Chapter 4 SECTORAL ACTIVITY FRAMEWORK

4.1 HUMAN DEVELOPMENT

Development of human resources plays a very important role in the implementation of national development of a nation. Human resources is not only the ultimate goal of development itself, but plays an important role as a mover and perpetrators of strategic plans and development programs that have been planned. In a broader scope, the development of human resources will include aspects of health, education and employment.

Human development is a complex problem that is affected by interrelated factors, such as the level of income, health, education, access to goods and services, location, geographical condition, gender, and the condition of the environment. Human development is also closely related to poverty. Poverty can be defined as a condition in which the basic rights to maintain and develop a decent life are not being met. The generally recognized basic rights encompass rights to have adequate food, to health, education, employment, housing, clean water, land, natural resources and the environment, to have a sense of security from acts or threats of violence and the right to participate in social-political life, for females as well as males.

4.1.1 Education

1. Key Issues

High quality human resources is always a priority in every nation's national development plan. Investment in human resource is reflected in the development plan of both education and health of every citizen. Education is an essential component in building qualified human resources; therefore it should be a priority in the strategic development plan. Education has a strong link with development which makes the education sector a perquisite to

develop other sectors. As an investment, education should empower children and allow them to contribute in the economy. Education stimulates and increases human potential.

As part of the strategic plan, education development should support the national development agenda in priority sectors, particularly agriculture and industrial sectors. Thus, it is expected that within a medium term stage (10 years) the existing people can fulfil the demand of workforce as needed by the economic growth.

In line with the Millennium Development Goals (MDGs), the Timor-Leste development plan has an objective that every child is required to fulfil their nine year basic education in 2015. Based on this global objective, Timor-Leste should be able to create a strategic plan to develop its human resources to become more qualified and competitive to answer the coming global challenges.

To answer these global challenges ahead, the Government of Timor-Leste will reform the education program to make high quality education become available for all levels of society.

2. Analysis

As a tool to design a suitable education program, understanding demographic movement is important. Approximately 53 percent of the Timor-Leste population is younger than 20 years old and around 15 percent are under 5 years old in 2007. The latest survey also indicates that Timor-Leste faces a high fertility rate, low life expectancy at birth, and high illiteracy.

High fertility rates imply higher demand of education as well as employment and public service demand in the future. One of the implications of low life expectancy at birth is low nutrition of the children that might affect capability to participate in school. It has been shown that children need 12 years to complete six years of basic education in Timor-Leste. Moreover, more than 51 percent of school age children are not in schools.

In Timor-Leste, the illiteracy level is the highest among middle-upper income countries. High adult illiteracy leads to strong resistant of the adults or parents in supporting of education. Families with a lot of children will use

these resources into more consumption rather than investment in human capital. This implies a socio-economic constraint at the household level.

According to the MDGs in education, every school age child is required to finish their basic education in 2015. In terms of education achievement, Timor-Leste is still very far from the goals to be achieved.

According to the Survey of Living Standard in 2007, only 8.7 percent, 10.2 percent, and 1.7 percent of the adult population of 18 years and older consecutively graduate from primary education, secondary education, and university in 2001. The progress of education attainment is very slow since only 13.8 percent of the same population graduates from secondary education in 2007. An even lower attainment is experienced at the university level in 2007. Low education attainment is mainly caused by low enrolment rates as well as low completion rates. Data indicates that only 70.7 percent of the enrolled children at primary education, 48.7 percent at enrolled pre-secondary education, and 28.4 percent at enrolled secondary education complete the respective education level.

Net enrolment rates at primary education, pre-secondary education, and secondary education is approximately 76.6 percent, 31.5 percent, and only 18.9 percent consecutively. Gender issues are apparent in education since female enrolment is relatively low compared to their male counterparts, particularly in pre-secondary education and secondary education.

Education facilities are major problem in the development of human resources in Timor-Leste. The Timor-Leste Survey of Living Standards in 2007 indicates that access to education facilities is low. Only approximately 73.8 percent and 33 percent of the national population regularly use primary school and secondary school facilities. Travel time from their households to the facilities is an average of about 53 minutes; with a travel distance of 3.6 kilometres. The variability of access to education facilities is almost similar to all regions. It shows that education facilities are not the only problems, but also that the access to the facilities themselves, such as road and other supporting infrastructures, is the crucial obstacle.

Based on medium scenario of National Population projection, it is predicted Timor-Leste's population approximately 1.18 million in 2011, subsequently in

2015 will increase to 1.33 million, in 2020 will be 1.52 million and in 2030 will be projected 1.96 million peoples.

The need assessment of school facilities based on minimum standard facilities for all level education, consist pre-school level (4-5 years old) up to higher level (20-24 years old). Assumed a pre-school facility with four classrooms could be support 120 students. Meanwhile a primary school and junior high school facility will be supporting 480 students.

The selective assumptions consist of:

- Assumption related to age of pre-school is predicted take part 20% of 4-9 total age structure.
- Assumption related to age of primary-school is predicted take part 80% out of 4-9 age and add 50% of 10-15 total age structure.
- Assumption related to age of junior high school is predicted take part 50% of 10 – 14 total age structure.
- Assumption related to age of senior high school is predicted take part 70% of 15 – 19 total age structure.
- Assumption related to age of vocational school is predicted take part 20% of 15 – 19 total age structure.
- Assumption related to age of higher level is predicted take part 10 % of 15 – 19 age structure and add 20% of 20 – 24 total age structure.

