

The Democratic Republic of Timor-Leste

# **Data Collection Survey on Industrial Development for Timor-Leste**

## **Final Report**

June 2014

**Japan International Cooperation Agency (JICA)**

**International Development Center of Japan Inc.  
KRI International Corp.**

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Exchange Rate  
May 2014  
USD 1 = ¥ 102.58  
(JICA Rate)



出所: National Statistics Directorate, Democratic Republic of Timor-Leste (2006)  
 “Timor-Leste Census of Population and Housing 2004.”

Map of Timor-Leste

Photos taken during the field work in Timor-Leste



Dili Port



CCT (Coffee factory)



Gota (Water Company)



Timor Block Building Industry



Timor Gas



ASZ



Moris Foun Handicraft Group



Coconut Oil production



English learning course(ETDA)



Salt industrials



CNEFP



SEPFOPE employment signboard

## Abbreviations

ADB	Asian Development Bank
ADN	National Development Agency
AEI	Specialized Investment Agency
ANAAA	National Agency for Academic Assessment and Accreditation
ASEAN	Association of South - East Asian Nations
ATP	Accredited Training Provider
BCTL	Central Bank of Timor-Leste
BNCTL	National Commercial Bank of Timor-Leste
CCT	Cooperative Café Timor
CCI-TL	Chamber of Commerce and Industry of Timor-Leste
CEOP	Employment and Career Guidance Center
CNEFP	National Centre for Employment and Professional Training
DIT	Dili Institute of Technology
EFA	Education for All
ETDA	East Timor Development Agency
GDP	Gross Domestic Product
GDP/C	Gross Domestic Product per capita
GIS	Geographic Information System
GNI	Gross National Income
HACCP	Hazard Analysis Critical Control Point
IADE	Institute for Business Development Support
ICT	Information and Communication Technology
IFC	International Financial Cooperation
IMF	International Monetary Fund
INDMO	National Labour Force Development Institute
ILO	International Labor Organization
ISC	Industry Sub-Commission
JICA	Japan International Cooperation Agency
KOICA	Korea International Cooperation Agency
LFP	Pragmatic Framework Study of Labor Force Planning 2014
LNG	Liquefied Natural Gas
MAF	Ministry of Agriculture and Fisheries
MCIE	Ministry of Commerce, Industry and Environment
MOFA	Ministry of Foreign Affairs and Cooperation
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOJ	Ministry of Justice
MOPCOM	Ministry of State and the Presidency of the Council of Ministers
MOPW	Ministry of Public Works
MOSA	Ministry of State Administration

MOSS	Ministry of Social Solidarity
MOT	Ministry of Tourism
MOTC	Ministry of Transport and Communications
MPRM	Ministry of Petroleum and Mineral Resources
NFQ	National Qualification Framework
NGO	Nongovernmental Organization
PPP	Public-Private Partnership
SDP	Strategic Development Plan
SEAPRI	Secretariat of State for Support and Promotion of Private Sector
SEPFOPE	Secretariat of State for Vocational Training and Employment
SOLS24/7	Science of Life Studies 24/7
TVET	Technical Vocational Education and Training
UNFPA	United Nations Population Fund
UNTL	National University of Timor-Leste
WB	World Bank



## EXECUTIVE SUMMARY

### 1. Back ground of the study

Timor-Leste suffered various political disruptions after gaining independence in 2002, but has achieved relatively steady economic growth thanks to oil revenues from the Bayu Undan and Kitan deep-sea oil and gas fields after the establishment of a petroleum fund in 2005. Public safety has rapidly improved in line with the stable economy. The election in 2012 was successfully completed without serious problem. With its social stability and the withdrawal of the United Nations Mission in East Timor (UNAMET) at the end of 2012 after being stationed in the country since 1999, Timor-Leste is now at the stage of self-sustaining development, as described by the catchphrase “Good-bye Conflict, Welcome Development”.

In 2011, the Government of Timor-Leste announced a Strategic Development Plan (2011-2030) (SDP) with the aim of becoming an “Upper Middle Income Country”. The SDP states that the development of the Timor-Leste economy will be built around the growth of three critical industries: agriculture, tourism and petroleum. It also mentions that in order to achieve the objective, it aims to create job opportunities and to develop human resources by breaking away from excessive dependence on oil and establishing key industries. The Government is formulating a 5-year investment plan while major ministries are making mid-term plans for projects to achieve the objectives of the SDP.

The most desirable output of the development program is employment creation. The statistics for 2010 estimate the population of Timor-Leste at 1,066,409 with an annual growth rate of 2.4%. The population will double by 2039 if this high growth rate continues. The youth population is expected to increase sharply, with 15,000 to 16,000 people entering the labor market every year, and yet Timor-Leste has not succeeded in fostering key industries to absorb the working population. Therefore, the immediate establishment of key industries is essential to absorb this working population.

To generate employment, it is necessary to diversify industries and develop new ones, as the Timor-Leste government recognizes. However, it is difficult to diversify industries because the Timor-Leste market is small due to the small population, while the petroleum sector is too large to allow other sectors to grow. Amid this environment, the Timor-Leste government has started industrial development programs including small business training, technical and vocational education and training (TVET), and overseas training.

The Data Collection Survey on Industrial Development for the Republic of Timor-Leste (“The Study”) aims to achieve the following objectives by analyzing the current industrial human resource development and enterprise development which are the key factors for industrial development and diversification, and by analyzing the gap between the policies and current status of Timor-Leste in order to identify what kinds of human resource development and enterprise development are required. The study was carried out based on previous studies such as the “Study on Business Opportunities

Development of Timor-Leste 2013”, “Study on Cooperation for Timor-Leste’s Accession to ASEAN 2013” and “Pragmatic Framework Study of Labor Force Planning 2014”(LFP). The field survey was carried out mainly by interviewing MCIE and other relevant ministries, 40 major private enterprises, vocational training schools, private associations, producers groups, and NGOs.

The results of the study were announced to the ministries, private enterprises and related organizations in a seminar titled “Industrial Development of Timor-Leste, The role of MCIE in Human Resource Development” organized with MCIE.

## **2. Current situation and issues of industries in Timor-Leste**

Agriculture, which is the dominant primary industry, heads the list of strategic sectors of the SDP. However, agriculture and fishing in Timor-Leste are mostly at the stage of self-sufficiency for families or small communities. For food, people in the cities such as Dili still rely on imports. For example, only 25% of the rice produced in Timor-Leste is traded and the rest is domestically consumed. Coffee is exported as an organic, Fairtrade product and accounts for 60% of non-oil exports. Vegetables produced in the districts are transported to Dili and distributed through markets. Due to the lack of a value chain, the quantity is limited. There is a pilot project organized by a supermarket to purchase vegetables directly from farms in the districts and deliver the vegetables to Dili using its own fleet. Modernization of the food industry and logistics system is essential for the development of both the agriculture industry and human resources who sustain the progress of agricultural technology.

The secondary industry in Timor-Leste is led by the mining industry (oil and cement) in the capital-intensive industries and by the construction industry in the labor-intensive industries. There are signs of manufacturing being started by local capital, such as the start-up of five mineral water enterprises in 2 years. The LFP estimates that the labor force in the secondary industry will rise to 104,000 in 2030 from 22,000 in 2010. To achieve this big increase, human resource development, upgrading of traffic infrastructure and the smoothing of finance are essential. The key measure, which attracts little attention, is to create and improve middle management and engineering. Many companies wish to replace foreigners by Timorese, but they cannot find appropriate human resources. From a macro perspective, it is very difficult and undesirable for all mid-level human resources to be foreigners. Thus, the development of mid-level human resources is crucial.

The major oil and gas fields are Bayu Undan and Kitan, both of which are deep-sea oil fields. Bayu Undan has attracted investments from Conoco Phillips, ENI, Santos, Inpex, Tokyo Electric and Tokyo Gas, while Kitan has attracted investments from ENI, Timor Gap (owned by the Timor-Leste government) and Inpex. The royalty income from these fields was 2.7 billion US dollars in 2013, while other revenue was just 146.3 million US dollars, thus oil and gas accounted for 94.8% of the government’s total revenue of 2.8 billion US dollars.

In Timor-Leste, the Tasi Mane Project is being implemented as a national project. This project will

build on the southern coast of Timor-Leste a supply base (Suai), a refinery and petrochemical plant (Betano), and an LNG plant (Viqueque), and will also connect the facilities by a highway and thus industrialize the southern coast. The supply base project in Suai started in 2014. In Baucau, there are reserves of gypsum and limestone. In March 2014 the Timorese government announced that Timor-Leste Cement, which is jointly owned by BGC, an Australian cement company, and Swan Energy, would build a 1.5 million-ton cement plant in Baucau. Some 30% of the cement produced will be for domestic consumption, and the remaining 70% will be exported to Australia. The total investment is USD500 million.

Since infrastructure construction is important in the SDP, the construction industry is vital to achieve the SDP. In the LFP, the number of employees in 2010 is 13,000, and is expected to increase to 36,000 by 2030. Local construction companies have grown to become the main contractor of major projects. There is an urgent need for construction companies to train middle management such as engineers and supervisors, because these are the key players in construction.

The manufacturing industry, which employs only 8,000 employees (3.3% of the private sector), is small. However, LFP estimates that the labor force of this sector will increase to 67,000 (13.8% of the private sector). The manufacturing industry can develop if import substitution progresses, so the pace of starting businesses as well as the level of quality and productivity should be improved. When the Study Team observed factories, several points were found to have been improved by 5S and cleanliness and efficiency training.

Employment in the tertiary industry is forecast to reach 243,000 people by 2030 from 86,000 people in 2010, according to the employment survey. Also in this field, the lack of mid-level human resources, especially middle management, has become a serious problem. Luxury hotels and supermarkets of Dili were conventionally a business target for foreigners. However, half of the guests and customers of restaurants and coffee shops at luxury hotels and high-end supermarkets are now Timorese. The domestic market is growing steadily. Food, which used to be purchased from abroad directly by supermarkets, etc., is now purchased by supermarkets from domestic dealers and distributors who import the food. The distribution and service industry was nationalized before manufacturing, even though distributors handle imported products.

