Administrative Officers, Directors and also with the participation of other entities, in order to assess the accuracy of the information given, but also the pertinence of the programs identified as necessary for the development of the human resources of the municipality.

## Summary of Results

The data presented here show that the majority of respondent population in Ainaro Municipality are young people aged 17-36 years. At the level of knowledge, there are a large number of people with no education level (illiterate), followed by

those with complete secondary, pre-secondary and basic education respectively. This dispersion of schooling, together with the rapid growth of the population in the relevant age groups, shows the essence of the challenge faced by the Ainaro 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, either at the secondary technical school level or at the higher technical level such as 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 participated in one of the vocational training courses with skilled labor prepared for self-employment or institutional strengthening.

Those who had already taken part in one of the short-term professional courses in most of them are 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 their degree program in Computer Science, Management, Law, Accounting and Civil Engineering - Civil Construction, 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 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 Ainaro 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 programs.

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 enable them to continue to take advantage of 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.

The Ainaro municipality identified skills shortages in the following sectors: Biophysics, Materials Engineering and Metallurgy, Mechanical Engineering, Agricultural Social Economy, Forest Resources and Forest Engineering or Forest Management, Agricultural Processing Engineering, Inland Water Resources, Sociolinguistics and Dialectology, Philosophy, Cultural Studies and others (see table 5). It also identified a lack of skills in the following areas: English, Nursing, Pharmacy, Hospitality, Accounting and Auditing, Machine Operation, Component

Manufacturing and Assembly, Engineering (Design and Development), Literacy and Software / 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 people's skills 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. It enables 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 makes it difficult to get a job, to earn a higher salary than the subsidy received 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 business people and medium-sized enterprises and farmers. Education and training for entrepreneurship is also fundamental to encourage 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 Ainaro Municipality needs to pay more attention to the development opportunities identified in the Municipality Development Plan (MDP) 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:

- The commitment to education should give priority to technical and professional training over academic, focusing more on the opening of



vocational training centers (or Polytechnic institutes) to the detriment of the opening of more universities.

- Complementary to academic training, the creation of specialization courses can increase the employability and professional capacity of those who complete 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 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 postgraduates with the highest number of job seekers "unemployment", are in the fields of Law, Civil Engineering - Civil Construction, Medicine (General Medicine), Economics, Management and others (see 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 quite a large number of people with disabilities who are job-poor 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 disabilities, 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 Ainaro 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 Ainaro Municipality 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 of 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 (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 household and national income growth, 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 a demand-driven secondary-vocational education and demand-driven post secondary technical education area-level provision of secondary and post-secondary education.

## PART A: INTRODUCTION, OBJETIVES AND METHODOLOGY

### 1. Introduction, Objectives and Methodology

#### 1.1. General Introduction

The Municipality of Ainaro is located in the southern center of the country, surrounded by mountains of Ramelau in the West, Kablaki, Suro and Mamalai. Ramelau is the highest mountain in Timor-Leste with an altitude of 2,963 m, and with potential for tourism, as it has very beautiful landscapes and on the summit of this was built a statue of Our Lady (*Estátua de Nossa Senhora*).

This municipality shares the borders to the West with the Municipality of Bobonaro and Covalima, to the East with the Municipality of Manatuto and Manufahi, in the South part it is to the coast of the Sea of Timor, in the North part with the Municipality of Ermera and Aileu and has a surface of total 869,80 km<sup>2</sup>.

In 2017, the population was estimated at 63,136 inhabitants, with 32,181 men and 30,955 women, and according to the 2015 census there are 10,601 families. The dominant religion in the territory of the municipality of Ainaro is the Catholic religion but there are also other religions practiced by populations like Protestants and Islam; being the most spoken languages in several languages where 63% of the population speak mambai, 29% speak Tetum, 7% bunak and 1% kemak.

#### Sub district Administration, Villages and Sub Villages

The Municipality of Ainaro is divided into 4 Sub district administratives, 21 Villages and 131 sub villages scattered throughout the territory according to table 1 below:

#### Sub district Administration

Sub district Administrative	superficies Km <sup>2</sup>	Percentage (%)
Ainaro	235.94	27.13
Hato- Builico	129.88	14.93
Maubisse	260.97	30.00
Hato-Udo	243.01	27.94
<b>Total</b>	<b>869.80</b>	<b>100</b>

### Sub district Administration, Villages and number of Sub Villages

Sub district administrative	Villages	Number of Sub Villages	Total
<b>Ainaro</b>	Ainaro	7	32
	Cassa	5	
	Manutaci	4	
	Mau-Nuno	3	
	Mau-Ulo	5	
	Soro	4	
	Suro-Craic	4	
<b>Hato-Builico</b>	Mauchiga	5	21
	Mulo	8	
	Nuno-Mogue	8	
<b>Maubisse</b>	Aituto	9	62
	Edi	6	
	Fatubessi	6	
	Horai-Quic	4	
	Liurai	4	
	Manelobas	4	
	Manetú	7	
	Maubisse	12	
	Maulau	10	
<b>Hato-Udo</b>	Foho-Ai-Lico	6	16
	Leolima	10	

Source: Census, 2015

### Climate, Relief and Hydrography

The climatic situation of the Municipality of Ainaro is essentially characterized in two main seasons, a dry season and a rainy season. The dry season occurs between May and July with varying temperatures, such as at the Hato-Builico sub district administrative, the temperature in the dry season can occur between 3° and 15° C, at the sub district administrative of Maubisse between 11° and 15° C, at the sub district administrative of Ainaro from the south the temperature varies from 15° and 29° C and in the northern part of the sub district administrative of Ainaro and at the sub district administrative of Hato-Udo the temperature can occur between



22° and 33°C. The rainy season occurs during the remaining months of the year; in the sub district administrative of Maubisse, Hato-Builico and part of North of the sub district administrative of Ainaro this time can occur between the month of Outubro and July, and in the southern part of the sub district administrative of Ainaro and in Hato-Udo between November and May.

### **Economic potential and Natural Resources for the development of the Municipality of Ainaro**

The strategic plan of the Municipality of Ainaro 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.

The strategic plan identifies the potential areas of economic development to be carried out, with a view to implementing the process of decentralization and creation of the municipality of Ainaro. Potential areas of economic development are identified below:

#### **a) Agriculture**

Agriculture is a major sector with much potential that the Municipality of Ainaro intends to develop. This sector can work simultaneously with other sectors to produce faster growth, reduce poverty and sustain the environment.

Agriculture can be a source of growth for the municipality's economy, a provider of investment opportunities for the private sector and a major driver of agriculture-related industries and the nonfarm rural economy.

Agricultural production is important for food security because it is the source of income for most low-income rural people. Thus, the Municipality identified the potential cultivation areas as follows in the table below:

Agriculture Area	Total Area: 22649,40 (Ha)
Floors with irrigation systems / <i>Várzeas com regadios</i>	562,00 (MAF, 2007)
Land for sale Sequeiros / <i>Terrenos sequeiros</i>	1120,00 (MAF, 2007)
vegetable garden / <i>Horta</i>	586,10 (Bappeda, 1995)
Surroundings / <i>Arredores</i>	145,00 (Bappeda, 1995)
Coffee Forestry / Arboriculture	5024,00 (MAF, 2007)
Forest	5877,30 (Bappeda, 1995)
<i>Terrenos Puso e Baldios</i>	9335,00 (Bappeda, 1995)

In addition, there is scope for large-scale agricultural development for the cultivation of food plants, industrial plants, medicinal plants and other plants including forests.

The livestock sector is also an important resource for animal populations and sources of animal protein, with one of the municipalities producing large numbers of cows, buffaloes, pigs, goats, chickens and others.

Almost all rural families were dedicated to raising buffalo, goats, pigs and chickens. Livestock farming is characterized by family exploitation and is an important complement to household income.

In this sense the Municipio de Ainaro intends to develop this area as an area of great potentiality and hope. It is necessary to have a good policy to guarantee the continuity of the production of this sector.

Forests play a key role for the municipality, providing useful resources for the subsistence of families (especially fruit, firewood and coal) and can be a great outlet for precious timber exports. However, the activities of the resident population result in some collateral issues such as forest degradation. Among the problems that are causing the degradation of existing forests are shifting agriculture, firewood harvesting, forest fire, indiscriminate logging, lack of policies and regulations, and lack of forestry information.

The forestry sector, through industries, has contributed to society by placing materials on the market that are essential to the population and increases the economic value and competitiveness of forest products.

The forest sector contributes an important part to the economy of the municipality through the generation of products for direct consumption or for export, generating taxes and employment and acting in the conservation and preservation of renewable natural resources. Thus, the sector must seek to achieve its sustainability permanently, to achieve continuous production without reducing its values and productivity without causing damage to the environment.

However, it is observed that the sustainable development of the forest sector is one of the fully viable strategies for the development of the Municipality as a whole.

### **b) Tourism**

The Municipality of Ainaro considers tourism as an essential element for economic development and a solution to social issues. Tourism is defined as the motor of development of the modern and diversified economy, of the socio-economic transformation of society.

The Municipality of Ainaro has a great abundance of water courses and fertile land for agriculture. It has a coastal area, on the south coast of the country, but also mountainous areas, including the highest point in Timor-Leste, Mount Tatamailau (2,960 m) and Mount Kablaki (the third highest mountain). It is located in the plateau with fresh climates and beautiful tourist landscapes that can contribute to the relaxation and the relaxation of the visitors (tourists). Other essential modalities for such economic development in the Ainaro Municipality include ecological tourism - Lagoa Bikin Tidi, Kayrala Xanana Gusmão National Park, historical and cultural tourism such as the Monument of the Rego of Dom Aleixo Corte Real and inns (Hatu-Builico, Maubisse and Hatudo) and Jakarta II - the place where many East Timorese were massacred during the Indonesian occupation. There are also beautiful "fatuk kuak" caves such as Bel-Loe and Hul Enjia, sacred water fountains among others.

The bet on the tourism sector increases the number of jobs because tourism is composed of several sectors, which allow the absorption of skilled labor, thus contributing to a better income distribution of the local population.

In this sense, the municipality has to establish the tourism information center, provide brochures and map the tourist and historical sites for advertising in order to attract visitors and domestic and foreign tourists.

In addition, it should enable young people in the areas of languages, namely, foreign language and historians to later guide visitors (tourists).

### **c) Trade, Industry and Cooperative**

Anticipating the decentralization of local power, the municipality has given greater attention in the sector of commerce, industry and cooperative. The municipality needs to create conditions to facilitate the licensing of trade activities and build markets in sub district administratives. Thus, community products can be distributed and sold.

Industrial activity is one of the powers that has been developed through rambutan (1,000), casuarina (aikakeu) (12,000), durian (500), orange tree (1,000), loquat (500) and other identified locations. Currently, production is still limited but the local population is expected to benefit in the future.

Another activity to be developed is to strengthen the cooperative area through the development of aquaculture and local poultry farming, a complementary activity of agriculture in order to reduce imports, poverty and increase income for the well-being of the population. It is also intended to cooperate with international partners with greater investment to strengthen local businesses.

Anticipating the implementation of the decentralization process and the 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, aquaparks, 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 institution building that serves 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 administratives 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 Ainaro 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 not yet a human resources census in the Ainaro Municipality is one of the reasons for this work. The purpose of this paper is to identify and analyze the current human resources situation and its distribution, to describe the current human resources situation of each sub district administration, to promote the planning of human resources, namely in relation to the needs of the municipality and finally to strengthen collaboration from the public sector to the private sector and professional associations.

## 1.2. 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 administrative;
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 methodological approach, whose quantitative and qualitative. The first one, the data were collected from individuals aged 17 years or over through the census of the population living in the Ainaro Municipality with the completion of a questionnaire, conducted between September 5 and November 5, 2016, and the second was done through the Focus Group Discussion (FGD), held on March 14, 2018.