The number of education facilities and school level built at the end of development phasing period in 2015, 2020, and 2030 by districts are shown below.

Table 4.1 - Projection of Pre School Facilities Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility 1 : 120 students				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	11	1.563	1.740	1.908	2.244	13	15	16	19	2	1	1	3
2	Ainaro	4	2.202	2.452	2.689	3.162	18	20	22	26	14	2	2	4
3	Baucau	3	3.996	4.450	4.879	5.738	33	37	41	48	30	4	4	7
4	Bobonaro	9	2.916	3.247	3.561	4.188	24	27	30	35	15	3	3	5
5	Covalima	7	2.067	2.302	2.524	2.968	17	19	21	25	10	2	2	4
6	Dili	28	5.558	6.189	6.786	7.981	46	52	57	67	18	5	5	10
7	Ermera	7	4.486	4.996	5.478	6.443	37	42	46	54	30	4	4	8
8	Lautem	4	2.375	2.645	2.900	3.411	20	22	24	28	16	2	2	4
9	Liquica	7	2.174	2.421	2.655	3.123	18	20	22	26	11	2	2	4
10	Manatuto	2	1.375	1.531	1.679	1.975	11	13	14	16	9	1	1	2
11	Manufahi	10	1.791	1.994	2.187	2.572	15	17	18	21	5	2	2	3
12	Oecusse	2	2.022	2.252	2.469	2.904	17	19	21	24	15	2	2	4
13	Viqueque	4	2.590	2.884	3.163	3.720	22	24	26	31	18	2	2	5
	Total	**98**	**35.115**	**39.104**	**42.878**	**50.427**	**293**	**326**	**357**	**420**	**195**	**33**	**31**	**63**

Sources: Analysis

Primary school need assessment in most of the districts until medium term development (2020) had fulfilment, except district Dili. Baucau district in 2011-2020, it is indicated availability of primary school facility is adequate, however in 2030, this districts need additional new primary school facilities as much as 4 unit. However all the facilities had to maintenance and revitalize

in short-term, the initial education program is addressed to rehabilitate all primary school facilities in Timor-Leste.

Table 4.2 - Projection of Primary School Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility (1 : 480 students)				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	49	9.825	11.002	12.223	14.466	20	23	25	30	-	-	-	-
2	Ainaro	39	13.213	14.789	16.412	19.414	28	31	34	40	-	-	-	1
3	Baucau	71	24.370	27.280	30.286	35.832	51	57	63	75	-	-	-	4
4	Bobonaro	82	18.574	20.800	23.116	27.361	39	43	48	57	-	-	-	-
5	Covalima	74	12.924	14.471	16.075	19.023	27	30	33	40	-	-	-	-
6	Dili	62	34.374	38.484	42.739	50.573	72	80	89	105	10	9	9	16
7	Ermera	67	27.243	30.495	33.852	40.049	57	64	71	83	-	-	7	13
8	Lautem	49	14.162	15.850	17.587	20.802	30	33	37	43	-	-	-	-
9	Liquica	38	13.759	15.407	17.120	20.263	29	32	36	42	-	-	-	4
10	Manatuto	64	8.713	9.757	10.842	12.833	18	20	23	27	-	-	-	-
11	Manufahi	34	10.980	12.292	13.648	16.148	23	26	28	34	-	-	-	-
12	Oecusse	79	12.645	14.158	15.727	18.613	26	29	33	39	-	-	-	-
13	Viqueque	104	15.354	17.182	19.063	22.547	32	36	40	47	-	-	-	-
	Total	**812**	**216.138**	**241.965**	**268.690**	**317.924**	**450**	**504**	**560**	**662**	**10**	**9**	**16**	**38**

Sources: Analysis

The result of junior high school need assessment is seen if almost districts need additional facilities because it still under *Minimum Standard Facility*. Comparing number of facilities in 2004 as much as 134, it is needed additional facilities in 2011 as much as 32 units, in 2015 as much as 14 and in 2030 as much as 40 units. Only Aileu, Ainaro, Manatuto, and Manufahi are quite

Table 4.1 - Projection of Pre School Facilities Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility 1 : 120 students				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	11	1.563	1.740	1.908	2.244	13	15	16	19	2	1	1	3
2	Ainaro	4	2.202	2.452	2.689	3.162	18	20	22	26	14	2	2	4
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7	Ermera	7	4.486	4.996	5.478	6.443	37	42	46	54	30	4	4	8
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10	Manatuto	2	1.375	1.531	1.679	1.975	11	13	14	16	9	1	1	2
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Sources: Analysis

Primary school need assessment in most of the districts until medium term development (2020) had fulfilment, except district Dili. Baucau district in 2011-2020, it is indicated availability of primary school facility is adequate, however in 2030, this districts need additional new primary school facilities as much as 4 unit. However all the facilities had to maintenance and revitalize and improvement of teaching quality and equipment, textbooks etc. Directly in short-term, the initial education program is addressed to rehabilitate all primary school facilities in Timor-Leste.