Tourism is one of the three priority areas in the SDP. The LFP forecasts that the labor force in the accommodation and food industry will increase from 8,000 in 2010 to 16,000 in 2030.

Timor-Leste has excellent tourism resources, and more and more foreigners are visiting Timor-Leste for diving and whale-watching.

IADE was founded in 2006, and is responsible for aid and promoting the investment of domestic capital. It is also responsible for giving training in bookkeeping, business planning and business administration.

Generally, financial services in Timor-Leste are underdeveloped. There are only four commercial banks, three of which are the branches of foreign banks, and two of them have only one branch in Dili. Micro finance is supplied for small and micro enterprises by NBCTL and NGOs. There is no stock exchange market or long-term finance institution in Timor-Leste. The SDP plans to establish the

National Development Bank and Timor-Leste Investment Agency in order to promote industry. The National Development Bank, which is in the process of being established, will offer loans at affordable rates to satisfy the unmet demand for long-term finance, which is estimated to be around \$50 million. The Timor-Leste Investment Corporation (TLIC), an investment company modeled on Tamasek Holding of Singapore and with capital of \$2 million already allocated in the budget of 2012, is to be established soon. TLIC will be a joint stock company established by degree law and the Government of Timor-Leste is the sole shareholder. TLIC will be involved in commercial activities in investing in sectors that are not attractive to other investors. The potential investments foreseen for TLIC may consist of following projects: Undersea cable internet project, Tourism projects, Office tower projects, Shopping complex projects. Timor-Leste has the problem that ownership of many lands is not clear, and that land ownership by foreigners and foreign enterprises is prohibited. Therefore, financing with land collateral is difficult. Since long-term borrowing from banks is difficult, private enterprises use the owners' own money, borrowing privately and retaining earnings for investment. It is essential to accelerate the modernization of the finance sector to make money flow more smoothly, as capital is the one of the main resources of industrial development.

Timor-Leste is located geographically at the transportation crossroads between resource-rich Australia and growing Asian countries. The northern coast of Timor-Leste is suitable for the construction of a deep-sea port. Although logistics currently face various problems such as narrow roads, a domestic-standard airport, and narrow sea ports, which create continuous demurrage of vessels, these logistic infrastructures are now being modernized with the support of international donors.

### **3. Industrial policy of Timor-Leste**

As per the Data Collection Survey on the Pragmatic Labor Force Plan 2014, the population of Timor-Leste will increase to approximately 500,000, which is nearly double the figure in 2010. If fresh labor demand is not created by 2030, the supply of workers will exceed the demand, resulting in higher unemployment. This is why industrial promotion is urgently required.

Currently, since more than half of the labor force of Timor-Leste have not completed basic education and there are few workers holding a technical or vocational education institute certificate, diploma, bachelor degree or masters degree, many expatriates are employed as managers, engineers and skilled workers in Timor-Leste. Therefore, there is an urgent need to replace such expatriates by Timorese.

There are two main types of industrial policy. One is the "laissez faire" policy to minimize intervention by the government and to let industrial development be guided by market principles. This policy is selected by countries in Europe and the US where private capital has grown strong. The other policy is to let the government play a leading role in industrial development. This policy is selected by countries in Asia where industry remains weak. Most Asian countries have achieved industrial development by implementing mid- and short-term industrial policies based on long-term industrial development goals. Their industries have steadily gone through the cycle of import substitution,

labor-oriented industrial development, promotion of export industry by foreign investment, resource oriented heavy industrialization, technology oriented industry development, service industry development, and high value-added/cutting-edge advanced technology industry development.

MCIE is the central organization of the government responsible for the conception, execution, coordination and evaluation of the policies and was established in 2012 under the 5th Constitutional Government. It has three main directorates, i.e. Directorate of Commerce, Directorate of Industries and Cooperatives, and Directorate of Environment. The Industries and Cooperatives Directorate is mainly in charge of industrial policy. As per the Degree Law under which MCIE was set up, its scope is commerce and industry and is not limited to small and micro enterprises. However, according to the Budget 2014 and its policies noted above, MCIE’s scope is limited to issuing business licenses, promoting small and micro enterprises, promoting local industries, subsidies, micro finance arrangements, operation of a vocational training center for small and micro enterprises, and quality management of export food products. The planned free trade zone and industrial zone are still in the pipeline.

One reason for promoting exports is “To give incentives and help business sectors where trade is growing, and to take part in a globalized economy to gain competitiveness and capacity” and also there is the vision of import substitutes, such as “Introducing new industrial technologies to transform and gradually reduce the import dependency towards some products”. However, due to the lack of an industrial policy, MICE does not clearly envisage which industry to promote in order to boost products, nor which industry to be modernized will produce import substitute products.

The trade balance of Timor-Leste shows that imports reached 670 million USD, against 31 million for USD exports excluding oil and gas. Timor-Leste is heavily dependent on the import of fuel, food, and daily consumables. The SDP sets a goal of reducing the dependence on imports. Thus, there is an urgent need to set up an industrial policy to improve the situation.

Table: Trade Balance of Timor-Leste 2012

Item	Comodity	U\$MM
Import	Power plant	244
	Fuel	104
	Automobile, parts	53
	Steel, Irons products	35
	Cerial (Rice etc)	31
	Machinery, parts	30
	Others	173
	Total	670
Export	Coffee	19
	Others	12
	Total	31
	Oil and Gas	2,280
	Grand Total	2,342

Source: BCTL 2013

#### **4. Human Resource Development**

It is important for a country to effectively train human resources to lead the economy and industrial development. Site supervisors and heavy equipment operators at construction sites are necessary skilled workers in the construction industry. Meanwhile, managers in key positions in foreign companies tend to be “company managers” active in international business. Farmers and producers handling marketable goods such as coffee, virgin coconut oil (VCO) and so on in groups and cooperatives, as well as university students who start up new businesses in advertising and design, are recognized as “business entrepreneurs”.

As all three types of human resource, namely skilled workers, company managers, and business entrepreneurs, are indispensable driving forces to support and develop industries, the country needs to establish a proper framework for training such human resources through education and training as well as employment creation, thus effectively supplying skilled human resources to the labor market.

In this study, industrial human resources are divided into three categories: skilled workers, management and entrepreneurs. Then, the three priority industrial sectors identified in the SDP (Agriculture, Tourism, and Oil and Gas) as well as Construction sector which develops/ improves infrastructures necessary for supporting growth of the priority industries were summarized respectively focusing on their needs in human resource development, and the HRD related programs were reviewed in view of to what extent satisfactory/ relevant to the needs.

The table on the next page shows the current situation and needs of industrial human resource development in the three priority areas and Construction sector based on the study results.