The population census is the only source of information on the life situation of the population in sub district administration and villages. The census produces information essential for the definition of public policies of the state at the level of sub district administration 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 the Municipal Administrators, Administrative Officers, Directors (list of participants in Annex 2), in order to assess the accuracy of the information given, but also the relevance of the programs identified as necessary for the development of the human resources of 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 RESULT 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 Ainaro Municipality, continues in four sections. **Section 1** is mainly based on FDCH survey and census statistical data from 2010 and 2015 to analyze the current human capital situation of Ainaro Municipality 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, describing 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. Understanding the human capital of the Ainaro Municipality

### 2.1. Presentation and Analysis of Data

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

### 2.2. Profile of Respondents

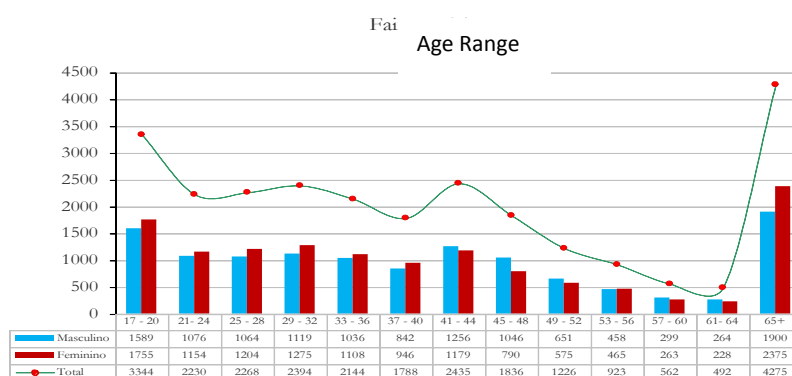
The first part of the collection tool outlined the profile of the respondents and as shown below, the results were represented in percentage graphs.

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 25,917 respondents, of whom 48.6 were male and 51.4% were female. The other aspects of the profile are arranged in the graphs below.

The majority were aged between 17 and 44 years old, representing 64.1%, followed by the age group from 45 to 64 years old, with 19.4% of those surveyed and 16.5% older than 65 years. The female sex is the largest number in the age group between 17-40 years, while the male sex was predominant in the respondents over 41 years of age, except for the age over 65 years (Figure 1).

Figure 1. Distribution of respondents by age group and by gender



### 2.3. People with Disability

Table 1 presents the evaluation distribution of the existence of disabled people in the Municipality of Ainaro. In the assessment of the existence of persons with disabilities, 495 respondents corresponded to 1.9% of the total number of respondents distributed by 4 Sub district administration (table 1):

Table 1. Distribution of existence of people disability by Sub District administration

Sub district administrations	Have a disability?		TOTAL
	Yes	No	
Ainaro	161	6,377	6,538
Hato-Udo	22	4,681	4,703
Hato-Builico	66	4,744	4,810
Maubisse	246	9,620	9,866
<b>AINARO</b>	<b>495</b>	<b>25,422</b>	<b>25,917</b>
<b>Percentage (%)</b>	<b>1,9</b>	<b>98,1</b>	<b>100,0</b>

The largest number of people with disability was registered at the Maubisse Sub district administration with 50% and Ainaro 33%. Hato-Bulico Sub district

administration and Hato-Udo with lower percentage corresponding to 13% and 4%, respectively (Table 2).

**Table 2. Distribution of the people with disability by sub district administration**

Sub district administrations	Frequency	Percentage (%)
Ainaro	161	33
Hato-Udo	22	4
Hato-Builico	66	13
Maubisse	246	50
<b>Total</b>	<b>495</b>	<b>100</b>

Among Of the 495 people with disabilities, 238 (47.6%) had physical disability, 100 (20%) had visual impairment, 81 (16.2%) had hearing impairment, 71 (14.2%) had mental disabilities, 10 (2%) with cognitive or intellectual disability (Table 3).

**Table 3. Distribution of the people with disability by type of disability and by sub district Administration**

Sub district administration	Type of disability					Total
	Physics / Mobility	View	Deaf mute	Psychosocial / Mental	Cognitive / intellectual	
Ainaro	104	27	11	23	-	165
Hato-Udo	7	5	7	2	2	23
Hato-Builico	31	3	15	9	8	66
Maubisse	96	65	48	37	-	246
<b>Total</b>	<b>238</b>	<b>100</b>	<b>81</b>	<b>71</b>	<b>10</b>	<b>500</b>

## 2.4. Education Level

It can be seen in the table of contents in table 4, of the illiterate respondents, adult literacy and incomplete elementary education occupy 54.9% of the total of the respondents. Basic (primary) and pre-secondary education represents 23.9% and secondary education occupies 17.6%. Vocational technical education and other levels of courses occupy 0.5% and 0.53%, respectively. At the tertiary or higher level, 2.7% of respondents have the level of higher education (Table 4). Of these 702 (2.7%) of respondents, 72.4% had a bachelor's degree, followed by Diploma III 23.9% and Diploma I 1.3%. Other academic levels have a percentage lower than 1% (Table 4).

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

Degree of Education / Level of Education	AINARO	Ainaro	Hato-Udo	Hato-Builico	Maubisse
Can not read / write	12,964	2,916	2,195	2,763	5,090
Does not read / write (did not finish primary school)	1,267	106	239	156	766
<b>Sub Total</b>	<b>14,231</b>	<b>3,022</b>	<b>2,434</b>	<b>2,919</b>	<b>5,856</b>
Primary	2,401	378	348	471	1,204
Pre-secondary	3,794	986	778	527	1,503
Secondary	4,554	1,673	934	795	1,152
Technical Vocational (high) School	123	47	33	6	37
Others	59	38	8	4	9
<b>Sub Total</b>	<b>10,931</b>	<b>3,122</b>	<b>2,101</b>	<b>1,803</b>	<b>3,905</b>
1 <sup>st</sup> . Cycle (1 <sup>st</sup> class – 4 <sup>th</sup> class)	47	33	4	4	6
2 <sup>nd</sup> . Cycle (1 <sup>st</sup> Year, 2 <sup>nd</sup> Year)	6	-	5	-	1
3 <sup>rd</sup> Cycle (3 <sup>rd</sup> year – 9 <sup>th</sup> year / 3 <sup>rd</sup> year up)	-	-	-	-	-
<b>Sub Total</b>	<b>53</b>	<b>33</b>	<b>9</b>	<b>4</b>	<b>7</b>
DI	9	2	-	3	4
DII	6	4	-	2	-
DIII	168	75	19	27	47
DIV	7	3	1	1	2
Bachelor's Degree (S1)	508	240	93	68	107
Master (S2)	4	2	1	1	-
PhD (S3)	-	-	-	-	-
<b>Sub Total</b>	<b>702</b>	<b>326</b>	<b>114</b>	<b>102</b>	<b>160</b>
<b>Total</b>	<b>25,917</b>	<b>6,503</b>	<b>4,658</b>	<b>4,828</b>	<b>9,928</b>

Regarding the distribution of the knowledge of the respondents by study area (study program) and by sub district administration, of the 702 who hold the higher degree only 360 (51.3%) answered this question. The details given can be seen in Table 5, below:



**Table 5. Distribution of the level of education of the respondents by study program following sub district administration**

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
<b>Total</b>	<b>4</b>	<b>4</b>	<b>82</b>	<b>4</b>	<b>263</b>	<b>3</b>	<b>-</b>	<b>360</b>	<b>220</b>	<b>140</b>
Mathematics	-	1	10	-	10	-	-	21	9	12
Law	-	-	-	-	32	-	-	32	24	8
Public Policy	-	-	1	-	24	-	-	25	19	6
Medical Doctor - Medical Practice (General Practitioner)	-	-	2	-	14	-	-	16	5	11
Civil Engineering - Civil Construction	-	-	2	-	13	-	-	15	11	4
Political Science	1	-	-	-	12	1	-	14	11	3
Nursing	-	-	9	1	3	-	-	13	7	6
Education	-	1	2	-	8	-	-	11	3	8
Economy	-	-	1	-	8	-	-	9	2	7
Economics Of Finance / Financial Management - Banking Economics	-	-	-	-	9	-	-	9	6	3
Mathematics Of Teaching	-	-	2	-	7	-	-	9	5	4
Physics Of Teaching	-	-	3	-	6	-	-	9	6	3
Accounting	-	-	-	-	8	-	-	8	5	3
Management	-	-	1	1	5	1	-	8	5	3
Agronomy	-	-	3	-	4	-	-	7	6	1
Management	-	-	1	-	6	-	-	7	7	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Computer Technology Engineering (Computer)	1	-	1	-	5	-	-	7	5	2
Aquaculture	-	-	-	-	7	-	-	7	5	2
Portuguese Language	1	-	3	-	2	-	-	6	4	2
Public Health	-	-	2	-	4	-	-	6	3	3
Education Sociology	-	-	2	-	4	-	-	6	4	2
Government Planning And Policy	-	-	-	-	4	1	-	5	3	2
Sociology	-	-	1	-	3	-	-	4	3	1
Mechanical Engineering	-	1	1	-	2	-	-	4	4	-
Dentist	-	-	4	-	-	-	-	4	2	2
Pharmacy	1	-	2	-	1	-	-	4	-	4
Public Administration	-	-	1	-	3	-	-	4	4	-
Human Resource Management	-	1	1	-	2	-	-	4	3	1
Business Administration	-	-	3	-	1	-	-	4	3	1
Education Biology	-	-	2	-	2	-	-	4	-	4
International, Bilateral And Multilateral Relations	-	-	-	-	4	-	-	4	3	1
Pre-Primary And Primary Education	-	-	3	-	1	-	-	4	2	2
Physics	-	-	1	-	2	-	-	3	3	-
Agro-Business	-	-	-	-	3	-	-	3	1	2
Production Of Livestock	-	-	-	-	3	-	-	3	1	2