Table 4.2 - Projection of Primary School Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility (1 : 480 students)				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	49	9.825	11.002	12.223	14.466	20	23	25	30	-	-	-	-
2	Ainaro	39	13.213	14.789	16.412	19.414	28	31	34	40	-	-	-	1
3	Baucau	71	24.370	27.280	30.286	35.832	51	57	63	75	-	-	-	4
4	Bobonaro	82	18.574	20.800	23.116	27.361	39	43	48	57	-	-	-	-
5	Covalima	74	12.924	14.471	16.075	19.023	27	30	33	40	-	-	-	-
6	Dili	62	34.374	38.484	42.739	50.573	72	80	89	105	10	9	9	16
7	Ermera	67	27.243	30.495	33.852	40.049	57	64	71	83	-	-	7	13
8	Lautem	49	14.162	15.850	17.587	20.802	30	33	37	43	-	-	-	-
9	Liquica	38	13.759	15.407	17.120	20.263	29	32	36	42	-	-	-	4
10	Manatuto	64	8.713	9.757	10.842	12.833	18	20	23	27	-	-	-	-
11	Manufahi	34	10.980	12.292	13.648	16.148	23	26	28	34	-	-	-	-
12	Oecusse	79	12.645	14.158	15.727	18.613	26	29	33	39	-	-	-	-
13	Viqueque	104	15.354	17.182	19.063	22.547	32	36	40	47	-	-	-	-
	Total	**812**	**216.138**	**241.965**	**268.690**	**317.924**	**450**	**504**	**560**	**662**	**10**	**9**	**16**	**38**

Sources: Analysis

The result of junior high school need assessment is seen if almost districts need additional facilities because it still under *Minimum Standard Facility*. Comparing number of facilities in 2004 as much as 134, it is needed additional facilities in 2011 as much as 32 units, in 2015 as much as 14 and in 2030 as much as 40 units. Only Aileu, Ainaro, Manatuto, and Manufahi are quite adequate till 2020.

Table 4.3 - Projection of Junior High School Level Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility (1 : 480 students)				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	8	3,575	4,042	4,591	5,490	7	8	10	11	-	-	2	2
2	Ainaro	10	4,406	4,981	5,658	6,766	9	10	12	14	-	-	2	2
3	Baucau	20	8,387	9,481	10,770	12,879	17	20	22	27	-	-	2	4
4	Bobonaro	9	6,909	7,810	8,872	10,610	14	16	18	22	5	2	2	4
5	Covalima	10	4,656	5,264	5,979	7,150	10	11	12	15	-	1	1	2
6	Dili	20	12,144	13,728	15,594	18,649	25	29	32	39	5	3	4	6
7	Ermera	7	9,298	10,511	11,939	14,278	19	22	25	30	12	3	3	5
8	Lautem	9	4,663	5,271	5,987	7,160	10	11	12	15	1	1	1	2
9	Liquica	7	5,061	5,722	6,499	7,772	11	12	14	16	4	1	2	3
10	Manatuto	8	3,213	3,632	4,125	4,934	7	8	9	10	-	-	1	2
11	Manufahi	11	3,816	4,314	4,900	5,860	8	9	10	12	-	-	1	2
12	Oecusse	5	4,556	5,150	5,850	6,997	9	11	12	15	4	1	1	2
13	Viqueque	10	4,994	5,645	6,412	7,668	10	12	13	16	-	1	2	3
	Total	134	75,679	85,551	97,177	116,215	158	178	202	242	32	14	25	40

Sources: Analysis

The result of senior high school need assessment is seen if all districts need additional facilities because the existing number of facilities is under *Minimum Standard Facility*. Comparing number of facilities in 2004 as much as 90, it is needed double additional facilities in 2011 as much as 91 units, in 2015 as much as 26 and in 2030 as much as 61 units as well. Private sector in senior high school is quite small, based on 2004 data, it is pointed that only approximately 32.2 % is owned by private sector besides the other by government. Therefore, provision of senior high school is more preferable to welcome private sector participation in the future.

Table 4.4 - Projection of Senior High School Level Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility 1 : 480 students				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	3	3.997	4.572	5.459	6.813	8	10	11	14	5	1	2	3
2	Ainaro	2	4.334	4.958	5.920	7.388	9	10	12	15	7	1	2	3
3	Baucau	6	8.452	9.667	11.544	14.407	18	20	24	30	12	3	4	6
4	Bobonaro	4	8.174	9.349	11.164	13.933	17	19	23	29	13	2	4	6
5	Covalima	6	4.862	5.561	6.640	8.287	10	12	14	17	4	1	2	3
6	Dili	33	20.214	23.121	27.609	34.456	42	48	58	72	9	6	9	14
7	Ermera	3	9.796	11.205	13.379	16.698	20	23	28	35	17	3	5	7
8	Lautem	4	4.555	5.210	6.221	7.764	9	11	13	16	5	1	2	3
9	Liquica	6	5.505	6.297	7.519	9.384	11	13	16	20	5	2	3	4
10	Manatuto	5	3.146	3.598	4.297	5.362	7	7	9	11	2	1	1	2
11	Manufahi	5	4.084	4.671	5.578	6.961	9	10	12	15	4	1	2	3
12	Oecusse	9	5.362	6.133	7.323	9.140	11	13	15	19	2	2	2	4
13	Viqueque	4	4.620	5.285	6.311	7.876	10	11	13	16	6	1	2	3
	Total	90	87.099	99.627	118.963	148.469	181	208	248	309	91	26	40	61