Table: Industrial human resource development programs

	Agriculture	Tourism	Oil-related industry	Construction
<b>Skilled worker</b>	<p><b>[Needs]</b> Capacity building for improvement of agricultural productivity and quality improvement of agricultural produce</p> <p><b>[Current Situation]</b> A few vocational training centers provide training courses of agriculture. Accredited courses of agriculture is only for the basic level (Level 1 and 2). The training for organic cultivation in Josefinia farm brought the improvement of agricultural productivity, extension of market and income improvement to farmers.</p> <p><b>[Areas to improve]</b> Increment of the training centers providing training course of agriculture. Improvement of the training courses (e.g. GAP/Good Agricultural Practice) training Expansion of the training for organic cultivation like Josefinia farm project</p>	<p><b>[Needs]</b> Hotel and restaurant Persons with English and basic academic skills Improvement of manners customer service in conversation Improvement of cooking skills <b>[Taxi]</b> Improvement of taxi service in driving techniques and service manners</p> <p><b>[Current Situation]</b> Around one half of vocational training centers provide basic training courses of tourism and hospitality. In recent years, the number of students increased. Also, employment situation in tourism area is relatively good. MoT sent trainees overseas to promote tourism and hospitality. In addition, MoT invited trainers from abroad to conduct training in Timor-Leste.</p> <p><b>[Areas to improve]</b> Improvement of training course of tourism and hospitality at vocational training centers Increase vocational training centers which provide training course of tourism and hospitality Expansion of conducting the training in neighboring area where tourism industry has been advanced Enhancement of English language courses <b>[Taxi]</b> Encourage taxi drivers and owners of taxi</p>	<p><b>[Needs]</b> Persons with sufficient PC skills and English proficiency</p> <p><b>[Current Situation]</b> Vocational training centers provide basic course of business administration and finance Higher education institutions provide English language course and PC training</p> <p><b>[Areas to improve]</b> Promotion of human resource development through programs implemented by government, institutions and private organizations</p>	<p><b>[Needs]</b> [Unskilled, semi-skilled worker] Basic academic skills such as reading, writing and arithmetic Basic manners of business, such as punctuality or attitudes to boss Awareness of "safe" or "clean" in the workplace <b>[Skilled worker]</b> Skilled workers with the knowledge and experiences, especially for road design and maintenance</p> <p><b>[Current Situation]</b> [Unskilled, semi-skilled worker] Vocational training centers provide basic course of technical skill training for construction The workers lack fundamental skills such as reading, writing and calculation as well as business etiquette. <b>[Skilled worker]</b> Many foreigners are employed instead of local people. It is urgent to develop domestic human resources.</p> <p><b>[Areas to improve]</b> [Unskilled, semi-skilled worker] Improvement of business etiquette and work ethics through OJT <b>[Skilled worker]</b> Promotion of training courses at vocational training centers</p>
<b>Management</b>	<p><b>[Needs]</b> Management skills to manage a set of features such as production-transportation-sale as well as to operate management resources effectively and efficiently</p> <p><b>[Current Situation]</b> There are efforts of supply chain management of organic farming training in Josefinia farm, but it remains in the experimental implementation Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills</p> <p><b>[Areas to improve]</b> Expansion of the agricultural development model like supply chain management in Josefinia farm Enhancement of agricultural department and faculty of business administration in higher education institutions.</p>	<p><b>[Needs]</b> Persons with knowledge and skills of administration, accounting and management</p> <p><b>[Current Situation]</b> Some vocational training centers provide basic training courses of business administration and finance. Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills MPRM provides scholarships to study abroad and English training program in India</p> <p><b>[Areas to improve]</b> Development of human resources with knowledge and skills of accounting, finance and marketing Development of human resources with knowledge and skills of installation and management of hotel and restaurant Enhancement of tourism department and faculty of business administration in higher education institutions</p>	<p><b>[Needs]</b> Persons with knowledge and skills for working in the international businesses</p> <p><b>[Current Situation]</b> Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills Leading companies conduct in-house training MPRM provides scholarships to study abroad and English training program in India</p> <p><b>[Areas to improve]</b> Enhancement of in-house training in leading companies Expansion of scholarship programs by MPRM Provide appropriate field for highly professional personnel in order to demonstrate their expertise Enhancement of faculty of business administration and management in higher education institutions</p>	<p><b>[Needs]</b> Human resources that can be served as a management</p> <p><b>[Current Situation]</b> Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills Leading companies conduct in-house training Many foreigners are appointed management position instead of local people</p> <p><b>[Areas to improve]</b> Provide practical management training at vocational training centers and/or higher education institutions</p>
<b>Entrepreneur</b>	<p><b>[Needs]</b> Capacity development of farmers (groups) for agro-industry in processing materials and market promotion</p> <p><b>[Current Situation]</b> MCIA and MoA support farmers (groups) to improve their technical skills through funding, exhibition, technical training, agro-processing training etc. IADE provides entrepreneurship development training and business consultation</p> <p><b>[Areas to improve]</b> Strengthening of support and training for farmers (groups) and producer leaders who are trying to new business in cooperation with IADE, MOA, CCI-TL and other related institutions. Support for acquiring skills and knowledge of management and business administration for university graduates Enhancement of business training and consultation of IADE Expansion of Overseas employment program of SEPOPE</p>	<p><b>[Needs]</b> Hotel and restaurant Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in districts or tourism promotion areas. <b>[Souvenir production and sale]</b> Increase of entrepreneurs (groups) who manage souvenir production and sale</p> <p><b>[Current Situation]</b> MoT financially support to develop tourism facilities and infrastructures through community based tourism program MCIA support handicraft goods producers in ways of technical training in Indonesia and facilitation for exhibition IADE provides entrepreneurship development training and business consultation. There has not been a success story. Overseas employment program of SEPOPE</p> <p><b>[Areas to improve]</b> Development of human resources with knowledge and skills of souvenir promotion Development of human resources with knowledge and skills of installation and management of hotel, restaurant and souvenir shop Enhancement of business training and consultation of IADE Expansion of Overseas employment program of SEPOPE</p>	<p><b>[Needs]</b> [Related to the Tasimane Project] Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in the project area.</p> <p><b>[Current Situation]</b> NGO provides English language training and PC skill training to the community people living near Tasimane project area.</p> <p><b>[Areas to improve]</b> Promote community based tourism programs of MOT Development of human resources with knowledge and skills of installation and management of hotel, restaurant and souvenir shop Enhancement of business training and consultation of IADE Expansion of Overseas employment program of SEPOPE Promote partnership with NGO Incorporate development of tourism facilities</p>	<p><b>[Needs]</b> Human resources that can achieve business development to non-construction sector (business diversification)</p> <p><b>[Current Situation]</b> Some companies started other businesses because small construction companies often suffer from funding problems due to unstable orders.</p> <p><b>[Areas to improve]</b> Increase opportunities to learn knowledge and skills for business diversification Enhancement of business training and consultation of IADE Expansion of Overseas employment program of SEPOPE (expected job creation and starting a new business after returning home)</p>

The SDP shows that Timor-Leste will become a higher low-income country by 2030 and its key industries will be agriculture, tourism and petroleum. Therefore, there are policies to expand crop cultivation such as vanilla, and to construct irrigation facilities as well as rejuvenate coffee trees in agriculture. Also, there are policies to open tourist centers and improve the convenience for tourists in the tourism industry. And there are policies to establish a polytechnic specializing in agriculture, tourism, and the petroleum industry in the education sector. However, a long-term industrial policy that defines which industries should be developed, how to develop such industries, and what steps should be taken by 2030, has not been created.

MCIE, which has jurisdiction over industrial policy, continues to develop small and micro enterprises and cooperatives, to promote the “one village, one product” movement, to select priority products such as salt, ethanol, handicrafts, and food, and to arrange funds by BNCTL small loans and grants, etc. Also, MCIE is conducting studies on promoting buffalo, peanuts, copra exports, manufacturing, the service industry, and the recycling industry. It is necessary to study how to protect and foster young industries until they grow sufficiently to participate in international competition because after joining ASEAN, the companies of Timor-Leste will be exposed to international competition in the region.

As seen in Malaysia and Thailand, the typical economic development model in Asia is to start by exporting natural resources, then shift to import goods substitutes, labor intensive export industries (manufacturing) by foreign investment, capital-intensive and technology-based industries, and then to the service industry. The export of oil and gas resources has already started in Timor-Leste, and the import substitute industry such as the drinking water business has also started. MCIE adopted a policy to substitute imports gradually. However, according to JETRO’s country wage comparisons, the wage level of Timor-Leste has already reached that of Vietnam and now exceeds the level of Cambodia, Laos, and Myanmar. Also, the labor population of Timor-Leste is only 250,000, and so it will be difficult to promote foreign investment for labor-intensive export industries in Timor-Leste.

For these reasons, a possible alternative for Timor-Leste is to proceed with a capital-intensive, technology-based industry and then the services industry stage by skipping the stage of the labor-intensive export manufacturing industry. Another possible alternative could be a logistics center of dry bulk cargo utilizing the geographical advantage of being located at the crossroads of maritime traffic between Australia, Indonesia, and China. Other alternatives are a brokerage trade port and international financial center business like Singapore, a tax haven business like the Caribbean island countries, the engineering industry, the information technology industry, accommodation for foreigners, and tourism. Also, it is advisable to promote industries which have the advantage of producing locally, such local beer breweries using high-quality water in Timor-Leste, and the confectionery manufacturing business.

More infrastructure facilities such as telecommunications, roads, bridges, ports, and airports need to be improved utilizing the Infrastructure Fund fueled by oil revenues, and related laws and regulations must be complied with.



The following are the recommendations of the Study Team.

1) Expansion of MCIE’s scope

MCIE is conducting the planning and implementation of small and micro enterprises as well as cooperatives, considering the size, resource constraints and past activities. However, considering the constraint of the population and resources, the government should formulate and implement an industrial development scenario utilizing the lessons learned by MIDA in Malaysia and IEAT in Thailand. Considering the current situation of industry with the start of large-scale development projects, signs of industrial diversification are emerging, so a long-term industrial policy should be formulated promptly. This requires the fostering of directors for planning and policy skills for coordinators and planning officers in MCIE. When the Philippines BOI was established in the 1990s, the Thailand BOI helped it to design systems and train officers; accordingly, it is recommended to receive training in IEAT Thailand or Malaysia MIDA. This training would include industrial policy planning, budget and execution. The training will be effective if the officers stay for more than one year and thus experience the cycle of annual budget planning and execution.

2) Middle Management Training

It is recommended to plan and implement training of industrial human resources, especially middle management, to create the strong middle management that is urgently required by the private sector. The trainees are expected to come from all industrial sectors because they all need middle managers.

3) Advanced Technology Training

In addition to the business standard course for middle management, to speed up advanced technical training, courses such as engineer training courses, environmental technology courses and analytic technology training courses are needed.

Table: Recommended training programs

Category	Course	Trainee
Business Course (Long term, several months to one year)	Business Management	Upper middle management
	Quality Assurance	All enterprises, government officials
	Finance Management	Middle management, accountants
	Information Technology	All enterprises, government officials
	Business English	All enterprises, government officials
Special Course (Short term, several days to weeks)	Project Management	Construction companies, information technology
	Trade and Logistics	Logistics companies

	5S, Kaizen	Manufacturers, government officials
	Hospitality, SOP	Service companies
	Marketing, Sales Promotion	Middle management
Special course (Short term, several days to weeks)	Environment Assessment	All enterprises
	Environment Technology	All enterprises
	Climate Change	All enterprises, government officials
	Analysis Practice	Food industry, government officials

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Appendix 1: Presentation at the seminar on 7<sup>th</sup> May, 2014

“Industrial Development of the Republic of Timor-Leste  
Role of MCIE in Industrial Human Resource Development”  
“Lesson Learned in Malaysia”

Appendix 2: Schedule of the study

# I Outline of the study

## 1.1 Background

Timor-Leste suffered various political disruptions after gaining independence in 2002, but has achieved relatively steady economic growth thanks to oil revenues from the Bayu Undan and Kitan deep-sea oil and gas fields after the establishment of a petroleum fund in 2005. Public safety has rapidly improved in line with the stable economy. The election in 2012 was successfully completed without serious problem. With its social stability and the withdrawal of the United Nations Mission in East Timor (UNAMET) at the end of 2012 after being stationed in the country since 1999, Timor-Leste is now at the stage of self-sustaining development, as described by the catchphrase “Good-bye Conflict, Welcome Development”.

In 2011, the Government of Timor-Leste announced a Strategic Development Plan (2011-2030) (SDP) with the aim of becoming an “Upper Middle Income Country”. The SDP states that the development of the Timor-Leste economy will be built around the growth of three critical industries: agriculture, tourism and petroleum. It also mentions that in order to achieve the objective, it aims to create job opportunities and to develop human resources by breaking away from excessive dependence on oil and establishing key industries. The Government is formulating a 5-year investment plan while major ministries are making mid-term plans for projects to achieve the objectives of the SDP.