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Economics Of Education / Management Of Education	-	-	1	-	2	-	-	3	1	2
General / Environmental Biology	-	-	1	-	1	-	-	2	1	1
Engineering Architecture	-	-	-	-	2	-	-	2	-	2
Mining Engineering	-	-	-	-	2	-	-	2	2	-
English Language	-	-	-	-	2	-	-	2	1	1
Religious Career	-	-	2	-	-	-	-	2	1	1
Nutrition	-	-	1	-	1	-	-	2	1	1
Forestry Techniques And Operations	-	-	-	-	2	-	-	2	1	1
Public Law	-	-	-	-	2	-	-	2	2	-
Economics Of Education	-	-	-	-	2	-	-	2	1	1
Teaching Chemistry	-	-	-	-	2	-	-	2	1	1
Teacher Training	-	-	-	1	1	-	-	2	-	2
Training Of Primary And Pre-Secondary Teachers	-	-	-	-	2	-	-	2	1	1
Biophysics	-	-	-	-	1	-	-	1	1	-
Materials Engineering And Metallurgy	-	-	-	-	1	-	-	1	1	-
Mechanical Engineering	-	-	-	-	1	-	-	1	1	-
Agricultural Social Economy	-	-	-	-	1	-	-	1	-	1
Forest Resources And Forestry	-	-	1	-	-	-	-	1	1	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Engineering										
Agricultural Engineering	-	-	-	-	1	-	-	1	-	1
Philosophy	-	-	-	-	1	-	-	1	1	-
Sociolinguistics And Dialectology	-	-	1	-	-	-	-	1	-	1
Computer Science	-	-	1	-	-	-	-	1	1	-
Transport Engineering And Telecommunications	-	-	-	-	1	-	-	1	1	-
Environmental Engineering	-	-	-	-	1	-	-	1	-	1
Midwife	-	-	1	-	-	-	-	1	-	1
Maternal And Child Health	-	-	1	-	-	-	-	1	1	-
Forestry Management	-	-	-	-	1	-	-	1	1	-
Engineering Of Agricultural Product Processing	-	-	-	-	1	-	-	1	1	-
Inland Water Resources	-	-	-	-	1	-	-	1	1	-
Fishing Engineering	-	-	1	-	-	-	-	1	1	-
Tourism And Hospitality	-	-	1	-	-	-	-	1	1	-
Regional And Urban Economics	-	-	-	-	1	-	-	1	1	-
Social Work (Including Gravedigger)	-	-	-	-	1	-	-	1	1	-
Philosophy Of Education	-	-	1	-	-	-	-	1	1	-
Governmental Sciences	-	-	-	-	1	-	-	1	1	-
Peace Study	-	-	-	-	1	-	-	1	1	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Catechism	-	-	1	-	-	-	-	1	-	1
Cultural Studies	-	-	1	-	-	-	-	1	-	1
Specific Curricula For Levels And Types Of Education	-	-	-	-	1	-	-	1	-	1
Others	-	-	3	1	4	-	-	8	5	3
<b>Ainara</b>										
<b>Total</b>	-	<b>3</b>	<b>42</b>	<b>2</b>	<b>137</b>	<b>2</b>	-	<b>186</b>	<b>120</b>	<b>66</b>
Law	-	-	-	-	20	-	-	20	14	6
Mathematics	-	-	6	-	4	-	-	10	5	5
Public Policy	-	-	1	-	16	-	-	17	12	5
Political Science	-	-	-	-	9	1	-	10	7	3
Civil Engineering - Civil Construction	-	-	1	-	8	-	-	9	7	2
Aquaculture	-	-	-	-	7	-	-	7	5	2
Management	-	-	1	-	5	-	-	6	6	-
Management	-	-	1	1	3	1	-	6	4	2
Economics Of Finance / Financial Management - Banking Economics	-	-	-	-	6	-	-	6	4	2
Economy	-	-	-	-	5	-	-	5	-	5
Nursing	-	-	4	-	1	-	-	5	4	1
Agronomy	-	-	1	-	3	-	-	4	4	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Computer Technology Engineering (Computer)	-	-	1	-	3	-	-	4	2	2
Mechanical Engineering	-	1	1	-	2	-	-	4	4	-
Public Health	-	-	1	-	3	-	-	4	3	1
Medicine - Medical Practice (General Practice)	-	-	1	-	3	-	-	4	2	2
Public Administration	-	-	1	-	3	-	-	4	4	-
Human Resource Management	-	1	1	-	2	-	-	4	3	1
Education	-	1	1	-	1	-	-	3	-	3
Business Administration	-	-	2	-	1	-	-	3	2	1
Mathematics Of Teaching	-	-	-	-	3	-	-	3	1	2
Physics Of Teaching	-	-	1	-	2	-	-	3	1	2
General / Environmental Biology	-	-	1	-	1	-	-	2	1	1
Engineering Architecture	-	-	-	-	2	-	-	2	-	2
Portuguese Language	-	-	2	-	-	-	-	2	1	1
Religious Career	-	-	2	-	-	-	-	2	1	1
Dentist	-	-	2	-	-	-	-	2	1	1
Nutrition	-	-	1	-	1	-	-	2	1	1
Public Law	-	-	-	-	2	-	-	2	2	-
Accounting	-	-	-	-	2	-	-	2	2	-
International, Bilateral And Multilateral Relations	-	-	-	-	2	-	-	2	2	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Training Of Primary And Pre-Secondary Teachers	-	-	-	-	2	-	-	2	1	1
Physics	-	-	1	-	-	-	-	1	1	-
Mining Engineering	-	-	-	-	1	-	-	1	1	-
Materials Engineering And Metallurgy	-	-	-	-	1	-	-	1	1	-
Agricultural Social Economy	-	-	-	-	1	-	-	1	-	1
Forest Resources And Forestry Engineering	-	-	1	-	-	-	-	1	1	-
Agricultural Engineering	-	-	-	-	1	-	-	1	-	1
Philosophy	-	-	-	-	1	-	-	1	1	-
Língua Inglesa	-	-	-	-	1	-	-	1	-	1
Computer Science	-	-	1	-	-	-	-	1	1	-
Transport Engineering And Telecommunications	-	-	-	-	1	-	-	1	1	-
Environmental Engineering	-	-	-	-	1	-	-	1	-	1
Pharmacy	-	-	1	-	-	-	-	1	-	1
Agro-Business	-	-	-	-	1	-	-	1	-	1
Engineering Of Agricultural Product Processing	-	-	-	-	1	-	-	1	1	-
Production Of Livestock	-	-	-	-	1	-	-	1	1	-
Fishing Engineering	-	-	1	-	-	-	-	1	1	-



Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Tourism And Hospitality	-	-	1	-	-	-	-	1	1	-
Pedagogical Biology	-	-	1	-	-	-	-	1	-	1
Teaching Chemistry	-	-	-	-	1	-	-	1	-	1
Catechism	-	-	1	-	-	-	-	1	-	1
Specific Curricula For Levels And Types Of Education	-	-	-	-	1	-	-	1	-	1
Pre-Primary And Primary Education	-	-	1	-	-	-	-	1	1	-
Teacher Training	-	-	-	-	1	-	-	1	-	1
Others	-	-	-	1	1	-	-	2	1	-
<b>Hato-Udo</b>										
<b>Total</b>	-	-	<b>6</b>	<b>1</b>	<b>36</b>	<b>1</b>	-	<b>44</b>	<b>27</b>	<b>17</b>
Law	-	-	-	-	5	-	-	5	4	1
Mathematics	-	-	1	-	3	-	-	4	1	3
Public Policy	-	-	-	-	5	-	-	5	4	1
Government Planning And Policy	-	-	-	-	2	1	-	3	2	1
Portuguese Language	-	-	1	-	1	-	-	2	1	1
Production Of Livestock	-	-	-	-	2	-	-	2	-	2
Economics Of Education	-	-	-	-	2	-	-	2	1	1
Physics Of Teaching	-	-	1	-	1	-	-	2	1	1
Pre-Primary And Primary Education	-	-	1	-	1	-	-	2	-	2

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Civil Engineering - Civil Construction	-	-	-	-	1	-	-	1	1	-
Mining Engineering	-	-	-	-	1	-	-	1	1	-
Agronomy	-	-	-	-	1	-	-	1	1	-
Sociology	-	-	-	-	1	-	-	1	1	-
English Language	-	-	-	-	1	-	-	1	1	-
Dentist	-	-	1	-	-	-	-	1	1	-
Nursing	-	-	-	1	-	-	-	1	1	-
Agro-Business	-	-	-	-	1	-	-	1	-	1
Inland Water Resources	-	-	-	-	1	-	-	1	1	-
Social Work (Including Gravedigger)	-	-	-	-	1	-	-	1	1	-
Economics Of Finance / Financial Management - Banking Economics	-	-	-	-	1	-	-	1	-	1
Mathematics Of Teaching	-	-	-	-	1	-	-	1	-	1
Education Sociology	-	-	-	-	1	-	-	1	1	-
Governmental Sciences	-	-	-	-	1	-	-	1	1	-
Peace Study	-	-	-	-	1	-	-	1	1	-
Others	-	-	1	-	1	-	-	2	1	1
<b>Hato-Builico</b>										
<b>Total</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>-</b>	<b>32</b>	<b>-</b>	<b>-</b>	<b>41</b>	<b>29</b>	<b>12</b>

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Education	-	-	1	-	5	-	-	6	3	3
Law	-	-	-	-	5	-	-	5	4	1
Mathematics	-	1	2	-	-	-	-	3	2	1
Political Science	-	-	-	-	3	-	-	3	3	-
Medicine - Medical Practice (General Practice)	-	-	-	-	3	-	-	3	2	1
Public Policy	-	-	-	-	3	-	-	3	3	-
Economy	-	-	1	-	1	-	-	2	1	1
Sociology	-	-	-	-	2	-	-	2	1	1
Portuguese Language	1	-	-	-	1	-	-	2	2	-
Physics	-	-	-	-	1	-	-	1	1	-
Biophysics	-	-	-	-	1	-	-	1	1	-
Pharmacy	-	-	-	-	1	-	-	1	-	1
Public Health	-	-	-	-	1	-	-	1	-	1
Agro-Business	-	-	-	-	1	-	-	1	1	-
Forestry Management	-	-	-	-	1	-	-	1	1	-
Regional And Urban Economics	-	-	-	-	1	-	-	1	1	-
Business Administration	-	-	1	-	-	-	-	1	1	-
Education Biology	-	-	-	-	1	-	-	1	-	1
Mathematics Of Teaching	-	-	-	-	1	-	-	1	-	1
Philosophy Of Education	-	-	1	-	-	-	-	1	1	-
Education Sociology	-	-	1	-	-	-	-	1	1	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Maubisse										
Total	3	-	27	1	58	-	-	89	44	45
Medicine - Medical Practice (General Practice)	-	-	1	-	8	-	-	9	1	8
Nursing	-	-	5	-	2	-	-	7	2	5
Accounting	-	-	-	-	6	-	-	6	3	3
Civil Engineering - Civil Construction	-	-	1	-	4	-	-	5	3	2
Mathematics	-	-	1	-	3	-	-	4	1	3
Mathematics Of Teaching	-	-	2	-	2	-	-	4	4	-
Physics Of Teaching	-	-	1	-	3	-	-	4	4	-
Education Sociology	-	-	1	-	3	-	-	4	2	2
Computer Technology Engineering (Computer)	1	-	-	-	2	-	-	3	3	-
Economics Of Education / Management Of Education	-	-	1	-	2	-	-	3	1	2
Agronomy	-	-	2	-	-	-	-	2	1	1
Law	-	-	-	-	2	-	-	2	2	-
Economy	-	-	-	-	2	-	-	2	1	1
Education	-	-	-	-	2	-	-	2	-	2
Pharmacy	1	-	1	-	-	-	-	2	-	2
Forestry Techniques And	-	-	-	-	2	-	-	2	1	1

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Operations										
Government Planning And Policy	-	-	-	-	2	-	-	2	1	1
Management	-	-	-	-	2	-	-	2	1	1
Economics Of Finance / Financial Management - Banking Economics	-	-	-	-	2	-	-	2	2	-
Education Biology	-	-	1	-	1	-	-	2	-	2
International, Bilateral And Multilateral Relations	-	-	-	-	2	-	-	2	1	1
Physics	-	-	-	-	1	-	-	1	1	-
Mechanical Engineering	-	-	-	-	1	-	-	1	1	-
Management	-	-	-	-	1	-	-	1	1	-
Sociology	-	-	1	-	-	-	-	1	1	-
Political Science	1	-	-	-	-	-	-	1	1	-
Sociolinguistics And Dialectology	-	-	1	-	-	-	-	1	-	1
Dentist	-	-	1	-	-	-	-	1	-	1
Public Health	-	-	1	-	-	-	-	1	-	1
Midwife	-	-	1	-	-	-	-	1	-	1
Maternal And Child Health	-	-	1	-	-	-	-	1	1	-
Teaching Chemistry	-	-	-	-	1	-	-	1	1	-
Cultural Studies	-	-	1	-	-	-	-	1	-	1
Pre-Primary And Primary	-	-	1	-	-	-	-	1	1	-

Study Program	LEVEL OF EDUCATION							Total	Gender	
	Diploma I	Diploma II	Diploma III	Diploma IV	Bachelor's Degree (S1)	Mester's Degree (S2)	PhD (S3)		Male	Female
Education										
Teacher Training	-	-	-	1	-	-	-	1	-	1
Others	-	-	2	-	2	-	-	4	2	2

## 2.5. Vocational Training Certificate Level I - Certificate IV

In the vocational / professional training course, about 1.2% (302/25917) of the total number of respondents in the Ainaro Municipality who had already participated in one of the Certificate I - Certificate IV courses. Of those who completed the certificate courses, 45.4% completed the Certificate I course, 22.8% Certificate II, 12.6% Certificate III and 19.2% Certificate IV (Table 6), while the largest training areas were Computer, Portuguese Language Course and English Language Course. Other areas of training represent very little. The predominant areas of Certificate I - Certificate IV training are Computer, Portuguese and English Language Courses. The data also show the lack of qualifications in some areas, which requires more attention and investment (Table 6). However the investment of the 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