Sources: Analysis

Vocational school is a school in which students are taught the skills needed to perform a particular job. Refer to assumption above where age of vocational school is predicted take part 20% of 15 – 19 age structure. It means, men or women in Timor-Leste is expected prefer to vocational school. The number of students will take study in vocational school is approximately 42.420 students. Consequently it is needed facilities as much as 32 units in 2011, then 8 units in 2015, 12 units in 2020 as follow and rest is 18 units in 2030.

Comparing the existing number, it is still limited, except in Covalima and Lautem (till 2015). Types of vocational school that promote to develop are divided into business, hospitality-tourism, technical, agriculture school. Private sector in senior high school is quite small, based on 2004 data, it is pointed that only approximately 30 % is owned by private sector besides the other by government. Therefore, provision of vocational school is more preferable to welcome private sector participation in the future.

Table 4.5 - Projection of Vocational High School Level Needs (2011 – 2030)

No	District	Number of facility	School age prediction				Standard Facility (1 : 480 students)				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Aileu	0	1.142	1.306	1.560	1.947	2	3	3	4	2	1	1	1
2	Ainaro	0	1.238	1.416	1.691	2.111	3	3	4	4	3	-	1	1
3	Baucau	4	2.415	2.762	3.298	4.116	5	6	7	9	1	1	1	2
4	Bobonaro	0	2.335	2.671	3.190	3.981	5	6	7	8	5	1	1	2
5	Covalima	3	1.389	1.589	1.897	2.368	3	3	4	5	-	-	1	1
6	Dili	6	5.775	6.606	7.888	9.845	12	14	16	21	6	2	3	4
7	Ermera	0	2.799	3.201	3.823	4.771	6	7	8	10	6	1	1	2
8	Lautem	3	1.301	1.488	1.777	2.218	3	3	4	5	-	-	1	1
9	Liquica	0	1.573	1.799	2.148	2.681	3	4	4	6	3	1	1	1
10	Manatuto	0	899	1.028	1.228	1.532	2	2	3	3	2	-	-	1
11	Manufahi	2	1.167	1.335	1.594	1.989	2	3	3	4	-	1	1	1
12	Oecusse	2	1.532	1.752	2.092	2.611	3	4	4	5	1	-	1	1
13	Viqueque	0	1.320	1.510	1.803	2.250	3	3	4	5	3	1	1	1
	Total	**20**	**24.885**	**28.465**	**33.989**	**42.420**	**52**	**59**	**71**	**88**	**32**	**8**	**12**	**18**

Sources: Analysis

Higher education refers to a level of education that is provided at academies, universities, colleges, vocational universities, community colleges, liberal arts colleges, institutes of technology and certain other collegiate-level institutions, such as vocational schools, trade schools, and career colleges, that award academic degrees or professional certifications.

The existing number of higher education level in Timor-Leste is 20 units. Based on assumption the age of higher level is predicted take part 10 % of 15 – 19 age structure and added 20% of 20 – 24 age structure total, it is predicted 33.2000 (men or women) needed to get access higher education. Comparing to existing number, it seen number of facilities is inadequate so that new higher education facilities is required.

The provision of higher education facilities will be approached by coverage area. Given coverage age in higher education refer to use "Regional Area Concept" in Timor-Leste. These are five regions in Timor-Leste, such as Regional 1 (Lautem, Baucau, Viqueque); Regional 2 (Ainaro, Manufahi, Manatuto), Regional 3 (Aileu, Dili, Ermera), Regional 4 (Bobonaro, Covalima, Liquica) and Regional 5 (Oecusse). Based on these divisions of regional. It is estimated number of facility need in 2011 as much as 14 units, 5 units in

2015, 7 units in 2020 and 14 units in 2030 as well. In 2011, it is seemed that Region 4 (Bobonaro, Covalima and Liquica) is need more facilities development than other regions because these region do not have higher education level facilities, but the other hand, this region will be promoted as new growth centre in Timor-Leste, especially in Suai (capital of Covalima), and becoming new national urban in the future. (see table below)

The provision of higher education level is not solely developed by national government, but private sector participation still needed. Private sector participation could be contribution in new region, for instance in Region 4 in the future.