The most desirable output of the development program is employment creation. The statistics for 2010 estimate the population of Timor-Leste at 1,066,409 with an annual growth rate of 2.4%. The population will double by 2039 if this high growth rate continues. The youth population is expected to increase sharply, with 15,000 to 16,000 people entering the labor market every year, and yet Timor-Leste has not succeeded in fostering key industries to absorb the working population. Therefore, the immediate establishment of key industries is essential to absorb this working population.

To generate employment, it is necessary to diversify industries and develop new ones, as the Timor-Leste government recognizes. However, it is difficult to diversify industries because the Timor-Leste market is small due to the small population, while the petroleum sector is too large to allow other sectors to grow. Amid this environment, the Timor-Leste government has started industrial development programs including small business training, technical and vocational education and training (TVET), and overseas training through Chamber of Commerce and Industry of Timor-Leste (CCI-TL), Institute for Business Support Timor-Leste (IADE) and Secretariat of State for Vocational Training and Employment (SEPFOPE).

## 1.2 Objectives

The Data Collection Survey on Industrial Development for the Republic of Timor-Leste (“The Study”) aims to achieve the following objectives by analyzing the current industrial human resource development and enterprise development which are the key factors for industrial development and diversification, and by analyzing the gap between the policies and current status of Timor-Leste in

order to identify what kinds of human resource development and enterprise development are required.

- 1) Industrial policies of Timor-Leste
  1. Analysis of Industrial development related policies
  2. Analysis of collaboration system among Ministries and Authorities for industrial development
- 2) Private enterprises enhancement policy
  1. Analysis of current situation of Business development Services (BDS)
  2. Analysis of current access to the financial services
  3. Analysis of the effects of the infrastructure improvement and enhancement of Private Enterprises
  4. Analysis of the role of the Ministry of Commerce, Industry and Environment in enhancement and development of Private Enterprises
- 3) Industrial Human Resource Development
  1. Analysis of the industrial human resource development relating to the industrial diversification
  2. Review of the experiences of the activities for industrial human resource development and employment creation implemented by Timor-Leste government.
  3. Organize the human resource development experience in neighboring countries.
  4. To summarize the lessons learned and recommendation related to the business management training for Timor-Leste

The expected outcome as the result of the survey is as follows;

1. The industrial policy of Timor-Leste will analyzed
2. The human resource development and Private Enterprises development policies required to overcome the gap between the industrial policies and current situation will be analyzed
3. By reviewing “Data collection survey on pragmatic framework study of labor force Plan”, the direction of the industrial policies for the construction, agriculture, tourism and petroleum sector will be sorted out.
4. The current situation and problems of Private Enterprises in Timor-Leste will be sorted out.
5. The contents and outcomes of the training implemented for the industrial development in Timor-Leste and effects to the industrial development and problems to be solved will be sorted out.
6. Recommendation to the Ministry of Commerce, Industry and Environment (MCIE) of the training program and implementation structure of the advanced business training for higher human resource development will be listed out.
7. Recommendation of the Business Development Service supply agencies will be listed out.

### **1.3 Period of Study**

The Study implemented from February to May in 2014.

### **1.4 Target Area of the Study**

The Study covers the entire area of Timor-Leste.

### **1.5 Major Agency to Cooperate**

The major agency to cooperate the Study is the Ministry of Commerce, Industry and Environment of Timor-Leste (MCIE).

### **1.6 Survey method**

- Interview with MCIE, related Ministries, governmental organizations, NGOs, enterprises and others
- Workshop with MCIE officials
- Group interview with university students

## II Work Flow and Procedure

### 2.1 Preparatory Work in Japan (February 2014)

- 1) The Study Team will summarize the current status of the private enterprises and trainings in Timor-Leste, referring to the data accessible in Japan for examples CCI and IADE web site.
- 2) The Study Team will analyze the current situation of private enterprises, especially SMEs and the support and enhancement policies development in Timor-Leste by reviewing existing JICA reports such as “Data collection survey on new industry development possibility study”, “Data collection survey on the support to ASEAN membership” and “Data collection survey on the pragmatic framework of the labor force plan”, and will study how the Study Team can design the direction of the development of the human resource and enterprises in order to implement the industrial development policies.
- 3) The Study Team will prepare an implementation plan and submit it to JICA headquarters (Southeast Asia and Pacific Department).
- 4) The Study Team will prepare an inception report that articulates the basic policies, methods and procedure of the Study and submit it to JICA headquarters to receive comments for finalization.

### 2.2 First Field Work in Timor-Leste (February-March 2014)

- 1) The Study Team will explain the implementation plan to JICA Timor-Leste Office.
- 2) The Study Team will explain the contents of inception report to the Government of Timor-Leste and discuss and confirm the outline and schedule of the Study as well as the scope of work including schedule, candidate Private Enterprises, Training institutes and BDS providers.

#### <Analysis of the industrial development related policies>

- 3) The Study Team will conduct the analysis of the industrial development related policies in Timor-Leste mainly by MCIE. (Trade, Investment, Private Enterprises development)
- 4) Utilizing the industry policy under formulation by MCIE as the basis, the Study Team will summarize the contents, location, department-in-charge of the industrial policies and papers in MCIE. (Examples; Private sector development strategy)
- 5) The Study Team will analysis and summarize the current status and problems of investment promotion, trade development, domestic industry development and investment environment of foreign enterprises.



### < Analysis of the support and enhancement policies for Private Enterprises >

- 6) To analyze the current status of BDS in Timor-Leste, the Study Team will collect the information on policies relating to the support and enhancement for Private Enterprises in Timor-Leste.
- 7) To analyze the capacity building projects for entrepreneur by IADE, CCI and so on, the Study Team will collect the information of the projects based on the existing data.
- 8) The Study Team will collect the information and analysis the current situation of the accessibility of the Private Enterprises to the finance services.
- 9) The Study Team will collect the information and analysis the current situation of the market accessibility by the Private Enterprises and logistic in Timor-Leste.
- 10) The Study Team will summarize the potential problems of the future economic and industrial integration to the global market and tertiary industrialization.
- 11) The Study Team will analyze the required function and facility of the National Logistics Center described in the “Incubator of Industry” program as well as the laboratory for the improvement of quality assurance and quality control ability.
- 12) The Study Team will summarize the issues and solutions relating to the enhancement and development of Private Enterprises in Timor-Leste based on the summary of 6) to 11) above.

### < Industrial Human Resources Development >

- 13) Referring to the existing JICA reports and current situation of the industrial development policies especially Private Enterprises, the Study Team will analyze the necessary human resource development for the industrial diversification.
- 14) The Study Team will analyze the programs and projects implemented by the government of Timor-Leste and main donors including JICA for the industrial development.
- 15) The Study Team will analyze the growth rate and employment creation by the main industries in Timor-Leste for the last 5 years based on the existing data.
- 16) The Study Team will review the industrial development policy and human resource development programs implemented by neighboring countries (for example, Indonesia, Laos etc.) for the comparison to Timor-Leste. The Study Team will also classify business courses in Japan Center Projects in East and Southeast Asia implemented by JICA and examine programs, formation (implementation agencies, structures, etc.), and know-how applicable to Timor-Leste.
- 17) The Study Team will learn the lessons in the business course above, for the application to Timor-Leste.

- 18) The Study Team will evaluate selected business training courses implemented by Timor-Leste government within the past three years through interview to the concerned organization and trainees.
- 19) The Study Team will draw the recommendations and lessons learned from the business courses implemented in the past.
- 20) The Study Team will collect the good training samples implemented by private sectors and extract the lessons learned for the training planning and implementation.
- 21) The Study Team will compile the outputs of the first field work as the Progress Report and share it with the Government of Timor-Leste for discussion.
- 22) The Study Team will report to JICA Timor-Leste Office on the result of the first field work.

### **2.3 First Home Office Work in Japan (March-April 2014)**

- 1) The Study Team will analyze the statistical data obtained in the first field work.
- 2) Based on the above mentioned analysis, the Study Team will discuss and confirm the scope of second field work with JICA headquarters.

### **2.4 Second Field Work in Timor-Leste (April-May 2014)**

- 1) The Study Team will study and summarize the outline of training to be implemented by MCIE's initiative in the future.
- 2) The Study Team will interview the authorities concerned including IADE, CCI, universities, and main private enterprises and analyze their human resource development method, needs and issues of human resource needs, operation structures, and possibility to collaborate with MCIE.
- 3) The Study Team will make a proposal with MCIE for the training, including the draft curricula, scale, location, lecturer (including Timorese), language, OJT, and qualification level.
- 4) The Study Team will make a suggestion on necessity, relevance, effectiveness, indicator, etc. for the advanced training course that will satisfy that the needs of the private business sector, including job opportunity in the abroad and or establishment of enterprises in abroad.
- 5) The Study Team will examine the job clarification needed by the foreign enterprises in Timor-Leste by interviewing foreign companies in sectors, such as construction, tourism, food processing, information technology etc.
- 6) The Study Team will produce recommendations on the outline of the BDS supplier including

capital, employee, facilities, equipment, target industry, finance etc.

- 7) The Study Team will compile the outputs of the second field work as the Draft Final Report and share it in the seminar with the Government of Timor-Leste for discussion.
- 8) The Study Team will report to JICA Timor-Leste Office on the result of the second field work.

## **2.5 Finalization of the Study in Japan (May-June 2014)**

- 1) The Study Team will report the result of the second field work and submit the draft final report to JICA headquarters.
- 2) Based on the comments from JICA headquarters, the Study Team will finalize and submit the final report.

## **2.6 Seminar (May 2014)**

The seminar of “Industrial development in Timor-Leste – Role on MCIE for industrial human resource development–” was held on 7<sup>th</sup> May, 2014 at Timor Plaza.