Sub District Administrations	Total	Cert. I	Cert. II	Cert. III	Cert. IV	Training Area Requiring More Attention
<b>Ainaro</b>						
<b>Total</b>	<b>302</b>	<b>137</b>	<b>69</b>	<b>38</b>	<b>58</b>	Physiotherapy / Massage
Computer	95	48	25	12	10	Rural Water Supply
Portuguese Language	79	32	15	13	19	Coffee Production
English Language	44	24	12	-	8	Training For Contractors
Agriculture / Horticulture	5	2	2	-	1	Business Construction (General)
Information Technological	4	1	2	-	1	Small Machine
Financial Services (Micro Finance And Banking);	4	1	-	1	2	Public Communication To The Study Of The Public Sector (Seftek);
Improve Business	2	-	-	1	1	Bricklayer
Hospitality Management (General)	2	1	-	1	-	General Administration Of The Office
Carpentry	2	2	-	-	-	Welding / Welding
Solar Production	1	-	-	1	-	Plumbing
Public Office Administration	1	1	-	-	-	Photographer
Hospitality (Food Production)	1	-	1	-	-	Electricity
Tourist And Tourist Guide	1	1	-	-	-	Automotive And



Sub District Administrations	Total	Cert. I	Cert. II	Cert. III	Cert. IV	Training Area Requiring More Attention
						Maintenance.
Construction (General)	1	1	-	-	-	Training And Evaluation
Tailor / Seamstress	1	1	-	-	-	Police Investigation.
Others	59	22	12	9	16	Management For Police
<b>Ainara</b>						(Diploma) In Training And Evaluation
<b>Total</b>	<b>119</b>	<b>54</b>	<b>27</b>	<b>15</b>	<b>23</b>	Cooker
Computer	32	19	8	3	2	Hair Stylist / Hairdresser
Portuguese Language	29	10	8	5	6	Aesthetic Course (Manicure And Pedicure)
English Language	16	8	3	-	5	Piano And Music Course
Information Technological	3	1	2	-	-	Painter Of Arts, Paintings, Tattoos
Financial Services (Micro Finance And Banking);	2	1	-	-	1	Agricultural Course
Improve Business	1	-	-	-	1	Fishing Course
Hospitality (Food Production)	1	-	1	-	-	
Tourism And Tourist Guide	1	1	-	-	-	
Construction (General)	1	1	-	-	-	
Carpentry	1	1	-	-	-	
Tailor / Seamstress	1	1	-	-	-	
Agriculture / Horticulture	1	-	1	-	-	
Others	30	11	4	7	8	
<b>Hato-Udo</b>						
<b>Total</b>	<b>132</b>	<b>62</b>	<b>34</b>	<b>10</b>	<b>26</b>	
Computer	50	23	15	6	6	
Portuguese Language	28	13	5	2	8	
English Language	21	12	6	-	3	
Agriculture / Horticulture	4	2	1	-	1	
Improve Business	1	-	-	1	-	
Hospitality Management (General)	1	1	-	-	-	
Information Technological	1	-	-	-	1	
Financial Services (Micro Finance And Banking);	1	-	-	-	1	
Others	25	11	7	1	6	

Sub District Administrations	Total	Cert. I	Cert. II	Cert. III	Cert. IV	Training Area Requiring More Attention
Hato-Builico						
Total	22	12	4	3	3	
Portuguese Language Course	13	7	1	2	3	
Computer	6	4	2	-	-	
English Language Course	2	1	1	-	-	
Solar Production	1	-	-	1	-	
Others	-	-	-	-	-	
Maubisse						
Total	29	9	4	10	6	
Portuguese Language	9	2	1	4	2	
Computer	7	2	-	3	2	
English Language	5	3	2	-	-	
Hospitality Management (General)	1	-	-	1	-	
Public Office Administration	1	1	-	-	-	
Financial Services (Micro Finance And Banking);	1	-	-	1	-	
Carpentry	1	1	-	-	-	
Others	4	-	1	1	2	

## 2.6. Professional Occupations in the Public Sector

### 2.6.1. Permanent Public Servants

Table 7 shows that the public servants and teachers are the main occupations of the public sector and together account for 83.9% of the positions. 35.5% of teachers maintained their positions between a period of 6 - 10 years and 24% with more than 15 years. As for employees in general, the highest proportion are those who have maintained public servants between 1-5 years and 6 -10 years.

Table 7. Distribution of permanent public servants by occupation and years of services

Occupation	<1 Year	105 Years	6 - 10 Years	11-15 Years	>15 Years	Total	Percentage (%)
Teachers	14	75	158	91	107	445	53,61
Public Servants	8	85	98	44	17	252	30,36
Doctor / Medical Specialist	1	29	8	6	7	51	6,14

Occupation	<1 Year	1-5 Years	6 - 10 Years	11-15 Years	>15 Years	Total	Percentage (%)
Chief Department	-	6	3	4	3	16	1,93
General Director	-	2	1	4	6	13	1,57
National Director	-	-	2	2	5	9	1,-8
Defender / Judge	-	2	1	-	-	3	-,36
Others	2	10	21	5	3	41	4,94
<b>Total</b>	<b>25</b>	<b>2-9</b>	<b>292</b>	<b>156</b>	<b>148</b>	<b>830</b>	<b>100,00</b>
<b>Percentage (%)</b>	<b>3,0</b>	<b>25,2</b>	<b>35,2</b>	<b>18,8</b>	<b>17,8</b>	<b>100,0</b>	

Regarding the grade / level of the respondents, 89.3% of the positions are between the F / level 1 and the D / level 4 levels. The servants with a level above 6 are very few, registering about 2% and those with special regime 1.6% (Table 8).

**Table 8. Grade and level of permanent public servants interviewed**

Grade / Level	Frequency	Percentage (%)
Grade A / Level 7	6	0,72
Grade B / Level 6	16	1,93
Grade C / Level 5	54	6,50
Grade D / Level 4	155	18,65
Grade E / Level 3	452	54,39
Grade F / Level 1, 2	135	16,25
Especial Regime	13	1,56
<b>Total</b>	<b>831</b>	<b>100</b>

## 2.6.2. Temporary Public Servants

Table 9 shows temporary public servants by occupation and years of service. The occupational pattern is different from the permanent public servants, the majority are people with undefined occupations corresponding to 70.8% of the respondents. Teachers and staff are those who have a high number of temporary public servants. Both represent 27.2% of temporary public servants, while the hiring of specialized technicians is only 2.1%. As for the standard of service duration is similar to permanent public servants, the highest proportion are those who have maintained the public service between

1-5 years and 6-10 years and together represent 84% compared to those who have maintained the service more than 10 years, only 6.2%.

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

Year of work	Public Servants	Specialized technical	Teachers	Others	Total	Percentage (%)
<1 Year	6	1	1	16	24	9,9
1-5 Years	27	3	9	88	127	52,3
6 - 10 Years	17	1	5	54	77	31,7
11-15 Years	-	-	-	10	10	4,1
>15 Years	1	-	-	4	5	2,1
<b>Total</b>	<b>51</b>	<b>5</b>	<b>15</b>	<b>172</b>	<b>243</b>	<b>100,0</b>
<b>Percentage (%)</b>	<b>21,0</b>	<b>2,1</b>	<b>6,2</b>	<b>70,8</b>	<b>100,0</b>	

## 2.7. Level of Education of Temporary Public Servants

At the level of schooling, 71.8% of temporary public servants have a level of secondary education and a bachelor's degree with percentage of 18.8%. Those with pre-secondary levels represent 3.1% and the rest have a percentage less than 2% (Table 10).

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

Education Level	Number of employees	Percentage (%)
Primary	5	1,6
Pre-secondary	10	3,1
Secondary	229	71,8
Vocational Training	6	1,9
Others	1	0,3
Diploma I	2	0,6
Diploma II	1	0,3
Diploma III / Bachelor	5	1,6
Diploma IV	-	0,0
Bachelor's	60	18,8
Master	-	0,0
PhD	-	0,0
<b>Total</b>	<b>319</b>	<b>100</b>

## 2.8. Non-Public Sector (Private Sector)

The non-public sector (Private Sector) in the Ainaro Municipality persists small compared to the public sector. Although the growth of the non-public sector is one of the government's main goals, and most of those who do not currently work have expressed their interest of 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 12 respondents, 16.7% hold positions as Director / Deputy Directors of the organizations and the highest 83.3% are employees.

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

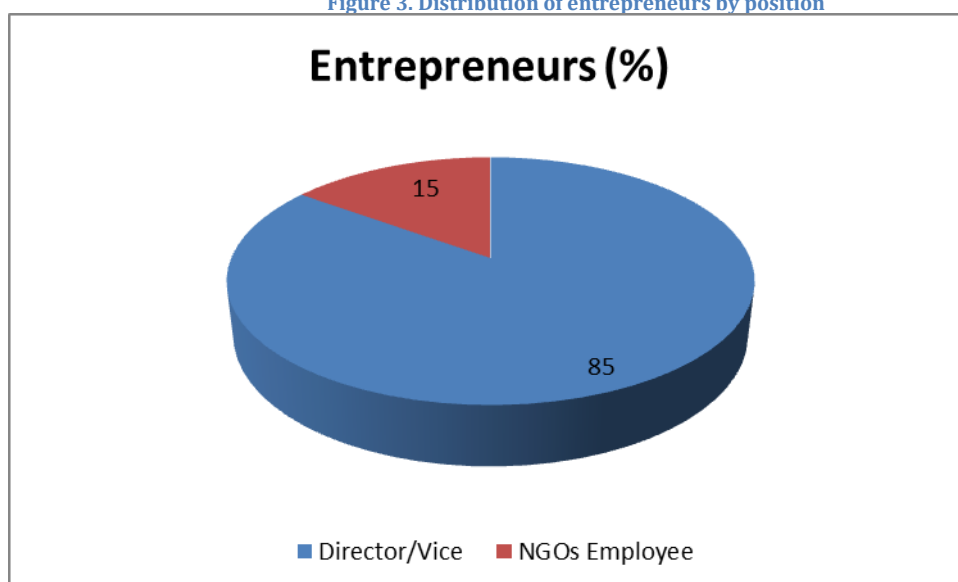


### 2.8.2. Entrepreneurs (Businessman)

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 essential to understand the human resources involved in this process and try to empower

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. 84.6% of the respondents are employed as Director or Vice Directors and 15.4% assume a function as a Director simultaneously as an employee of the same company.

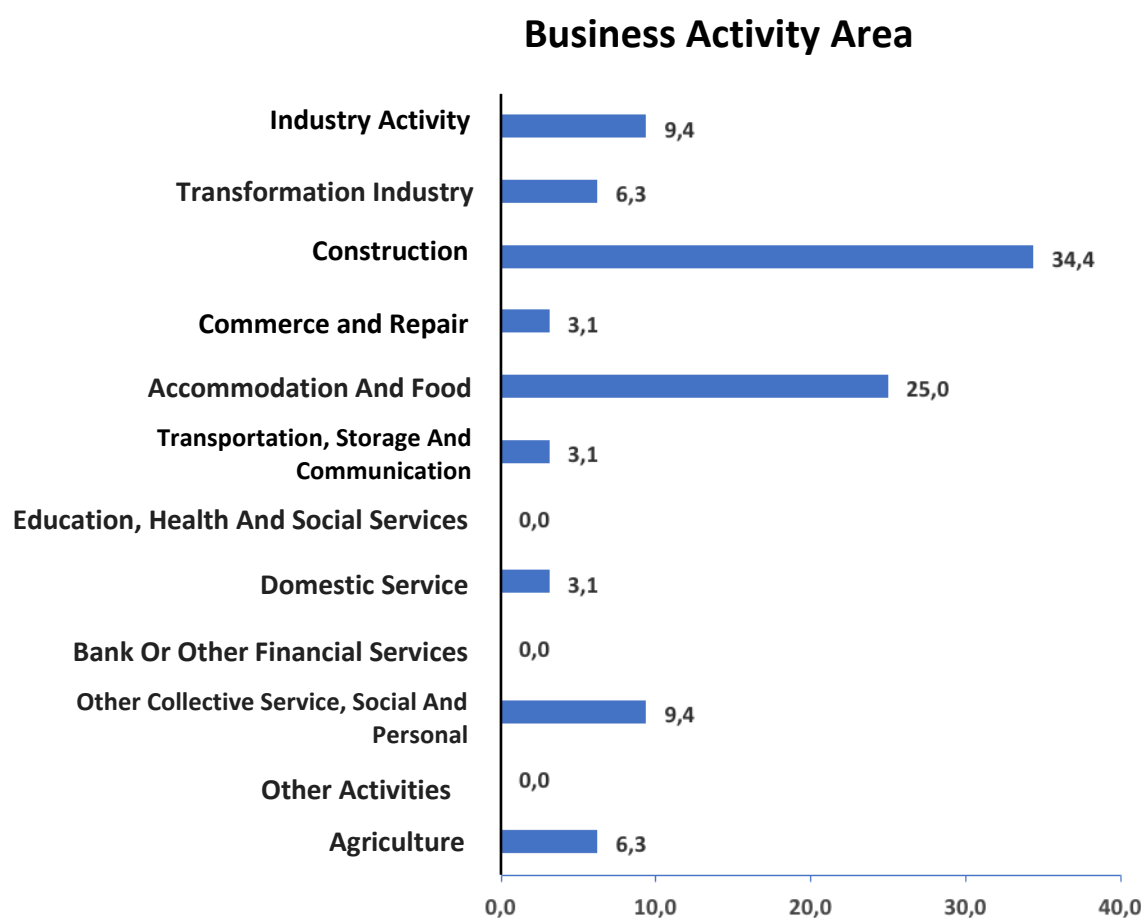
Figure 3. Distribution of entrepreneurs by position



### 2.8.3. Activity Sector

The largest proportion of the companies' areas of activity are related to construction, food accommodation, industrial activity and other social and personal collective services. Other sectors of activity are between 3 - 6.3%, being registered some sectors without registration of activities (Figure 4).