Table 4.6 - Facilities Need of Higher Education Level (2011 – 2030)

No	Region	Number of facility	Higher Level age prediction				Standard Facility (1 : 1000 students)				Number of Facility Need			
			2011	2015	2020	2030	2011	2015	2020	2030	2011	2015	2020	2030
1	Region 1	3	6.236	7.020	8.302	10.904	6	7	8	11	3	1	1	3
2	Region 2	1	4.258	4.925	5.822	7.664	4	5	6	8	3	1	1	2
3	Region 3	15	14.057	16.274	19.225	25.398	14	16	19	25	-	2	3	6
4	Region 4	0	6.601	7.634	9.026	11.868	7	8	9	12	7	1	1	3
5	Region 5	1	2.048	2.370	2.801	3.692	2	2	3	4	1	0	0	1
	Total	20	33.200	38.222	45.177	59.526	33	38	45	60	14	5	7	14

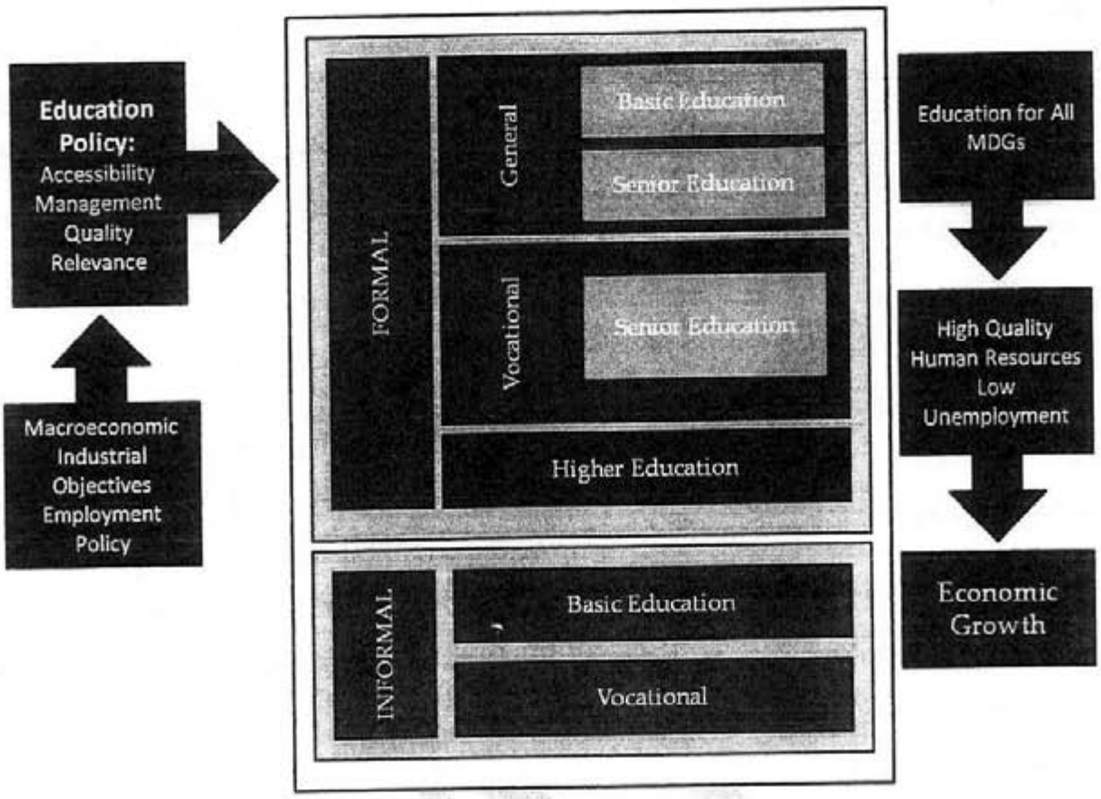
Sources: Analysis

3. Policy Direction

Considering the poor education conditions, which include low enrolment rates and low accessibility, the education policy focuses on four policy directions:

- Increase the enrolment rates in every district to achieve MDGs in the education sector by improving the accessibility to education facilities and motivating children to go to school
- Improvement of education quality to build competitive human resources
- Increase the relevance of the education curriculum to the current economy policy and plans
- Improve management of education programs and facilities
- Promote new facilities due to population growth till end year of 2030 for all education level (primary, secondary, and tertiary) with strong involvement private sector participation.

Figure 4.1 - Education System and Policy Strategy



4. Strategic Programs

To achieve the education sector targets, which include national targets and MDGs; four important programs are chosen: Accessibility (A), Management (M), Quality (Q), and Relevance (R). A different focus will be carried out every five years depending on the school level.

- Accessibility

  Every child with the age of 7-15 is required to have an access to primary education schools. The accessibility of primary education has to be achieved in 2015. During 2011-2015, basic education can be accessed not only at formal schools but also through informal education. Informal education is necessary to cater the drop-outs and provide them with literacy education.

  Informal education system has to be accommodated to answer the difficulties of less fortunate children with time, financial, and physical disability constraints.

- Management

Improvement of the management of the schools is important because it can make the education system more efficient. This consequently improves the delivery of education to the children and supports the national objective. Strategies are to increase the management capacity of the educators as well as the education administrators, with a human resources development policy and implementation plan for administrative staff and teaching staff.

- Quality

  The curriculum and quality of the teachers are the main concern for this program. The curriculum should be carefully developed and consider the requirement in building qualified human capital to supporting the strategic development plan. Certification programs to ensure quality of educators is an essential step to support the quality improvement of education.

- Relevance

  The relevance of education system to the economic, industrial and employment policy is important to ensure that the graduates supply is in accordance to the work force demand.