The ministries, governmental organizations, higher education institutions, private enterprises, private organizations, NGOs, and international agencies were participated.

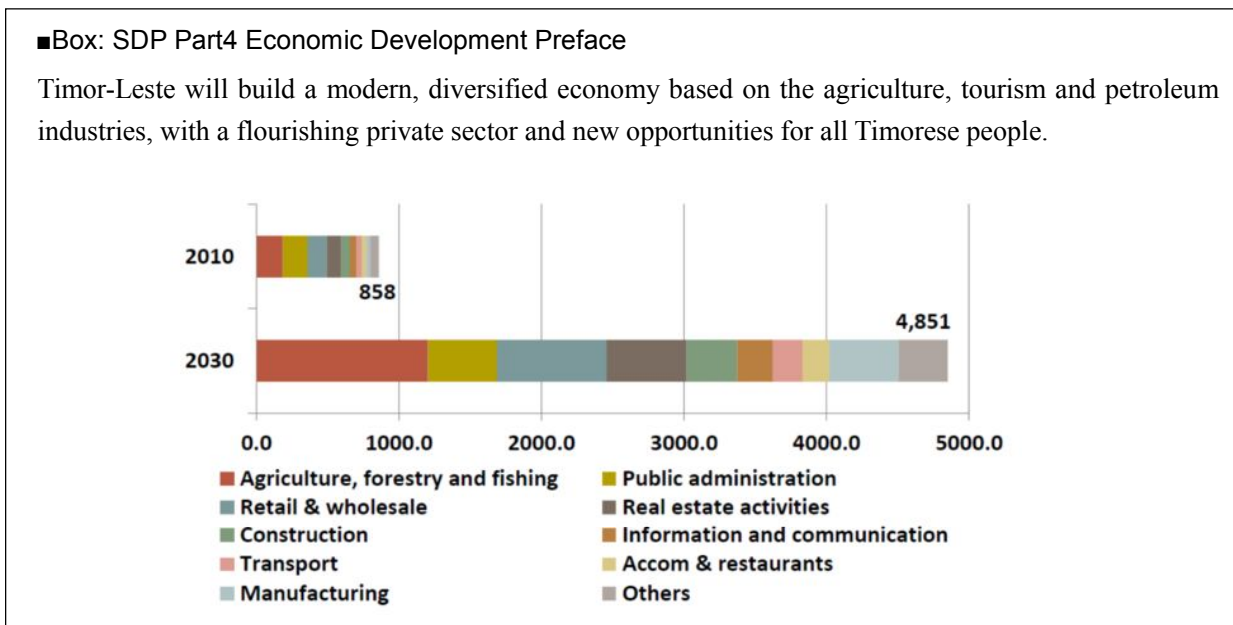
The results of the Study were announced to the participants in the seminar. The Minister for MCIE mentioned that it has a responsibility of industrial human resource development, and that industrial promotion could not be successful without human resource development. He added that MCIE should analyze strengths and weaknesses of the country in order to promote industrial development as well as human resource development.

Throughout the discussion in the seminar, the role of MCIE on industrial human resource development was emphasized.

### III Result of the Study

#### 3.1 The Situation and Challenges of the Industries of Timor-Leste

The economy of Timor-Leste is growing steadily on the revenue from the Bayu Undan and Kitan oil and gas fields. In 2011 the Timor-Leste government issued the Strategic Development Plan (SDP) (2011-2030), which presents the goal to be upper middle income county by 2030. Also, SDP shows agriculture, tourism and petroleum as the industries that will be developed in the future. Its vision of 2030 is the modernized and diversified economy with high quality infrastructure such and roads, power, ports and telecommunication.



In Timor-Leste, many big projects are planned now. Those are the construction of a supply base in Suai, the expansion of Dili Airport, the construction of highways, the construction of a refinery in Betano, the construction of a new port in Tibar, and the construction of a cement factory of 1.5 million tons per year in Baucau.

The present period, when such big projects are going, is a very important time for the development of the industries in Timor-Leste

Described herein are the situation and challenges based on the information that Survey Team collected; the Situations, Challenges and Future Pictures of the Industries (3.1.1), the Situation of Business Development Services (3.1.2), the Situation of the Access to the Financial Services (3.1.3), Industry Supporting Organizations (3.1.4), and the Situation of Transportation Infrastructure (3.1.5).

■Box: Target Enterprises and Cooperatives

For the survey, the Study Team visited 40 enterprises as below.

Those in agriculture, forestry and fishing, it includes cooperatives as well as agricultural cooperations and organizations.

<b>Primary Industry(4)</b>	
Agriculture, Forestry and Fishing(4)	Cooperative Café Timor, PARCIC, Mada Heliq, Saiseiko
<b>Secondary Industry(13)</b>	
Mining & Quarrying(3)	Timor Gap, ETO, Timor Gas
Construction(4)	Ensul, PT.PP, Carya Timor, EDS
Manufacturing(6)	Be'e Mor, Gota, Timor Block Industry, Bee Haus, Moris Foun, ASZ
<b>Tertiary Industry(23)</b>	
Accommodation & Food(5)	Timor Plaza, AETTTL, Hotel Timor, Compass, ATNAS
Wholesale & Retail Trade(6)	Kmanek, Pateo, KONNEKT, Toyota Auto, Tiger Fuel, Kor Timor
Transportation & Storage(3)	SDV, ATCTL, Air Timor
Service(9)	(Finance) ENU, BNCTL, NITL (Telecommunication) Timor Telecom, Telemor (Others) Maubere Security, Grafica National, Guide Post, Halsion

### 3.1.1 The Situations, Challenges and Future Pictures of the Industries

In this section, the industries of Timor-Leste will be classified in three categories, primary industry, secondary industry and tertiary industry. Then the situations, challenges and the future pictures will be discussed. Since this classic classification, which is widely utilized, suits governmental organizations and statistics, the data can be studied well.

As for the section of Business License of MCIE (SERVE), the number of enterprises that have business license is now about 16,500 in Timor-Leste. Primary industry has 32 businesses, secondary industry has 7,935 and tertiary industry has 8,368.

Table3.1.1 The projections of the labor force in 2030

Industry	2010	2030	Increase	Increase rate
Agriculture, Forestry and Fishing	127,000	137,000	10,000	7.9%
<b>Primary Industry</b>	<b>127,000</b>	<b>137,000</b>	<b>10,000</b>	<b>7.9%</b>
Mining & Quarrying	1,000	1,000	-	0.0%
Construction	13,000	36,000	23,000	176.9%
Manufacturing	8,000	67,000	59,000	737.5%
<b>Secondary Industry</b>	<b>22,000</b>	<b>104,000</b>	<b>82,000</b>	<b>372.7%</b>
Accommodation & Food	8,000	16,000	8,000	100.0%
Wholesale & Retail Trade	44,000	58,000	14,000	31.8%
Transportation & Storage	8,000	14,000	6,000	75.0%
Service	34,000	155,000	121,000	355.9%
<b>Tertiary Industry</b>	<b>94,000</b>	<b>243,000</b>	<b>149,000</b>	<b>158.5%</b>
<b>Private Sector</b>	<b>243,000</b>	<b>484,000</b>	<b>241,000</b>	<b>99.2%</b>
<b>Public Administration</b>	<b>5,000</b>	<b>8,000</b>	<b>3,000</b>	<b>60.0%</b>
<b>Total</b>	<b>248,000</b>	<b>492,000</b>	<b>244,000</b>	<b>98.4%</b>

(Source: LFP)

Table 3.1.2 The number of businesses by industry (2014)

Industry	Quantity
Agriculture, Forestry and Fishing	32
<b>Primary Industry</b>	<b>32</b>
Mining & Quarrying	60
Construction	7,367
Manufacturing	508
<b>Secondary Industry</b>	<b>7,935</b>
Accommodation & Food	641
Wholesale & Retail Trade	6,672
Transportation & Storage	139
Service	916
<b>Tertiary Industry</b>	<b>8,368</b>
<b>Private Sector</b>	<b>16,335</b>

(Source: MCIE)

### (1) Primary Industry (Agriculture, Forestry and Fishing)

Agriculture, which occupies a large part of primary industry, is on the top of the list of strategic sectors of SDP. However, agriculture and fishing in Timor-Leste is mostly at the stage of self-sufficiency in families or in small communities. The citizens of cities such as Dili rely on imported food. For example, only 25% of the rice produced in Timor-Leste is traded and the rest is domestically consumed.

#### (1)-1 Agriculture

SDP stipulates, "A thriving agriculture sector is needed to reduce poverty, provide food security and promote economic growth in rural areas and our nation as a whole."

Since independence, Timor-Leste has invested a lot in agricultural infrastructure, namely machinery and the provision of subsidized seeds and fertilizers. The table below shows the content of the investment in the agricultural area from 2007 to 2009.

Table 3.1.3 The investment in agriculture from 2007 to 2009

Item	Content
Hand tractors	Increased from 100 to 2,591.
Tractors	Increased from 13 to 315.
Irrigation schemes	31 schemes were rehabilitated.
Mini-markets	32 markets have been established.

(Source : SDP)

SDP has the goal that the supply of food will exceed the demand by 2020. According to LFP, the labor force in the sector will increase from 127,000 in 2010 to 137,000 in 2030. A scenario is that agricultural production will increase significantly with almost the same number of labor force. To achieve the goal, the progress and widespread of agricultural technology, and the progress of food

manufacturing (secondary industry) and logistic system (tertiary industry) are indispensable. Moreover, there is an urgent need to develop personnel who can contribute to the progress and spread of agricultural technology.