Figure 4. Distribution of activity areas of Entrepreneurs



#### 2.8.4. Education Level of Entrepreneurs

The data also show that most of the people involved have no level of education (71.2%), secondary education (10.9%) and pre-secondary education (7.8%). 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. 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 formation of qualified employees are crucial for the municipality.



Table 11. Distribution of entrepreneurs and level of education

Education Level	Number of Entrepreneurs	Percentage (%)
Can not read / write	5327	71,2
Secondary	815	10,9
Pre-secondary	584	7,8
Primary	348	4,7
Does not know read / write (did not finish primary)	229	3,1
Bachelor's Degree (S1)	104	1,4
Secondary Technical School	21	0,3
Diploma DIII	18	0,2
Secondary School	10	0,1
Secondary School of Agriculture	4	0,1
Secondary School of Social Assistance	4	0,1
2 <sup>nd</sup> Cycle (1 <sup>st</sup> Year, 2 <sup>nd</sup> Year)	2	0,0
3 <sup>rd</sup> Cycle (3 <sup>rd</sup> Year until 9 <sup>th</sup> Year / 3 <sup>rd</sup> Year – 9 <sup>th</sup> year	2	0,0
Secondary School of Sports	2	0,0
Diploma IV	2	0,0
1 <sup>st</sup> Cycle (1 <sup>st</sup> class up to 4 <sup>th</sup> class)	1	0,0
Secondary School of Nursing	1	0,0
Others	1	0,0
Diploma I	1	0,0
Master's Degree (S2)	1	0,0
Diploma II	0	0,0
PhD (S3)	0	0,0
<b>Total</b>	<b>7477</b>	<b>100,0</b>

## 2.9. Preferred Working Areas

This work 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 about 81.8% chose the non-public sector (private sector) compared to the public sector with 18.2%. The highest work

preference for the non-public and public sector was Maubisse's sub district administration (Table 12).

**Table 12 . Total number of respondents in the Municipality of Ainaro looking for a job and where they intend to work, in the public or private sector**

Sub district administrations	Public sector	Percentage (%)	Non-Public Sector	Percentage (%)	Total	Percentage (%)
Ainaro	276	28,7	314	7,3	590	11,2
Hato-Udo	140	14,6	1054	24,5	1194	22,7
Hato-Builico	66	6,9	246	5,7	312	5,9
Maubisse	479	49,8	2696	62,6	3175	60,2
<b>Total</b>	<b>961</b>	<b>100,0</b>	<b>4310</b>	<b>100,0</b>	<b>5271</b>	<b>100,0</b>

## 2.10. Business Sector Preferred to Work In

Table 13 shows that in the private sector the preference is mainly for agriculture (61.1%), domestic tasks (6.6%), construction (6.4%) and industrial activity (5.8%), with 5-7% preferring industry and construction. Other sectors of activity have a percentage less than 5%.

**Table 13. Distribution of areas of activity that respondents wish to work**

Activity sector	Sub District Administrations				Total	Percentage (%)
	Ainaro	Hato-Udo	Hato-Builico	Maubisse		
Agriculture	328	716	1,496	2,437	4,977	<b>61,1</b>
Industry	98	89	54	235	476	<b>5,8</b>
Transformation industry	53	25	40	144	262	<b>3,2</b>
Construction	77	109	54	285	525	<b>6,4</b>
Commerce and repair	39	29	104	197	369	<b>4,5</b>
Accommodation and Food	50	62	36	154	302	<b>3,7</b>
Transport, Storage and Communication	15	33	29	40	117	<b>1,4</b>
Education, Health and Social Work	48	20	164	86	318	<b>3,9</b>
Domestic Service	124	96	46	272	538	<b>6,6</b>
Bank or other financial services	11	11	9	35	66	<b>0,8</b>
Other collective, social and personal services	16	39	16	113	184	<b>2,3</b>
Other activities	0	1	1	4	6	<b>0,1</b>

Activity sector	Sub District Administrations				Total	Percentage (%)
	Ainaro	Hato-Udo	Hato-Builico	Maubisse		
Total	859	1,230	2,049	4,002	8,140	100,0
Percentage (%)	10,6	15,1	25,2	49,2	100,0	

### 2.11. Age Group of the Respondents Who are Looking for Job

Regarding the age group, the largest number of respondents seeking employment are young people aged between 17 and 36 years, representing around 66.6% (Table 14).

Table 14. Age range of respondents looking for a job

Age Group	Non-Public Sector	Percentage (%)
17 - 20	514	11,9
21- 24	653	15,2
25 - 28	675	15,7
29 - 32	598	13,9
33 - 36	471	10,9
37 - 40	360	8,4
41 - 44	329	7,6
45 - 48	189	4,4
49 - 52	118	2,7
53 - 56	68	1,6
57 - 60	42	1,0
61- 64	33	0,8
65+	260	6,0
<b>Total</b>	<b>4310</b>	<b>100</b>

### 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 115 graduates respondents, 74.8% intend to work in the public sector and only 25.2% intend in the non-public sector. Graduates want more work in the public sector rather than the private sector.

The areas of higher education courses with the highest number of job seekers "unemployment" is in the area of law with a percentage of 14.8%. Graduates in other areas are less than 10%, so these data are fundamental for municipal government, employers and other employers' partners in order to know how to take advantage and employ them.

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

Nu.	Study Program / Area of Specialization	Do Not Work And Want To Work?		Total	Percentage (%)
		Public Sector	Non- Public Sector		
1	Law	14	3	17	14,8
2	Civil Engineering - Civil Construction	3	5	8	7,0
3	Medicine - Medical Clinic (General Practice)	7	0	7	6,1
4	Economy	5	0	5	4,3
5	Management	5	0	5	4,3
6	Aquaculture	2	2	4	3,5
7	Accounting	3	1	4	3,5
8	Mathematics	2	1	3	2,6
9	Political Science	3	0	3	2,6
10	Computer Technology Engineering (Computer)	2	1	3	2,6
11	Public Policy	3	0	3	2,6
12	Architecture Engineering	1	1	2	1,7
13	Mining Engineering	2	0	2	1,7
14	Agronomy	1	1	2	1,7
15	Education	2	0	2	1,7
16	Nursing	1	1	2	1,7
17	Public Health	1	1	2	1,7
18	Government Planning And Policy	2	0	2	1,7
19	Economics / Human Resource Management	2	0	2	1,7
20	Economy Of Finance / Management Of Finances - Banking Economics	1	1	2	1,7
21	Teaching Biology	2	0	2	1,7
22	Teaching Mathematics	1	1	2	1,7

Nu.	Study Program / Area of Specialization	Do Not Work And Want To Work?		Total	Percentage (%)
		Public Sector	Non- Public Sector		
23	Teaching Physics	2	0	2	1,7
24	Sociology Of Education	2	0	2	1,7
25	General / Environmental Biology	1	0	1	0,9
26	Mechanical Engineering	1	0	1	0,9
27	Administration	1	0	1	0,9
28	Philosophy	1	0	1	0,9
29	Sociolinguistics And Dialectology	1	0	1	0,9
30	Computer Science	1	0	1	0,9
31	Transportation Engineering And Telecommunication	1	0	1	0,9
32	Industry Engineering/Technology Industry	0	1	1	0,9
33	Dentist	0	1	1	0,9
34	Pharmacy	1	0	1	0,9
35	Midwife	1	0	1	0,9
36	Maternal And Child Health	0	1	1	0,9
37	Forestry Techniques And Operations	0	1	1	0,9
38	Agricultural Product Processing Engineering	0	1	1	0,9
39	Animal Production (Livestock)	0	1	1	0,9
40	Inland Water Fishing Resources	0	1	1	0,9
41	Public Administration	1	0	1	0,9
42	Regional And Urban Economics	1	0	1	0,9
43	Teaching Chemistry	1	0	1	0,9
44	Economics Of Education / Management Of Education	1	0	1	0,9
45	Government Science / Comparative Government Systems	0	1	1	0,9
46	Catechism	1	0	1	0,9
47	Training Of Primary And Pre-Secondary Teachers	1	0	1	0,9
48	Others	2	2	4	3,5
<b>Total</b>		<b>86</b>	<b>29</b>	<b>115</b>	<b>100,0</b>

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

Table 16 shows the number of students surveyed in the Ainaro Municipality who are currently attending higher education in different study programs. The numbers show that the areas of study, where their graduates have a greater number of "unemployment" (Table 15), still remain areas with higher numbers of students (Table 16). The decentralization of local power that will be implemented by the government and the development of the private sector in the Municipality is expected to provide 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 currently attending courses in higher education

Nu.	Study Areas	Frequency	Percentage (%)
1	Management	17	10,2
2	Education	13	7,8
3	Civil Engineering - Civil Construction	10	6,0
4	Public Health	10	6,0
5	Mining Engineering	9	5,4
6	Sociology	8	4,8
7	Agronomy	4	2,4
8	Law	4	2,4
9	Computer Technology Engineering (Computer)	4	2,4
10	Midwife	4	2,4
11	Tourism And Hospitality	4	2,4
12	Public Policy	4	2,4
13	International, Bilateral And Multilateral Relations	4	2,4
14	Mathematics	3	1,8
15	Physics	3	1,8
16	Engineering Architecture	3	1,8
17	Public Law	3	1,8
18	Portuguese Language	3	1,8
19	Pharmacy	3	1,8
20	Medicine - Medical Practice (General Practice)	3	1,8
21	Economics / Human Resource Management	3	1,8
22	Economy Finance / Finance Management - Banking Economy	3	1,8
23	Teaching Biology	3	1,8
24	Teacher Training	3	1,8

Nu.	Study Areas	Frequency	Percentage (%)
25	General / Environmental Biology	2	1,2
26	Petrology	2	1,2
27	Public Administration	2	1,2
28	Accounting	2	1,2
29	Teaching Mathematics	2	1,2
30	Sociology Of Education	2	1,2
31	Chemistry	1	0,6
32	Electrical Engineering	1	0,6
33	Anesthetist	1	0,6
34	Agriculture Engineering	1	0,6
35	Psychology	1	0,6
36	Political Science	1	0,6
37	Theology	1	0,6
38	English Language	1	0,6
39	Environmental Engineering	1	0,6
40	Dentist	1	0,6
41	Nursing	1	0,6
42	Gastrointestinal Radiology, Medical Radiology	1	0,6
43	Agribusiness (Agribisniss)	1	0,6
44	Conservation Of Nature	1	0,6
45	Inland Water Fishing Resources	1	0,6
46	Aquaculture	1	0,6
47	Development Study	1	0,6
48	Business Administration	1	0,6
49	Teaching Physics	1	0,6
50	Teaching Chemistry	1	0,6
51	Government Science / Comparative Government Systems	1	0,6
52	Study Of Peace	1	0,6
53	Cultural Studies	1	0,6
54	Educational Psychology	1	0,6
55	Education (Teaching) Pre-Primary And Primary	1	0,6
56	Training Of Primary And Pre-Secondary Teachers	1	0,6
57	Others	1	0,6
<b>Total</b>		<b>167</b>	<b>100,0</b>