- Responding to Demand due to Population Growth

  Retaining existing education facilities even increasing capacity (for instance adding classrooms) are not inadequate to serve all Timor-Leste's people, because Timor-Leste Is one country that have high fertility rate. Therefore, in Strategic Development Plan insist develop new education facilities in future. The provision of new facilities will be separated to two tables, such as table of primary and secondary as one, and else which is table of higher education.

Based on table below, each facilities will be divided into 3 development stages, namely: stage I : (2011 -2015), stage II (2016 -2020) and stage III (2021 – 2030). These stages will inform how many facilities is provided by districts or regions. For instance, for pre-school level in first stage will be developed as many as 228 preschool, then second stage becoming 31 pre-school and third stage 63 pre-school.

Two tables below could be seen as strong challenge for national government as key stakeholder mainly to develop new development. Therefore, it is required private sector participation especially strongly becoming main actor in education delivery services. The provision of new facilities in higher education is strongly promoted by private sector. For example in coverage area in Region 4, is strongly promoted to develop new facilities in higher education level mainly in Suai (District of Covalima) and Maliana (District of Bobonaro). Two locations will be promoted as many as 8 new higher education in first stage, then will be followed in second stages as many as one facility, and third stages three facilities. Besides, in Region 3 (Dili, Ermera and Aileu) is seen in first stage will be promoted 2 new facilities and then in second stage will be added 2 new facilities and third stages are developed 6 new facilities.

Dealing with private sector participation, it is targeted in end of third stage, pre-school will be strongly targeted 90% by private sector, then primary and junior high school are demanded involvement private sector as many as 50 %. The rest, higher education such as academies, universities, colleges, vocational universities, community colleges, liberal arts colleges, institutes of technology and certain other collegiate-level institutions are promoted to involved private sector participation as many as 50 % of total new facilities in end of third stage.

Table 4.7 - The Development Stages of Primary and Secondary Level Education Facilities (2011 -2030) in Timor-Leste by Districts

No	District	Pre-School			Primary School			Junior High School			Senior High School			Vocational School		
		2011-2015	2016-2020	2021 -2030	2011-2015	2016-2020	2021 -2030	2011-2015	2016-2020	2021 -2030	2011-2015	2016-2020	2021 -2030	2011-2015	2016-2020	2021 -2030
1	Aileu	4	1	3	-	-	-	-	2	2	7	2	3	3	1	1
2	Ainaro	16	2	4	-	-	1	-	2	2	8	2	3	3	1	1
3	Baucau	34	4	7	-	-	4	-	2	4	14	4	6	2	1	2
4	Bobonaro	18	3	5	-	-	-	7	2	4	15	4	6	6	1	2
5	Covalima	12	2	4	-	-	-	1	1	2	6	2	3	-	1	1
6	Dili	24	5	10	18	9	16	9	4	6	15	9	14	8	3	4
7	Ermera	35	4	8	-	7	13	15	3	5	20	5	7	7	1	2
8	Lautem	18	2	4	-	-	-	2	1	2	7	2	3	-	1	1
9	Liquica	13	2	4	-	-	4	5	2	3	7	3	4	4	1	1
10	Manatuto	11	1	2	-	-	-	-	1	2	2	1	2	2	-	1
11	Manufahi	7	2	3	-	-	-	-	1	2	5	2	3	1	1	1
12	Oecusse	17	2	4	-	-	-	6	1	2	4	2	4	1	1	1
13	Viqueque	20	2	5	-	-	-	1	2	3	7	2	3	4	1	1
	Total	228	31	63	18	16	38	46	25	40	118	40	61	40	12	18

Source: Analysis

Table 4.8 - The Development Stages of Tertiary Level Education Facilities (2011 -2030) By Regions In Timor-Leste

No	Region	Capital of District (Location)	Higher Education		
			2011-2015	2016-2020	2021 -2030
1	Region 1	Baucau, Lospalos	4	1	3
2	Region 2	Same	4	1	2
3	Region 3	Dili, Glenno, Aileu	2	3	6
4	Region 4	Suai, Maliana	8	1	3
5	Region 5	Pante Maccasar	1	0	1
	Total		19	7	14

Source: Analysis

4.1.2 Health

The advancement of a nation/state is not dependent on its age or abundance of natural resources. Many countries are rich in natural resources, but these resources are drained by other nations or they are unable to create added value to the existing natural resources. This is caused by the low quality of human resources.

The quality of human resources is determined by the capacity of the human brain. The potential capacity of the human brain is determined at a very early age. To maintain the quality of the human brain, the main requirement is the good health of pregnant women and a healthy labour process. The health of the child, starting from when they are in the womb until the age of 5, must also be monitored closely. If a child's health deteriorates, the process of brain maturity will not achieve the optimal level.

Competitiveness of the next generation in the next 20-25 years will not be able to reach a good level without good maternal and child health. Maternal and children morbidity and mortality become sensitive indicators that contribute to the life expectancy levels. This is why the health of the mother, child, and the prevention of infectious diseases suffered by both are the three goals (from the total of eight goals) of the global commitment to Millennium Development Goals (MDGs).

1. Health Services and Facilities

The National Health Service system of Timor-Leste consists of primary, secondary, and tertiary health care. Health services could also be classified in two types of services: clinical/medical services and public health services. Services for the individual are still not effectively done. There are many cases that could be handled at the primary care level, but many patients go directly to secondary care facilities.