Table 3.1.4 Basic Food Balance (2010-2030)

Year		2010	2015	2020	2025	2030
<b>Annual Losses (% of total production)</b>		25%	20%	15%	10%	5%
<b>Basic Food Production</b>	Rice (ha)	50,000	63,815	70,000	70,000	70,000
	Rice (Mt/ha) (grain)	1.00	1.20	1.43	1.70	2.02
	Rice (Mt grain) (adjusted for losses)	37,500	61,262	85,085	107,100	134,330
	Maize (ha)	76,500	80,494	83,169	85,625	87,080
	Maize (Mt/ha) (grain)	1.25	1.54	1.89	2.33	2.50
	Maize (Mt grain) (adjusted for losses)	71,719	99,168	133,611	179,556	206,815
	Roots/Tubers (ha)	8,499	8,943	9,240	9,513	9,675
	Roots/Tubers (Mt/ha)	7.50	8.35	9.29	10.33	11.49
	Roots/Tubers (Mt) (adjusted for losses)	47,807	59,739	72,964	88,442	105,607
	<b>Total Basic Food Production (Mt)</b>	<b>157,026</b>	<b>220,169</b>	<b>291,660</b>	<b>375,098</b>	<b>446,752</b>
<b>Basic Food Balance</b>	Rice (Mt grain)	-76,317	-59,608	-49,959	-27,340	-5,868
	Maize (Mt)	-438	23,127	54,759	98,524	124,408
	Total grain (Mt)	-76,755	-36,481	11,800	71,184	118,540
	Roots/Tubers (Mt)	-7,306	1,509	12,118	25,422	40,840
	<b>Basic Food Balance (Mt)</b>	<b>-84,061</b>	<b>-34,972</b>	<b>23,918</b>	<b>96,606</b>	<b>159,380</b>
	Basic Food for Livestock Production (Mt)	-	-	-	75,000	125,000
	<b>Adjusted Basic Food Balance (Mt)</b>	<b>-84,061</b>	<b>-34,972</b>	<b>23,918</b>	<b>21,606</b>	<b>34,380</b>

(Source : SDP)

The labor force in the agricultural sector in 2010 is 127,000, which occupied nearly half of the total of private sector. LFP indicates that an estimate of 137,000 for 2030, will account for a little less than 30% of the total private sector. The Study Team interviewed MAF, UNAPE, CCT and NGO.

■Box: Interview with Agriculture Industry

○CCT (Cooperativa Café Timor)

CCT produces about 200 tons of coffee beans per annum on average. The biggest customer is Starbucks. CCT has a plan to expand production volume by planting 2 million new trees per year.

CCT has 21,558 contracted farmers. CCT employs 304 permanent workers, among whom 61 are college graduates, and 3,000 seasonal employees. Most of the college graduates are health workers. There are few UNTL graduates.

CCT owns 20 trucks for collecting the coffee cherries.

Much of the coffee produced in Timor-Leste is Arabica.

CCT is dealing cassavas, vanillas and cloves.

○PARCIC (NGO dealing mainly coffee)

PARCIC has worked in the coffee business more than 10 years, and also have People's Shops in rural areas.

Although PARCIC looked for agricultural business other than coffee, no good product has been found so far.

As for CCT, CCT is doing business generous to farmers and contributes to their economic stability. On the other hand the international competitiveness of CCT is weak. Coffee business in Timor-Leste needs brand power not to compete on price. Otherwise exports will not increase.

## (1)-2 Fishing

The fishing industry in Timor-Leste is still primitive. Fishermen catch fish on the beach and sell on the street. A cause of the slow development is that the government cannot protect fishing grounds. In addition, human resources have not developed.

### ■Box: Interview with Fishing industry

#### ○Saiseiko

Saiseiko is a subsidiary of Japanese food distributor. Saiseiko's main lines of business are fish and agricultural products, but neither of them is in business now.

Saiseiko owns 5 boats of fiber-glass. They are 98t, 90t, 60t, 60t and 29t, none of which are in operation.

A problem is that sea patrol is not done. The south side of Timor-Leste is a good fishing ground, but the Indonesian illegal fishermen come and catch fish.

The authority concerned has 2 patrol boats, but there are no skilled sailors.

About human resources in the fishing industry, Timorese fishermen easily become sick on Saiseiko's boats. So it will take time to train them.

About agricultural business, Saiseiko tried to buy pumpkins from Com Area, but farmers supplied only 200t even though the contract was 2,000. The weather was not bad. Laziness or lack of will to honor contracts is a big problem.

## (2) Secondary Industry

The capital-intensive, mining industry (oil and cement) and the labor-intensive construction industry have lead the secondary industry in Timor-Leste. There is a sign of the start of manufacturing with local capital, such as the start-up of 5 mineral water enterprises over the past 2 years.

LFP projects the labor force in secondary industry to increase 104,000 in 2030 from 22,000 in 2010. To realize this big increase, human resource development, upgrading of traffic infrastructure and better access to finance are necessary. Effective measures have not been taken for the creation and improvement of middle management and engineers although it is important. Many companies hope to replace foreigners with Timorese, but they cannot find appropriate human resources. From a macro perspective, it is very difficult and undesirable to supply all the middle human resources from foreigners.

The development of mid-level human resources is the most important in this area.

### (2)-1 Petroleum Industry

The important oil and gas fields are Bayu Undan and Kitan, both of which are in the ocean. Bayu Undan has expected reserves of 3.4tcf of gas and 400Mbbbl/day of NGL. Conoco Phillips, ENI, Santos, Inpex, Tokyo Electric and Tokyo Gas are investing in Bayu Undan.

Kitan is invested by ENI, Timor Gap (owned by the Timorese government) and Inpex. The royalty income from these fields was 2,693.3 million US dollars in 2013, 172 million US dollars of which was



from Kitan. Since the government's other revenue was 146.3 million US dollars, the revenue of oil/gas accounted for 94.8% of the government revenue of 2,839.6 million. The revenue from Bayu Undan and Kitan is estimated to be 26,050.5 million dollars in total from 2002 to 2025.

Greater Sunrise oil/gas field, which is in dispute with Australia and is invested by Woodside, Conoco Phillips and Osaka Gas, is estimated to have a reserve of 9.2 tcf gas and 321Mbbbl/day NGL. About onshore fields, while the policy of development and the allocation of mining areas are under consideration, several exploratory wells have been already drilled in the southern area, and the reserves have been identified.

At present, Timor-Leste is importing oil products from Indonesia, Australia, Singapore etc. The port for import is operated by Pertamina. The domestic distribution is done by several dealers. In 2011, the national oil company, Timor Gap, was established. Timor Gap is in charge of exploration of oil, export/import of oil, and production and sales of oil products. It is planned that Timor Gap will construct a refinery and spread gas stations all over the nation.

Timor-Leste is implementing the Tasi Mane Project as a national project. It is a project to build on the southern coast of Timor-Leste a supply base (Suai), a refinery and petrochemical plant (Betano), an LNG plant (Viqueque), to connect the facilities by highway and to industrialize the southern coast. In 2014, the supply base project in Suai started. It aims to build an on-shore base to supply machines, materials, food, water and operators to the off-shore terminal of the oil/gas field. The project, including the supply base, airport, port, road and 213 ha residence building, has a budget of 350 million US dollars. In 2013, 83,996 thousand US dollars is on the infrastructure fund budget, and the construction will start in 2014. The employment of 2,000 persons during the construction and 1,000 after the completion is planned.

■Box: Interview with Petroleum Industry

○Timor Gap (Government owned Oil Enterprise)

Timor Gap is a 100% government owned corporation whose CEO and Board Members are approved at the Council of Ministers. All its profit are transferred to the Petroleum Fund, and contributed to the government budget and economic growth of Timor-Leste. The number of employees is 96 now and will be 100 in three months. Now all of its employees are Timorese.

Timor Gap has three big projects within the Suai Supply Base Cluster: airport, supply base, and highway. The airport project already started. An Indonesian company was selected as consultant, with which Timor Gap would sign an EPC contract. A contractor is in the public testimonial period and a contract will be awarded if there would be no objection.

Timor Gap has their general policy to check the availability of local procurement first, in public works.

○Esperança Timor Oan Lda (ETO) (Dealing of Oil)

ETO is a member of Grupo Esperança, which is a group of private companies, mainly in energy and construction business. It consists of ETO fuel (oil), G&S (construction), Detile (consultation of

construction), Gota (mineral water), and Santos Living (apartment rental).

ETO headquarters have 58 employees and ETO group has more than 200 employees in total.

ETO imports, transports and sells diesel and gasoline. ETO has nine oil tank trucks: one 16-ton, one 15-ton, two 10-ton and five 5-ton. Although it is using many small trucks because of narrow roads, it will use larger trailers when the road condition is improved.

The government is planning a petroleum receiving facility in Hera. Timor Gap will carry petroleum to a jetty, and ETO hopes to operate storage and outlets to tank trucks there.

ETO has a long term goal to participate in the exploration of the Timor Sea.

ETO's largest problem is human resources. There are few Timorese skilled workers. ETO hires Indonesian and Portuguese engineers. Gota hires Chinese machine technicians.

ETO hires unskilled Timorese and trains them on site. ETO believes that private companies should train employees, which is insufficient in Timor-Leste.

## (2)-2 Cement

Baucau has reserves of gypsum and limestone which are raw materials for cement. In March 2014, the Timorese government announced that Timor-Leste Cement, which owned jointly by BGC, an Australian cement company, and Swan Energy, would build a cement plant of 1,500,000 tons per year in Baucau. 30% of the cement produced is directed to domestic consumption, while 70% is planned to be exported to Australia. The total investment is USD 500 million.

Construction has been ordered at \$ 350 million to POSCO E&C of Korea already, and work will be started in January 2015. The construction period will be 34 months. An estimated 3,000 people will engage in the cement plant during the construction and 1,000 people after the construction. This case is the largest ever private investment in Timor-Leste.

Large-scale infrastructure construction, such as roads, public buildings, private commercial facilities, ports, and airports, has begun in Timor-Leste. The products of the cement plant have become to meet the domestic demand. In addition, construction material companies are growing in relation to the construction industry and the cement industry. Timor Block Building Industry, a manufacturer of hump pipe and concrete blocks, has grown with the growth of the construction industry due to public investment. It is characterized by the employment of mainly semi-skilled and unskilled labor.