## 2.14. Year the course ends

Regarding to the estimation of the numbers of higher education students who will graduate or finish their courses in the next 6 years, the data in Table 17 show that

the areas of Management, Education, Civil Engineering (Civil Construction), Mining Engineering , Sociology and Public Health 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**

Study Area	Year The Course Ends							Total
	2017	2018	2019	2020	2021	2022	2023	
Management	7	2	3	3	1	0	0	16
Education	5	1	1	2	1	1	0	11
Civil Engineering - Civil Construction	5	2	0	1	1	0	0	9
Mining Engineering	2	2	2	1	1	0	0	8
Sociology	4	0	1	1	0	0	0	6
Public Health	1	2	2	0	1	0	0	6
Computer Technology Engineering (Computer)	2	1	0	1	0	0	0	4
Midwife	3	0	1	0	0	0	0	4
Tourism And Hospitality	1	2	0	0	1	0	0	4
International, Bilateral And Multilateral Relations	2	0	0	2	0	0	0	4
Mathematics	0	3	0	0	0	0	0	3
Physics	1	2	0	0	0	0	0	3
Agronomy	2	1	0	0	0	0	0	3
Public Law	0	0	1	1	1	0	0	3
Medicine - Medical Clinic (General Practitioner)	1	2	0	0	0	0	0	3
Economics / Human Resource Management	0	3	0	0	0	0	0	3
Economy Of Finance / Management Of Finances - Banking Economics	0	2	1	0	0	0	0	3
Teaching Biology	0	1	0	2	0	0	0	3
Teacher Training	1	0	1	1	0	0	0	3
General / Environmental Biology	0	1	1	0	0	0	0	2
Engineering Architecture	1	0	1	0	0	0	0	2
Portuguese Language	1	0	1	0	0	0	0	2
Petrology	1	1	0	0	0	0	0	2



Study Area	Year The Course Ends							Total
	2017	2018	2019	2020	2021	2022	2023	
Pharmacy	1	0	0	1	0	0	0	2
Accounting	0	0	0	0	2	0	0	2
Teaching Mathematics	2	0	0	0	0	0	0	2
Sociology Of Education	2	0	0	0	0	0	0	2
Public Policy	0	2	0	0	0	0	0	2
Chemistry	0	1	0	0	0	0	0	1
Electrical Engineering	0	0	0	1	0	0	0	1
Agricultural Engineering	0	0	0	1	0	0	0	1
Law	1	0	0	0	0	0	0	1
Psychology	1	0	0	0	0	0	0	1
Political Science	0	1	0	0	0	0	0	1
Theology	0	0	0	0	1	0	0	1
English Language	0	0	1	0	0	0	0	1
Environmental Engineering	1	0	0	0	0	0	0	1
Dentist	0	0	0	1	0	0	0	1
Nursing	0	0	1	0	0	0	0	1
Gastrointestinal Radiology, Medical Radiology	1	0	0	0	0	0	0	1
Agribusiness (Agribisniss)	0	0	0	1	0	0	0	1
Inland Water Fishing Resources	0	0	1	0	0	0	0	1
Aquaculture	1	0	0	0	0	0	0	1
Public Administration	0	1	0	0	0	0	0	1
Development Study	0	1	0	0	0	0	0	1
Teaching Physics	0	0	1	0	0	0	0	1
Teaching Chemistry	1	0	0	0	0	0	0	1
Educational Psychology	1	0	0	0	0	0	0	1
Education (Teaching) Pre-Primary And Primary	1	0	0	0	0	0	0	1
Training Of Primary School Teachers And Pre-Secondary Education	0	0	0	1	0	0	0	1
<b>Total</b>	<b>53</b>	<b>34</b>	<b>20</b>	<b>21</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>139</b>

## 2.15. The Demand of training for Personal and Institutional

### 2.15.1. Training in generic areas 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 the Ainaro Municipality. Table 18 below indicates the size of professional development training by training area and course duration. 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 1,021 respondents represent a substantial level of training activity, since 61.6% lasts 1 - 6 months, 26.9% less than one month and 11.5% have been for more than 6 months. It is also notable that the main courses were in the areas of leadership, information technology, finance, administration and planning. There are few indications of training in areas considered as priority areas for the municipality, such as agriculture, construction and hospitality and tourism.

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

Training Area	Duration				Total	Percentage (%)
	Less than 1 month	1 - 6 month	7 month - 1 year	More than 1 year		
Leadership	67	100	19	21	207	20,3
Business	45	79	11	6	141	13,8
Planning	39	74	2	7	122	11,9
Management	30	38	3	7	78	7,6
Human Resources	27	36	11	4	78	7,6
Information Technology	8	187	3	0	198	19,4
Procurement and Logistics	9	16	0	1	26	2,5
Management	29	60	6	8	103	10,1
Information System and Business Management	15	15	0	2	32	3,1
Media and Public Relations	5	0	0	0	5	0,5
Specialized technical	0	7	1	0	8	0,8
Others	1	17	1	4	23	2,3
<b>Total</b>	<b>275</b>	<b>629</b>	<b>57</b>	<b>60</b>	<b>1,021</b>	<b>100,0</b>
<b>Percentage (%)</b>	<b>26,9</b>	<b>61,6</b>	<b>5,6</b>	<b>5,9</b>	<b>100,0</b>	

### 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 highest percentage (59.8%) following the English language with 29.1%. The Tetum language has participation of 7.7% of the respondents and other languages with a participation of less than 3%. 65.3% of the courses are between 1 and 6 months, 4.5% less than one month and 32% more than 7 months. The Portuguese language and English language courses are the main courses conducted by the respondents in the Ainaro Municipality.

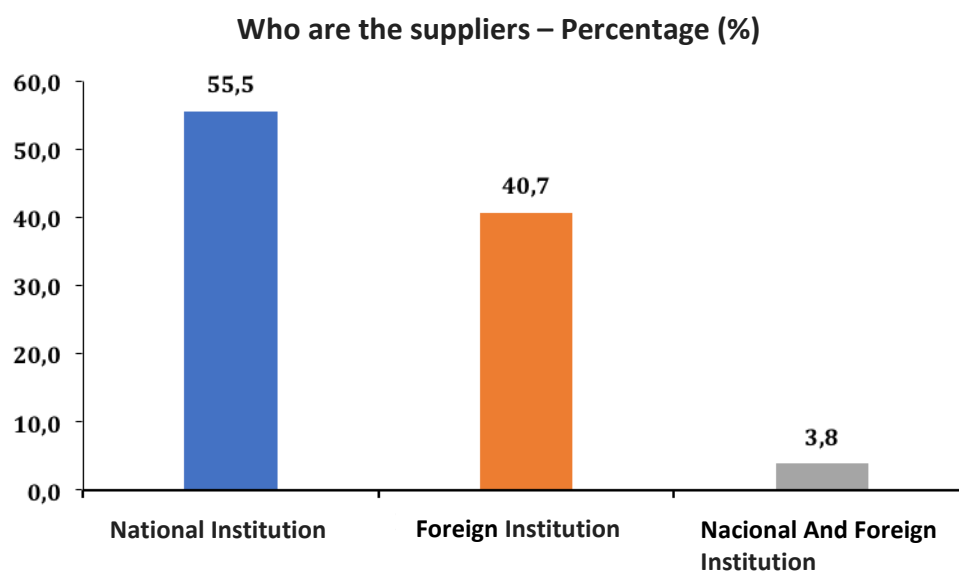
Table 19. Language training and the duration of the course

Type of training	Duration				Total	Percentage (%)
	Less than 1 month	1 - 6 month	7 month - 1 year	More than 1 year		
Portuguese	51	795	202	204	1,252	59,8
English	33	429	81	66	609	29,1
Tetum	7	92	28	34	161	7,7
Indonesia	1	33	5	6	45	2,2
Korea	2	10	4	0	16	0,8
Others	0	8	0	1	9	0,4
<b>Total</b>	<b>94</b>	<b>1,367</b>	<b>320</b>	<b>311</b>	<b>2,092</b>	<b>100,0</b>
<b>Percentage (%)</b>	<b>4,5</b>	<b>65,3</b>	<b>15,3</b>	<b>14,9</b>	<b>100,0</b>	

### 2.16. Institution Providers and Financing

55.5% of the training providers are national institutions, 40.7% provided by foreign institutions and only 3.8% promoted by national and foreign institutions (Figure 5).

Figure 5 . Institution provider of language training



### 2.17. Training Financing

Among the total number of respondents who have already done language training, 46.2% was financed by the trainee himself, 34.2% by the government and 14.3% by the private sector. Training with government support in cooperation with international partners and only by international partners corresponds to 4% and 1.3%, respectively (Table 20).

Table 20. Funders of language training

Sub District Administration	Government	Private sector	Own account	Government and international partners	International Partners	Total
Ainaro	227	199	234	38	14	712
Hato-Udo	156	32	173	11	2	374
Hato-Builico	112	11	179	10	7	319
Maubisse	116	14	239	12	1	382
<b>Total</b>	<b>611</b>	<b>256</b>	<b>825</b>	<b>71</b>	<b>24</b>	<b>1787</b>
<b>Percentage (%)</b>	<b>34,2</b>	<b>14,3</b>	<b>46,2</b>	<b>4,0</b>	<b>1,3</b>	<b>100,0</b>

## 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 training to generate capital gains, it is necessary to respond to the needs of the organization or institution and, consequently, those 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, public or non-public. 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 table 21, shows that the majority of respondents wish to raise their knowledge in the area of Language - Portuguese and English as being the official language and working language, respectively. Then areas such as computer technology-computer, teacher

training and education, management, administration and leadership professionals are possibly areas that offer more jobs.

The longing for training in specific areas such as agriculture, fisheries, livestock, tourism, in industries was not found in any of the respondents compared to generic training areas. This is due, of course, to the lower number of employees in this area in addition to the lack of knowledge on the part of respondents about the importance of training for self-employment. Check out training to broaden general knowledge are more preferred compared to specialized areas.

Table 21. Areas of training desired by non-employed respondents

Nu.	Training Areas	Frequency	Percentage (%)
1	Languages (English, Portuguese, etc.)	12	37,5
2	Varieties *	6	18,8
3	Information Technology, Database, Web, Software and Electronic Filing (registration) - computer	5	15,6
4	Teachers and Education Professionals	5	15,6
5	Management, Administration and Leadership	4	12,5
<b>Total</b>		<b>32</b>	<b>100,0</b>

\*) 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 formations

### 2.18.2. Development Training and Institutional Strengthening

As regards the second question - the personal development training and institutional / organizational strengthening applied to the employed respondents, the data in Table 22 shows that the areas of training such as Languages (Portuguese and English), Teacher and Professional Training of Education, Management, Administration, Leadership and Other Varieties, continue to be areas of higher preference desired by the respondents.

Table 22. Areas of training desired by non-employed respondents

Nu.	Training Area	Frequency	Percentage (%)
1	Languages (English, Portuguese, etc.)	96	37,9
2	Teachers and Education Professionals	45	17,8
3	Management, Administration and Leadership	41	16,2
4	Varieties *	24	9,5
5	Information Technology, Database, Web, Software and Electronic Filing (registration) - computer	15	5,9
6	Finance, Budget, Accounting and Planning	10	4,0
7	Information System & Business Management;	6	2,4
8	Agriculture	4	1,6
9	Medicine and Health Professionals	3	1,2
10	Procurement, Logistics and Asset Management	2	0,8
11	Police, Defense, Security (employee training)	2	0,8
12	Training of trainers	1	0,4
13	Law and Justice	1	0,4

Nu.	Training Area	Frequency	Percentage (%)
14	Human resource Management	1	0,4
15	Mediation Technique, Conflict Analysis, Conciliation and Sensitive Cases	1	0,4
16	Fisheries	1	0,4
<b>Total</b>		<b>253</b>	<b>100,0</b>

\*) 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 formations

## 2.19. Category and Academic Degree of Training

### 2.19.1. Vocational or Academic Training

When asked about the training category, of the 4365 respondents, 60.9% of the respondents intend to develop their knowledge through vocational / professional training courses and 39.1% in the Academic - higher education course (Table 23). The Administrative Office of Ainaro has a greater number of those who wish to have vocational / professional training.