In general, the number of government health facilities is relatively adequate to conduct clinical/medical health care. However, these facilities still lack the equipment and other materials to provide good service to the community. Many health facilities are not supported by other supporting facilities such as clean water, electricity, and phone lines.

The organization of clinical/medical health services is still held by the government. Private enterprises are not yet actively involved. However, due to lack of incentives for health workers many of them run private practices outside government working hours, especially in urban areas like the city of Dili. This policy tends to make health standards lower as they do not provide adequate clinical services as government health facilities.

Health personnel resources are still lacking, both in terms of quantity and quality. A lot of doctors working in Timor-Leste are from overseas; but aside from doctors Timor-Leste also has many other health personnel shortages. In addition, there is an issue of dissemination and training of health workers who have not been handled properly.

2. Problem and Challenges

The problems and challenges facing health sector can be divided into broad categories namely policy issues, institutional issues and behavioural issues.

The policy issues include the absence of health services standardizations, poor road infrastructure and public transport facilities which causes difficulty for people to access adequate health services, system that can provide emergency referral services for women and children has not been fulfilled, lack of coordination between health and infrastructure access and insufficient health care funding.

The institutional issues covering lack of incentives for health workers. As a result many health workers run private practices outside government working hours, especially in urban areas like the city of Dili. This policy tends to make health standards lower as they do not provide adequate clinical services as government health facilities. Health personnel resources are still lacking, both in terms of quantity and quality. A lot of doctors working in Timor-Leste are from overseas. But aside from doctors, Timor-Leste also has many other health personnel shortages. In addition, there is an issue of dissemination and training of health workers who have not been handled properly. Lastly, national hospital's limitations in handling super-specialist cases

The behavioural issues include the followings:

- In term of malaria, public behaviour that is not compliant with the use of bed nets and malaria drugs free purchases without health recommendations. In addition, health service factors are not optimal because of the poor quality of health facilities in terms of diagnosis and treatment of malaria. There is also minimal health promotion in accordance with the local culture;
- The emergence of HIV-AIDS cases in Timor-Leste as many as 82 cases since the year 2000-2008. The quantity of this case is an iceberg phenomenon that should receive immediate attention from the government and society;
- High mortality because of non-contagious disease triggered by poor life style choices such as smoking, low fibre diet, lack of exercise, and bad driving behaviour;
- Many people still have low awareness of personal hygiene, for example many do not wash their hands using soap before eating;
- There is low community participation in health administration at the village and suco level.

3. Policy Direction

The health sector policy direction in the short-term (2011 - 2015) is aimed two aspects: to achieve the MDGs indicators and health system development that supports the MDGs. The policy includes:

a) Health development is an important input from the development of both Timor-Leste short term and long-term goal. Given the limited resources available the health development is focused on improving maternal and child health for the poor, rural, and other marginalized people so that they can:

- Improve access for the poor and rural population to primary and secondary health services.
- Improve the quality of primary and secondary health services with a variety of resources sufficient to provide adequate services in the achievement of the MDGs.
- Focus on health services and interventions that are cost effective or evidence based

- Ensure the sustainability of health services to meet the need of the government health budget, especially in the next five years
- Increase the participation of the public and private parties involved in health service
- Increase government budget for health by 15% of the total government budget

b) Develop a package of health services for basic health services and hospitals (Basic Services Package for Primary Health Care and Hospitals)

c) Policy development of health human resources working in the government is lean but effective through increased knowledge, skills, and incentives that can provide a quality service. The government will strengthen private health workers so that the private sector can operate properly in the Timor-Leste. The Government will meet the needs of health workers in the country to educate the sons of the nations either within the country and abroad.

d) The Government will develop operational research studies as a basis for decision making.

Table 4.9 - Target Group of Integrated Community Health Services (SISCa)

No	District	Infant (0 -4 years)					Women (15-24)					Elderly (> 65 years)				
		2004	2011	2015	2020	2030	2004	2011	2015	2020	2030	2004	2011	2015	2020	2030
1	Aileu	6,278	8,462	9,084	9,865	11,315	3,507	4,654	5,363	6,362	8,226	816	989	1,076	1,638	2,013
2	Ainaro	9,242	12,458	13,373	14,523	16,657	4,356	5,793	6,682	7,920	10,284	1,625	1,940	2,116	3,207	3,975
3	Baucau	15,803	21,302	22,867	24,833	28,482	7,810	10,367	11,947	14,172	18,329	5,076	6,026	6,594	9,976	12,346
4	Bobonaro	13,587	18,315	19,660	21,351	24,488	8,057	10,707	12,345	14,637	18,976	3,710	4,470	4,866	7,395	9,128
5	Covalima	8,563	11,543	12,391	13,456	15,433	4,791	6,365	7,339	8,702	11,276	2,006	2,372	2,590	3,915	4,880
6	Dili	27,721	37,367	40,112	43,561	49,961	21,257	28,354	32,747	38,768	50,656	3,256	3,910	4,239	6,439	8,030
7	Ermera	17,383	23,431	25,153	27,316	31,329	9,225	12,254	14,126	16,751	21,696	2,925	3,496	3,812	5,780	7,160
8	Lautem	9,871	13,306	14,283	15,511	17,790	4,286	5,689	6,556	7,776	10,056	2,555	3,023	3,299	4,988	6,218
9	Liquica	8,369	11,281	12,110	13,151	15,083	5,089	6,758	7,790	9,238	11,959	2,010	2,362	2,585	3,900	4,865
10	Manatuto	5,953	8,024	8,614	9,355	10,729	2,938	3,905	4,502	5,338	6,921	1,501	1,784	1,952	2,955	3,653
11	Manufahi	7,444	10,034	10,771	11,697	13,416	3,896	5,177	5,970	7,078	9,176	1,535	1,831	1,996	3,024	3,757
12	Oecusse	9,544	12,865	13,810	14,997	17,201	5,540	7,369	8,500	10,074	13,085	1,610	1,944	2,108	3,207	3,980
13	Viqueque	10,986	14,809	15,897	17,263	19,800	4,630	6,154	7,096	8,412	10,909	3,519	4,176	4,562	6,902	8,570
	Total	150,744	203,196	218,125	236,879	271,685	85,382	113,546	130,962	155,227	201,547	32,144	38,323	41,796	63,327	78,575