### ■Box: Interview with Cement Industry

#### ○Timor Block Building Industry

Timor Block Building Industry has been in business in Timor-Leste more than ten years. It is the biggest in the sector and does business only in Dili.

Its main product is concrete pipes, which are one or two meters long. They are shorter than those of developed countries because of mechanical restrictions. The company has grown with public works by the government. The owner is Chinese Indonesian.

Timor Block has 7 managers, 15 supervisors, 90 semi-skilled workers and 20 unskilled workers. All

the managers, 13 of the supervisors and 12 of the semi-skilled workers are foreigners. Most of them are from Indonesia, the Philippines and China.

Because the employment of foreigners costs around three or four times as much as that of Timorese and they need longer holidays to go home, Timor Block really wants to hire Timorese if possible. However, Timorese's motivation to work and to earn money and willingness is low. So they do not master technics easily.

### (2)-3 Other Mining Industries

According to the Ministry of Petroleum and Natural Resources, the result of a mineral resource survey in Timor-Leste shows that copper, gold and silver are promising, followed by chromium and manganese. In addition, reserves of phosphorus, marble, clay, gypsum and limestone have been identified.

A sample survey of copper has been carried out by the Allied Mining Company in Fossula, Baucau. Gold reserves have been identified in Hilamanu, Manatuto, and other places, and a sample survey has been conducted. Reserves of chromium were identified in Baucau and Manatuto. Reserves of manganese have been identified in several places such as Baucau and Viqueque. Reserves of phosphorus have been identified in Baucau and Manatuto. Marble has been identified in Manufahi, Viqueque and Manatuto. The reserve in Lacro, Manatuto, is estimated at more than 5,000,000 cubic meters.

### (2)-4 Construction Industry

Since infrastructure construction is important in SDP, the construction industry can be regarded as an important industry for the realization of SDP. In LFP, the number of employees in 2010 is 13,000, and is expected to increase to 36,000 in 2030.

Leading foreign builders have supported the development of the construction industry to date. However, local constructors have grown. They enter other industries and utilize the capital and know-how of business accumulated in the construction industry in the new businesses (EDS, ASZ, and others).

Problems of human resources are often pointed out: lack of middle management, skilled-workers, unskilled-workers and basic academic skills. It can be said that the industry has a considerable need for Timorese middle management personnel.

#### ■Box: Interview with Construction Industry

○Ensul (Constructor)

Ensul is a Portuguese general constructor.

On human resources, a lack of basic education is a problem, which leads to the insufficiency of skilled workers and a low level of unskilled workers. Ensul wants to hire as many Timorese as possible, but it tends to hire foreigners.

Basic education means following timetables and supervisors as well as mathematics. It should be done at schools. A vocational training center, Don Bosco is teaching business manners, safety and cleanliness as well as ordinary education. Ensul hires Don Bosco graduates, who are very skilled mechanical and steel workers. Ensul thinks that since Timorese like to learn basic training at school will be effective. Timorese generally likes to learn, and so their ability will develop if they have opportunities.

The financial system has problems. Banks do not have the service of advance payment bonds, which construction industry needs, so constructors need to reserve much cash. Formerly, Ensul received cash from Portugal, but after the European monetary crisis, Ensul needs to reserve cash themselves.

The bond is partially served by insurance companies. In Timor-Leste, insurance is rather developed, and substitute the banking system.

#### ○PT.PP(Constructor)

PT.PP is an Indonesian constructor. It is now constructing the new building of the Ministry of Finance.

PTPP hires Indonesian engineers and skilled workers, and trains Timorese unskilled workers on site. It hopes that the Timorese become engineers and skilled workers in the future.

#### ○Carya Timor-Leste(Constructor)

Carya Timor-Leste is an Indonesian general contractor established in 2005, which specializes in road construction and prefabrication. It hires 200 permanent workers. 20 Indonesian engineers and mechanics are hired on a project basis.

The highest position of Timorese is Site Engineer, under Site Manager. Carya Timor-Leste is training them to be Site Manager by “on-the-job training”.

As for unskilled workers, 100% are Timorese, while there are not so many Timorese for skilled workers. When comparing Indonesian and Timorese skilled workers, Timorese levels are still lower than Indonesian ones. Carya Timor-Leste would like to send their Timorese technician or engineering assistants to a middle management training course when it is established.

#### ○EDS(Constructor)

EDS started its business in 2000. First, it was in the transportation business, and then moved to construction in 2008. Its main business is the construction of roads.

EDS hires about 150 employees, 5% of whom are expatriates from Indonesia or the Philippines. All the mechanics are foreigners.

There are three big problems in Timorese business: Low-level human resources, insufficient implementation of laws, and low efficiency.

On human resources, it is hard even to find drivers. Although there are many unemployed people, it is difficult to find qualified persons. Also, Timorese generally do not have a service spirit.

Inefficiency can be seen all over Timor-Leste. Since construction is not implemented well, some trouble occurs soon.

On public administration, visa procedures need much time to go around three offices.

## (2)-5 Manufacturing Industry

The manufacturing industry is a small industrial sector with only 8,000 employees (3.3% of the private sector). However, LFS projects the labor force in this sector in 2030 at 67,000 (13.8% of the private sector). The manufacturing industry can develop if import substitution progresses. So the pace of starting business, product quality, and productivity should be improved.

These years, many mineral water enterprises start business and aim to increase its share in the domestic market. Also, the export of mineral water to Singapore has started.

When the Survey Team visited the factories, several points for improvement were identified, such as 5S, cleanliness and efficiency. There are many themes to be dealt with at middle management training. Also, the outcome of the training will be large.

### ■Box: Interview with Manufacturing Industry

#### ○ASZ (Canned food company, planning to start manufacturing food)

ASZ has a business style that uses capital accumulated in the construction industry, which is in a boom by public works.

ASZ is a canned food company founded by the Timorese owner of a construction company in 2012. ASZ designs canned food, asks an Indonesia company to produce it, imports from Surabaya and sells in Timor-Leste.

The canned food has a Halal certification in Indonesia, but does not have certification of the Ministry of Health or HACCP.

ASZ is planning to build a food processing and canning factory in Ermera District, and is training employees for food processing. Also, the owner is thinking of producing bio-plastic and processing chicken meat. ASZ has not borrowed money from banks and does not plan to do so. ASZ does not have the experience of receiving advices of ILO and IADE for exhibition at international trade fairs.

#### ○Be'e Mor (Manufacturer of mineral water)

Be'e Mor was founded by a businessman in Singapore. There are 48 employees, among whom five are Chinese, three are Filipino and two are Indonesian. Be'e Mor uses Chinese machines and the technicians are Chinese.

Be'e Mor imports the material of bottles from Indonesia and pumps up water from a depth of 100 meters on the plant site.

70% of the sales are domestic and 30% are export to Singapore. It got the certification of the ASEAN Water Association. Singapore is utilizing reclaimed water for drinking water and seems a good market of mineral water.

The price is USD 3 per one case of 24 600cc bottles, which is superior in price compared with AQUAS of Indonesia, which sells at USD 5.

#### ○Gota (Manufacture of mineral water)

Gota started its business in February 2013 with 15 employees, and now hires 23. One of them is a

mechanical engineer from China, while the others are from Timor-Leste.

Gota provides products of mineral water in the domestic market for the present. The products type consists of three: Gallon stores, 1.5 liter bottles and 500ml bottles. Gota plans to produce a brand-new type of '320ml bottles' in the near future.

The main competitors are Indonesian bottlers, such as AQUA, and the local competitor is Be'e Mor.

Water is transported from several head gates in a mountain area. Gota imports raw materials of bottles from China, and inflates the materials into bottles at the factory. The printed sticker of labels is also imported from China.

Gota has a laboratory and hires experienced staff that holds a certificate from the Department of Water and Sanitary, the Ministry of Public Works. An external inspector comes every month from the Ministry of Health. However, Gota has no certification regarding quality control such as ISO or HACCP.

Gota does not have any original training program yet. Gota have not participated in the government's/public institution's training programs do far, but Gota would like to join those programs from now on.

### **(3) Tertiary Industry (Wholesale and Retail, Transportation and Storage, Accommodation and Food, Service)**

Employment in tertiary industry is forecast to expand from the employment of 86,000 people in 2010 to 243,000 people in 2030, according to the employment survey. In this field, too, a lack of middle-level human resources, especially middle management, has become a serious problem.

Luxurious hotels and supermarkets in Dili were conventionally a business that targeted foreigners. However, half of the guests and customers of restaurants and coffee shops at luxury hotels and high-end supermarkets have become Timorese. The domestic market is growing steadily. Food which was purchased from abroad directly by supermarkets etc, is now purchased by supermarkets from domestic dealers and distributors who import. The distribution and service industry has been nationalized before manufacturing, as distributors deal in imported products.

#### **(3)-1 Tourism Industry**

Tourism has been cited as one of the three priority areas in the SDP. LFP forecasts labor force in the accommodation and food sectors will increase from 8,000 in 2010 to 16,000 in 2030.

Timor-Leste is said to be rich in tourism resources. More foreigners are coming to Timor-Leste for diving and whale-watching.

To convey the attractions of Timor-Leste, the Ministry of Tourism has issued a helpful brochure for tourists "Discover Timor Leste".