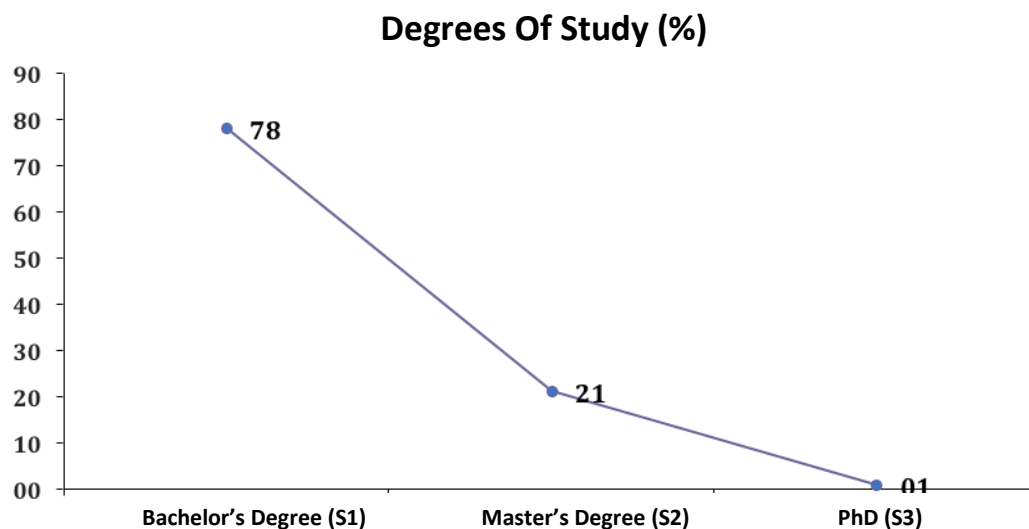
Table 23. Category of training - Academic or Vocational Training

Sub district administrations	Academic / University	Vocational Training	Total
Ainaro	721	1,008	1,729
Hato-Udo	437	696	1,133
Hato-Builico	274	404	678
Maubisse	274	551	825
<b>Total</b>	<b>1,706</b>	<b>2,659</b>	<b>4,365</b>
<b>Percentage (%)</b>	<b>39,1</b>	<b>60,9</b>	<b>100</b>

Among the 1,706 (39.1%) respondents who wish to take a course in higher education, 78% plan to increase their knowledge in undergraduate degree, 21.2% in master's degree and only 0.8% in doctoral studies (Figure 6).



Figure 6 . Degrees of studies wishing to continue



The details of the training areas and the academic degrees desired can be seen in table 24.

Table 24. Academic degrees and areas of study that wish to pursue

Training Area	Academic level courses (University)			Total
	Bachelor's Degree (S1)	Master's Degree (S2)	PhD (S3)	
Languages (English, Portuguese, etc.)	43	5	1	49
Teachers and Education Professionals	22	7	0	29
Management, Administration and Leadership	12	5	0	17
Information Technology, Database, Web, Software and Electronic Filing (registration) - computer	6	1	0	7
Finance, Budget, Accounting and Planning	3	2	0	5
Varieties *	4	1	0	5
Medicine and Health Professionals	0	2	0	2
Information System & Business Management;	2	0	0	2
Agriculture	1	1	0	2
Police, Defense, Security (employee training)	2	0	0	2
Training of trainers	0	1	0	1
Law and Justice	1	0	0	1
Mediation Technique, Conflict Analysis, Conciliation and Sensitive Cases	0	1	0	1
<b>Total</b>	<b>96</b>	<b>26</b>	<b>1</b>	<b>123</b>
<b>Percentage (%)</b>	<b>78,0</b>	<b>21,2</b>	<b>0,8</b>	<b>100,0</b>

\*) 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 Municipal Strategic Plan (PEM)**

The Ainaro Municipal 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:

1. Social capital: health, education and social protection;
2. Infrastructure: transport, telecommunications, energy and water supply and sanitation;
3. Economic fundamentals: targeting three sectors for development - agriculture, tourism and petrochemicals - to generate growth, jobs and new sources of public revenue beyond oil;
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 the 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 Ainaro Municipality identified the following needs for generic training areas in order to develop the capacity and competence of its human resources for the implementation of its strategic priority programs and municipal development, in line with the strategic development objectives.

Development of Social Capital:	
Education Sector	<ol style="list-style-type: none"> <li>1 In the area of education, children between the ages of 3 and 5 have to start enrolling in quality Pre-School;</li> <li>2 The children of Ainaro must attend quality basic education;</li> <li>3 Development of Vocational Technic education;</li> <li>4 Construct the building for Preschool and Basic Education in all the territory in the Ainaro Municipality;</li> <li>5 Establish and complete the educational facility and library in Ainaro;</li> <li>6 Build the garden or space to play in the playground on the school grounds;</li> <li>7 Build the housing for teachers or school teachers;</li> <li>8 Improve school meal management to promote nutrition.</li> <li>9 Eradication of illiteracy;</li> <li>10 Establish a professional technical training center in the areas of tourism and hospitality and others and employment center to facilitate young people to the labor market .</li> </ol>
Health Sector	<ol style="list-style-type: none"> <li>1. Ensure access to quality health for all citizens;</li> <li>2. All pregnant women should receive care and consultation of pregnancy and prenatal care at least 4 times;</li> <li>3. All pregnant women receive care and health care at the time of delivery;</li> <li>4. Children receive health care such as polio, tuberculosis, diphtheria and hepatitis B vaccine;</li> <li>5. Epidemic diseases caused by malaria are well controlled and reversed;</li> <li>6. All health centers at least have one doctor, two pharmacists and two nurses;</li> <li>7. Increase access to prenatal health care at the</li> </ol>

	<p>time of delivery, postnatal and quality family planning;</p> <ol style="list-style-type: none"> <li>8. Improve obstetric emergencies by introducing knowledge and treatment at the beginning of the case in community;</li> <li>9. Strengthen reproductive health performance in adolescents;</li> <li>10. Care for child health services;</li> <li>11. Improve health systems and other supports;</li> <li>12. Increase access to quality of occupational health services for immunization;</li> <li>13. Training in health services;</li> </ol>
<b>Youth and Sport</b>	<ol style="list-style-type: none"> <li>1) To establish a sports association directed by young people at administrative and municipal level;</li> <li>2) The construction of sports infrastructure such as stadiums and gymnasiums for volleyball, soccer, basketball and others;</li> <li>3) Construction of youth training centers at the municipal level;</li> <li>4) Support finances in youth sports activities in the community and promote quality talents;</li> </ol>
<b>Social inclusion</b>	<ol style="list-style-type: none"> <li>1. Social protection for vulnerable families, such as the elderly and people with disabilities (social security);</li> <li>2. Ensuring social security for workers;</li> <li>3. Improve the Social Inclusion Program, including the families of veterans, national liberation fighters, the mother's purse and the elderly;</li> <li>4. Create veterans council in the municipality;</li> <li>5. New construction for the office of social solidarity in the Municipality of Ainaro;</li> <li>6. Emergency assistance for families affected by natural disasters;</li> <li>7. Training on gender equality and participation of rural women in development.</li> </ol>

<p><b>Environment</b></p>	<ol style="list-style-type: none"> <li>1) Socialization and environmental awareness campaigns involving young people, students and community groups in the Municipality of Ainaro;</li> <li>2) Establish the planting centers at each administrative post for the conservation, protection of crops and the environment;</li> </ol>
<p><b>Culture and heritage</b></p>	<ol style="list-style-type: none"> <li>1. To mobilize, identify and promote all the natural, cultural and heritage heritage of the Municipality of Ainaro for investment needs such as local wealth;</li> <li>2. Strengthen local culture as a national identity</li> </ol>
<p><b>Development of The Economy</b></p>	
<p><b>Agriculture Sector</b></p>	<ol style="list-style-type: none"> <li>1. Increase horticultural production (vegetables, potatoes, beans, cabbage, etc.) production of coffee, rice and corn;</li> <li>2. Increase the investment capital of the coffee and vanilla plantation;</li> <li>3. Establish the center of veterinary services, such as vaccination in potential resources for pets in the Municipality of Ainaro;</li> <li>4. Provide training in sustainable animal health techniques;</li> <li>5. Establish research and development institutions for agricultural investments;</li> <li>6. Establish coffee processing center in Maubisse;</li> <li>7. Facilitating farmers' access to the market;</li> <li>8. Involve the private sector and promote agribusiness and agroindustrial activities.</li> </ol>
<p><b>Turism Sector</b></p>	<ol style="list-style-type: none"> <li>1) Develop potential sites in the Municipality of Ainaro for tourist destinations for domestic and foreign tourists;</li> <li>2) To construct infrastructure of tourist destinations connecting the positioning to places identified as historical sites;</li> </ol>

<b>Commercial and Industrial Sector</b>	<ol style="list-style-type: none"> <li>3) Rehabilitation of historical monuments as a monument of "Dom Aleixo Corte-Real";</li> <li>1. Optimize the merchant registration system;</li> <li>2. Develop small industries;</li> <li>3. Provide basic training or training for servers and competitive sectors;</li> <li>4. Create a sound market management system and efficiency;</li> </ol>
<b>Infrastructure Development</b>	
<b>Roads and Bridges</b>	<ol style="list-style-type: none"> <li>1. Effective monitoring of bridge construction;</li> <li>2. Build and link national, regional and rural bridges in the Municipality of Ainaro;</li> </ol>
<b>Electrical Sector</b>	<ol style="list-style-type: none"> <li>1) All residents in the Municipality of Ainaro have access to electricity for 24 hours;</li> </ol>
<b>Water and Sanitation Sector</b>	<ol style="list-style-type: none"> <li>1. All households in the Municipality of Ainaro have access to sustainable and guaranteed water and sanitation;</li> <li>2. Construction and construction of new sanitation in villages and schools;</li> <li>3. To construct the water channeling for all the households in the Municipality of Ainaro;</li> </ol>
<b>Telecommunications</b>	<ol style="list-style-type: none"> <li>1 70% of the population has access to low-cost and guaranteed telecommunications;</li> <li>2 Inform all activities through quality radio and educational broadcasts;</li> </ol>
<b>Institutional framework - focus on macroeconomic management and improvement of the capacity and effectiveness of government institutions.</b>	
<b>Good Governance Management on Public Sector</b>	<ol style="list-style-type: none"> <li>1. Establish the necessary legal framework for the development of the municipality;</li> <li>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</li> </ol>

<p><b>Justice</b></p>	<p>municipality;</p> <ol style="list-style-type: none"> <li>3. Ensure implementation of the land and property law;</li> <li>4. To reinforce the performance and the attendance services of the sucos authorities;</li> <li>5. Promote the favorable business environment to attract investment within the municipality;</li> <li>6. Strengthen the presence of community police in juices;</li> <li>7. Promote continuous dialogue for conflict prevention;</li> <li>8. Ensure public order, environmental health, law and freedom of expression of all people;</li> <li>9. Strengthen the implementation of the PNDS &amp; PDIM program;</li> <li>10. Increase employee knowledge in generic areas such as:                         <ul style="list-style-type: none"> <li>o Procurment Manegment</li> <li>o File Management</li> <li>o Accounting, Finance and Audit Management</li> <li>o Human resource Management</li> <li>o Territory Planning</li> <li>o Heritage Management and Logistics</li> </ul> </li> </ol> <ol style="list-style-type: none"> <li>1 Training for private lawyers, Notaries, Registration and lawyers;</li> <li>2 Training for magistrates and defense lawyers Specific training for magistrates and public defense lawyers;</li> <li>3 Management of public administration for employees involved in social / community development;</li> <li>4 Languages mainly Portuguese</li> </ol>
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### 3.2. Main Areas of Training

The Municipality of Ainaro 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 for the period 2023-2025 and in the long term to the end of 2030. Training needs were subdivided into two categories: the first refers to scholarships for technical and vocational education, bachelor's, master's and doctorate, and the second refers to professional development through participation in workshops, seminars and development in the work context. The data of the main training areas are presented in the following table, taking into account the short, medium and long term priorities.