4. Strategic Program

In accordance with the policy direction that health sector is focused on, the achievement of the MDGs service programs are directed at the achievement of strategic health that can be done by strengthening the status of various health resources.

a) Development and Empowerment of the Health System. It includes the complement of the input according to the needs of the MDGs. In the long run, Timor-Leste should have a strong health system in order to provide adequate health services for the entire population of Timor-Leste as a nation unsure welfare.

b) Child Health:

- Services are provided on the intervention of evidence-based interventions which are both preventive and curative
- Antenatal care that improve child health, including the provision Iron and Folate, disease detection for syphilis, HIV and PMTCT (prevention of mother to child transmission of HIV), tetanus toxoid, breast feeding, insecticide treated bed nets
- Essential services include neonatal cord care, eye drops, vitamin K, asphyxia neonatal resuscitation, kangaroo care, and promotion of exclusive breast feeding, detection and referral of new born.
- Improving child and maternal nutrition, including micronutrients and macronutrients
- Providing nutrition for children who suffer from malnutrition
- Immunization for all infants
- Integrated management of ill children, especially pneumonia, diarrhoea, and malaria

c) Maternal Health:

- Maternal death usually goes through a delay model that can be divided into three categories:

i) The first delay – decision to delay care due to traditional factors: absence of permission from the family, ignorance, decisions from husband / parents, economic factors, and lack of access.

ii) The second delay – delay caused by the range of facilities, limited communications network, limited roads, and lack of transport.

iii) The third delay – difficult to get services outside working hours, lack of health worker skills, unfriendly staff, limited infrastructure, lack of equipment and consumables including essential drugs.

- In addition, specific antenatal care services are provided, such as post-natal care, contraception, and abortion services because of medical indications.

d) HIV-AIDs

- Educate people about high risk behaviour
- Promote condom usage
- Treat sexually transmitted diseases
- Tuberculosis finding and treatment with Direct and Observed Treatment Short Course (DOTS)
- Malaria prevention with the promotion INSECTICIDE-treated bed nets and improve malaria treatment

Table 4.10 - Implementation of Integrated Community Health Services (SISCa) Program (2011-2030)

No	District	Target Location (Sucos)	Target Group (Vulnerable Groups)					Standar SISCa Post (1:1000)				Implementation SISCa Posts (unit)			
			2004	2011	2015	2020	2030	2011	2015	2020	2030	2011-2015	2016-2020	2021-2030	Total
1	Aileu	31	10,601	14,105	15,524	17,866	21,554	14	16	18	22	16	2	4	22
2	Ainaro	21	15,223	20,191	22,170	25,649	30,915	20	22	26	31	22	3	5	31
3	Baucau	59	28,689	37,695	41,408	48,981	59,156	38	41	49	59	41	8	10	59
4	Bobonaro	50	25,354	33,491	36,872	43,383	52,592	33	37	43	53	37	7	9	53
5	Covalima	30	15,360	20,280	22,320	26,073	31,589	20	22	26	32	22	4	6	32
6	Dili	31	52,234	69,630	77,098	88,768	108,647	70	77	89	109	77	12	20	109
7	Ermera	52	29,533	39,181	43,091	49,847	60,185	39	43	50	60	43	7	10	60
8	Lautem	34	16,712	22,017	24,138	28,276	34,064	22	24	28	34	24	4	6	34
9	Liquica	23	15,468	20,401	22,485	26,289	31,907	20	22	26	32	22	4	6	32
10	Manatuto	29	10,392	13,713	15,068	17,647	21,303	14	15	18	21	15	3	4	21
11	Manufahi	29	12,875	17,043	18,736	21,800	26,349	17	19	22	26	19	3	5	26
12	Oecusse	18	16,694	22,178	24,418	28,278	34,266	22	24	28	34	24	4	6	34
13	Viqueque	35	19,135	25,138	27,554	32,578	39,279	25	28	33	39	28	5	7	39
	Total	442	268,270	355,065	390,883	455,433	551,807	355	391	455	552	391	65	96	552