Table 25. Distribution of training needs in the short, medium and long term

Main Areas of Training	Category of Training You Wish To Pursue (Academic / Professional)		Training priorities		
	Academic	Technician Professional	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (Until 2030)
Hospitality	√	√	√	√	
Architect	√	√	√	√	
A Translator	√	√	√		
Computer Technology	√	√	√	√	
Hospitality	√	√	√	√	
Cooker	√	√	√	√	
Receptionist	√	√	√	√	
Computer Engineer / Website	√	√	√	√	
History And / Or Domestic Tourism	√	√	√	√	
Horticulture Specialist	√	√	√	√	
Agroindustrial Specialist	√	√	√	√	
Veterinary Specialist					
Agricultural Production Specialist					
Fishing Specialist	√	√	√	√	
Forestry Engineer	√	√	√	√	
Mine And Gas Engineer	√	√	√	√	
Geophysics	√	√	√	√	
Natural Resource Experts	√	√	√	√	



Main Areas of Training	Category of Training You Wish To Pursue (Academic / Professional)		Training priorities		
	Academic	Technician Professional	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (Until 2030)
Fatuk - Raihenek	√	√	√	√	
Landscaper	√	√	√	√	
Soil Engineer	√	√	√	√	
Mine Engineer In Gas					
Civil Engineer (Civil Construction)	√	√	√		
Marketing	√	√	√		
Hospitality		√	√		
Workshop		√	√		
Gardening (Flowers)		√	√		
Qualification In The Area Of Sciences (Mathematics, Chemistry, Physics, Biology And Language)	√	√	√	√	√
Training And Recruiting Pre-School Teachers.	√	√	√	√	√
Teacher Training And Recruitment.	√	√	√	√	√
Qualification In The Area Of Administration, Logistics, Resource Management, Data Base, Finance And Procurement	√	√	√	√	√
Teacher Training (Teaching Method).	√	√	√	√	√
Recruitment		√	√	√	
Psychiatry, Midwife / Nurse, Doctor, Radiologist	√	√	√	√	√
Chemical Technician, Medical Specialist, Dentist.	√	√	√	√	√
Ophthalmology, Cardiovascular Specialist, Operation, Therapy Specialist	√	√	√	√	√
Public Health Technician	√	√	√	√	√
Medical Support	√	√	√	√	√

Main Areas of Training	Category of Training You Wish To Pursue (Academic / Professional)		Training priorities		
	Academic	Technician Professional	Short Term (2019-2022)	Medium Term (2023-2025)	Long Term (Until 2030)
Professional Training For The Disabled (Social Assistance)		√	√	√	√
Technical Support To Judges In The Courts.	√	√	√	√	√
Law Formation	√	√	√	√	√
Human Resources Training And Training		√	√	√	
Environmental Technical Recruitment And Forest	√	√	√	√	√
Low		√	√	√	√
Recruitment And Training	√	√	√	√	√
Professional Technical Support	√	√	√	√	√
Technical Administration, Staff Training For Bachelor's Degree	√	√	√	√	√
Training In Procurement	√	√	√	√	√
Technical Audit	√	√	√	√	√
Technical Finance And Training	√	√	√	√	√
Technical File And File Formation	√	√	√	√	√
Miscellaneous Technicians	√	√	√	√	√
Cadastral	√	√	√	√	√
Lawyer And Jurist	√	√	√	√	√
Administration	√	√	√	√	√
English And Portuguese	√	√	√	√	√

#### 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, the levels of education and areas of study, occupations and their intentions of training and/or employment in the desired areas were subsequently analyzed. The second is the identification of priority municipal programs based on the four pillars of the Municipal Strategic Plan (MSP/PEM) and key human resources that need training to develop the same priority programs. Attempts have been made to analyze and compare the existence of current human resources and the need for training/training required by the municipality based on its priority programs to allocate funding efficiently and effectively.

The data presented here show that the majority of respondent population in Ainara municipality are young people aged 17-36 years. At the level of knowledge, there are a large number of people with no education level (illiterate), followed by those with complete secondary, pre-secondary and basic education respectively.

This dispersion of education level, together with the rapid growth of the population in the relevant age groups, shows the essence of the challenge faced by the Ainara 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, either at the secondary technical level or at 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 skilled labor prepared for self-employment or institutional strengthening.

Those who have already taken part in one of the short-term professional courses in most are generic professional courses geared more towards administrative work and public function 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).

graduate course in Law, Civil Engineering - Civil Construction, Medicine (General Medicine), Economics, Management and others (see table below). 15). The work preference is in the public sector while the non-licensed have a preference in the non-public sector as Agriculture, Industrial Activity, Manufacturing Industry, Construction and others in smaller quantity (Table 13).

Analyzing the training preference based on the priority programs (Table 25) with the current human resources (Table 5), the data show that the Ainaro Municipality has a high number of graduates in several areas, even though it is verified that there is still needs 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 stress that there are still serious concerns about quality not only in technical knowledge but 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 international work. In this sense, it becomes important to unite with the additional training at the level of post graduations aimed at the priority technical areas and professional stages.

Another challenge demonstrated in the work presented was the greater 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 education of the Municipality will not be able to overcome the serious problems which are facing right now even the future challenges.

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 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 enterprise.

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

The municipality has identified skills shortages in the following sectors: Biophysics, Materials Engineering and Metallurgy, Mechanical Engineering, Agricultural Social Economy, Forest Resources and Forest Engineering / Forest Management, Agricultural Processing Engineering, Inland Water Resources, Sociolinguistics and Dialectology, Philosophy, Cultural Studies and others (see table 5). It also identified a lack of skills in the following areas: English, nursing, pharmacy, hospitality, accounting and auditing, machine operation, component manufacturing and assembly, engineering (design and development), literacy, software engineering and management (decision, leadership, delegation, motivation). Thus, it is considered that academic skill 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 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 with 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. It enables 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 at primary and secondary level due to various difficulties and this makes it difficult to get a job and the higher salary than the benefit 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 to enable them to acquire the knowledge and skills necessary to obtain a vocational qualification which help to overcome the concerns of employers so that they can have more opportunities and easier to entry into the labor market.

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 the elderly who did not have access to or stay in basic education, especially small and medium-sized business and farmers. Education and training for entrepreneurship is also principal 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 supply of study areas at the secondary and post-secondary level that is geared to the needs of the country (demand-driven secondary vocational education and demand-driven post secondary technical 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 order to develop human capital resources and achieve sustainable development in the future, the Ainaro municipality needs to pay more attention to the development opportunities identified in the Municipal Development Plan and the 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 should give priority to technical and professional training on academic, focusing more on the opening of vocational training centers (or Polytechnic institutes) to the detriment of the opening of more universities;
- b. Complement to the academic formation, the creation of courses of specialization to 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 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, domestic tasks, industry and construction.

Graduates and postgraduates with the greatest number of job seekers, "unemployment", are in the areas of Law, Civil Engineering - Civil Construction, Medicine (General Medicine), Economics, Management and others (see 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 quite a large number of people with disabilities who are job-poor and have inadequate professional qualifications or have very limited practical professional background. It is recommended the need to develop initial and continuing vocational training for people with disabilities and disabilities, in particular the gestural training for those with visual and hearing disabilities, so that they may have more opportunities to enter 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 PEDM, 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 municipality's agricultural needs;
  - **Construction** with a limited infrastructure inherited from the Indonesian government period and the continuous development needs, the municipality faces an important construction task. A



substantial investment in the local construction workforce appears to be necessary;

- **Tourism** continues to be a future opportunity, rather than a reality today for the municipality, 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, policy development and 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 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 enterprise;
  3. Technical and vocational education and training (TVET). The FDCH survey shows a lower level of TVET qualifications than university qualifications in the Municipality of Ainaro, 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. In particular, the increasing role of women, especially in agriculture, and with a higher skill level due to improved training, may contribute to household and national income growth, 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 supply of study areas at the secondary and post-secondary level that is geared to the needs of the country (demand-driven secondary vocational education and demand-driven secondary technical education).

## 6. Bibliographic References

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- General Directorate of Statistics - Ministry of Finance, Population and Housing Census in 2010;
- General Directorate of Statistics - Ministry of Finance, Population and Housing Census in 2015;
- Strategic Plan for National Development from the year of 2011-2030;
- Strategic Plan for Municipal Development 2016.

**Annex 1. Questions at the groups discussion**  
**QUESTIONS FOR GROUP DISCUSSION - GROUP I - GENERAL QUESTIONS**

Identify the Natural Resources that the Municipality / RAEOA-Oecusse has as priorities to develop!	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/Midterm and Long Term)		
		Academic	Professional Technical	Short Term (2019-2021)	Mid Term (2022-2025)	Long Term (2026 - 2030)
<b>TOURISM</b>						
<b>AGRICULTURE</b>						
<b>IDENTIFY OTHER POTENTIALS</b>						

**QUESTIONS FOR GROUP DISCUSSION - GROUP II - SOCIAL CAPITAL**

Social Capital	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/Midterm and Long Term)		
			Academic	Professional Technical	Short Term (2019-2021)	Mid Term (2022-2025)	Long Term (2026 - 2030)
EDUCATION AND TRAINING							
HEALTH							
SOCIAL INCLUSION							
ENVIRONMENT							
CULTURE AND PATRIMONY							

**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)
<b>DESENVOLVIMENTO RURAL</b>							
<b>AGRICULTURE</b>							
<b>PRIVATE SECTOR</b>							

**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. Attendance List of the participants in the group discussion

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

Nu.	Name	Position	Institution
1	Evalista M. Dila	Staff	MCI Regional III Ainaro
2	Fransisco Barros	Chefe Dept. PDIM	MAE
3	Osorio X. de Araujo	Diretor Interino	MAE
4	Jemribes D. Ferreira	Coordenador Indústria	MCI
5	Zulmira A. Martins	Reporter	R. C. L. T. Ainaro
6	Filomeno da Silva	Diretor DTPSC	MJ
7	Lucio R.	Diretor Agricultura	MAP
8	Zeferino G Magno	Funsionario DTPSC	DTPSC
9	Tomas M. dos Santos	Chefe Dept.	EDTL
10	Natalia de Orleans Amaral	Chefe Gabinete Agrikultura	Agrikultura Regiaun II
11	Joanito B. da S. Araujo	Chefe Dept. Civil	MJ
12	Mafilde da C. Cardoso	Staff	Estatistic
13	Joze H.	Dir. OPT	OP
14	Sonia Maria Martins	Staff	Obras Publica
15	Luis Alarico Fernandes	Oficial Financas	Obras Publica
16	Nuno P. de Araujo	Coordenador Arte Kultura	Educacao e Arte Kultura
17	Venancio de Araujo	Chefe Dep. Do Ensino	Educacao e Arte Kultura
18	Benjamin R. Guterres	Gestao Pessoal SSM	Saude Ainaro
19	Nazaria de Araujo	Admin. Posto Ainaro	Ainaro
20	Leovigildo A. Pereira	Saniamentu	Ainaro
21	Eduardo L. de Carvalho	Diretor SLAIM Ainaro	MAE
22	Maria da Costa	Staff	MAE
23	Fransisco Joao de A. Ribeiro	Tekniko Professiaonal	MCI
24	Florindo Amaral	Fokal Point R.H. EMA	Educacao
25	Germano de Araujo	Diretor SMASA	SMASA Ainaro
26	Filomeno Seixas Pinto	Diretor PNDS	PNDS - MAE
27	Arianto de O. Armario	Mis. PNDS	PNDS - MAE
28	Cancio da C. Sina	Staff Ad. M. A.	MAE
29	Eduar da Costa	Coord. Plano Internal	Plano Internal
30	Fransisco Guterres Araujo	Staff	MAE
31	Fabiola A. da Conceicao	Staff	MAE
32	Valdemir do A. Bucar	DNSPP	MI
33	Fernando do Nascimento	Staff	FDCH
34	Domingos Fernandes	DEAP	FDCH