■Box: Department of Tourism's Pamphlet "Discover Timor Leste"

1. Timor-Leste History
  - Ancient history and peoples
  - Early foreign contact and Portuguese colonization
  - World War II
  - Portuguese decolonization and Timorese independence movements
  - 1975-1999: The Indonesian Occupation
  - 1999: A Vote for Independence
  - 2002: A New Beginning
2. Timorese Culture
3. Museums and Places of Historical Interest
  - The Indonesian occupation, Santa Cruz Cemetery
  - World War II: Dare Memorial Café and Museum, Arte Moris
4. Dili: The Capital
  - Famous Statues, Waterfront life, Beautiful beaches, Atauro Island, Cool hills
5. Underwater Timor-Leste: Some of the world's best scuba diving
  - Scuba Diving and Water Sports Operators:  
Dive Timor Lorosae, FreeFlow Diving, Compass Charters
6. Exploring the Districts
  - Tour Companies Timor Mega Tours
  - Eco Discovery Timor Sparrow Tours
  - Manatuto, Baucau, Lautem, Viqueque, Ainaro, Cova Lima, Liquisa, Aileu, Oecusse, Bobonaro, Ermera
7. Timor-Leste: at the culinary crossroads of Asia
8. Shopping
  - Banks ANZ, Bank Mandiri, Caixa Geral de Depósitos, Western Union
  - Telecommunications, Timor Telecom, Telemor, Telecomcel
9. Public transport
  - Buses and taxis: Flybus airport shuttle service
  - By sea: Atauro and Oecusse
  - Vehicle rental: EDS Car Rentals, Esilva Motors
10. Overland travel from Kupang, West Timor, Indonesia
  - Paradise Tour and Travel, Timor Travel
11. Visa and International Travel
  - Airlines: Air Timor, Merpati, Sriwijaya Air, Airnorth
12. Further information: useful internet links
  - Government websites, Hotel and tour booking websites and listings,  
General Business Information, Lonely Planet Guide to Timor-Leste

■Box: Interviews with Tourism Industry

○Timor Plaza (Retail, real estate rent, accommodation and tourism)

Timor Plaza building was opened in 2012, which has 6 floors and a total of 30,000 square meters. Total investment cost is USD 20 million. It has another shopping center named "Jape Homemaker Village" of 60,000 square meters in Darwin, Australia.

Timor Plaza was founded by a businessman in Timor-Leste whose father immigrated from China. Timor Plaza is managing a shopping center, hotel and restaurant in Dili, employing approximately 200 employees and annual turnover is approximately USD 50 million in Dili.

The owner has future plans in two directions. One is to establish a global standard general hospital in Dili. The other is to develop the tourism industry. Timor Plaza has an idea to develop Timor-Leste to be a tourist site like Bali. Timor-Leste has the same environment as Bali, with nature to attract and shift 10% of tourists from Bali.

Timor Plaza has already acquired 3 km beach at the northeast of Christ Ray in Dili. Timor Plaza has an idea to set up a five-star hotel, amusement facility, restaurant, cottage resort, spa resort and so on. This project will create 5,000 to 10,000 jobs for Timorese. The estimated investment cost is USD 50 million. Timor Plaza is looking for investors from Japan.

The owner told that the main challenge in Timor-Leste is to motivate Timorese because neither money nor work itself is the motivation of Timorese. So, his challenge is to establish culture to work in Timor-Leste. He thinks in basic education, work culture should be taught.

#### ○Hotel Dili/Timor Gas (LPG distributor and Hotel)

Hotel Dili and Timor Gas are private enterprises founded by an Australian owner and the oldest and biggest LPG distributor.

The family's business in Timor-Leste started in 1971, when they bought Hotel Dili, which originally opened eighty years ago. During the conquest by Indonesia, they left for Australia, but the owner family returned to Timor-Leste and restarted the hotel business in 1998.

The gas business started in 1999. Originally, they used gas for their own hotel business, but they were asked to supply to other and gradually expanded the supply.

Timor Gas has 7,500 customers. It distributes LPG using 4kg, 12kg and 44kg cylinders by truck. The price of gas to typical residential customer is around USD4/kg.

The owner commented on the financial and land ownership systems of Timor-Leste as follows.

"The family has never borrowed money from banks in Timor-Leste, because the finance system has many problems. If a business wants to borrow money, it can borrow up to only USD0.5 million for up to 48 months. In Timor-Leste, land cannot be used as collateral because the ownership of land is not clear."

"The constitution and laws that prohibit foreigners and foreign enterprises from possessing land are a problem. The prohibition is interrupting the development of tourism in Timor-Leste."

#### ○AETTL (Union of the tourism industry) (Hotel Arbito)

Hotel Arbito was established in 2008 by a Portuguese owner. There is an union of the tourism industry but it has actually disappeared and so the owner of Hotel Arbito talked with other hotel owners to establish a new union, AETTL. AETTL was established in 2013, but has not started operation yet.

Timor-Leste has good assets to attract tourists such as beautiful nature and hiking courses, which are better than those of Fiji or Bali.

The owner thinks that Timorese lack in hospitality compared with people in Bali or Fiji, who are very



friendly and welcome tourists.

Hotels and the tourism sector needs personnel with the capability of English, accounting, statistics, managing people or cooking, bar etc..

○Compass (Tourism, a department of Tiger Fuel)

Compass, a department of Tiger Fuel, started its tourism business in 2006. Under two Australian owners of Tiger Fuel, five Timorese staff members are working.

Compass operates its business related to diving, such as water taxi between Dili and Atauro Island, motor boat and sailing boats.

Most of the customers are from foreign countries such as Japan, Australia and Europe. Diving in Timor-Leste is good in natural conditions. The business has grown steadily so far and will grow in the future.

The biggest problem is that all the costs are high. Air fares and costs of hotels and products are high. Economical hotels for divers are expected. Also, the products should be produced in Timor-Lest and has lower prices.

### (3)-2 Wholesale and Retail Industry

Labor force in the wholesale and retail industry became 44,000 in 2010, and is expected by LFP to increase steadily to 58,000 in 2030.

Wholesale and retail trade has been developed in advance of manufacturing, because it imports products and distributes them to city citizens and businesses. The enhancement of wholesale and retail is an important element, which is indispensable to the priority sectors in SDP and the industries of construction and manufacturing.

#### A. Wholesale Industry

Hearing with senior management of hotels and supermarkets showed that importers and distributors increased and that they did not need to import goods directly from abroad. It is believed that the wholesale industry will develop further if the system of transportation and warehousing improves.

##### ■Box: Interview with Wholesale Industry

○Kor Timor (NGO, Dealing of Rural Products)

Kor Timor, an NGO, was started in 2006 by a former Australian owner. Kor Timor hires 23 members of staff. All are local and 16 of them are women. The former owner helps Kor Timor even now. Kor Timor purchases handmade products and food from mainly women in rural areas, and sells to supermarkets or directly to consumers at the airport and Timor Plaza.

The main business has been textile and recycle paper (into boxes), but Kor Timor is now expanding business lines through a one village one product project, which started in 2013. The new products are virgin coconut oil, banana chips, taro chips, honey, and soaps.

The biggest customer is the government, which buys recycled paper boxes with cloth for souvenir

boxes.

Kor Timor sends its designer to Indonesia. If there are some good training courses, Kor Timor will be willing to send its staff.

The problems of Kor Timor are marketing, quality and customer service.

## **B. Supermarket Industry**

There are several large and small supermarkets in Dili. Initially, supermarkets were developed from the business of imported food, beverage and goods to foreigners working for international institutions etc. Now, half of the customers of the supermarkets are Timorese.

The following 2 supermarkets, which show good examples of growing Timorese employees, are owned by foreigners. Also, the managers told the stories, which suggested the coordination of business and society, a high standard of ethics and the "way of commerce".

### **■Box: Interviews with Supermarkets**

#### **○KMANEK (Supermarket)**

KMANEK has two supermarkets, one old shop in Bidau and the other at Timor Plaza. Also it has headquarters and warehouses. The owner was originally a Singaporean food trader, who imported foods and exported to another countries including Timor-Leste. He bought the supermarket in 2002 at Bidau and started supermarket business there.

KMANEK hires 120 Timorese and more than 20 foreigners from the Philippines, China and Indonesia.

The owner has his opinion on Timorese human resources as follows.

Timor-Leste was conquered by foreign countries for centuries. The Timorese have long experience to be oppressed and sucked by foreigners. So they basically have a sense of distrust to foreigners. Building mutual trust between management and employees is the most important.

It is true that Timorese have less basic skills and less willingness to work, but it is no use complaining about it.

Management need patience and teach again and again. Showing how to do, working with them and instructing again and again are necessary. If management trains employees with patience, they will be well skilled and, have the ability of application.

KMANEK pays higher salaries than average in Timor-Leste and raises the salaries with the development of ability. So the employees work long and the abilities of the long experienced workers are high. The owner does not have any complaints on their ability. KMANEK does not need to hire many employees for the supplementation of employees who quit, and so it can train each of new employees very carefully.

The owner believes that Timorese people has the most important character that workers should have, namely honesty and humbleness.

The owner believes in the honesty of Timorese through his experience.

In 2006, when two groups of people fought each other, KMANEK kept the shop open instead of evacuation advisory. The two groups fought and cut heads etc, but they did not attack third parties.

The economy paralyzed and people came to KMANEK and asked to "sell" foods even if they did not have money. KMANEK "sold" USD 300,000 of products, asking the "customers" to write their names on the receipts. After peace was restored, all the "customers" came and paid money.

Formerly, KMANEK directly imported products, but now it can buy products from domestic dealers. The distribution system is improving.

Timorese need to speed up before the oil dries up. KMANEK is expecting much on the projects of 2014 and 2015, which will promote the progress of the Timorese economy and society.

#### ○Pateo (Supermarket)

Pateo started its business in Timor-Leste as a small shop in 2001, which sells only Portuguese wine and Portuguese olive oil. In 2010, it changed its business into a supermarket style. Now it has only one supermarket in Dili. The number of products it deals in has increased from two to 7,000 for in the last 13 years.

80% of the products it sells are Portuguese and 20% are others. Most of them are Timorese.

The sales are increasing year by year despite the withdrawal of UN and other NGOs. Formerly, 90% of the customers were foreigners, but now half of the customers are Timorese.

Pateo hires 40 employees. Five of them are Portuguese, one is Filipino and the others are Timorese. Now there is one Timorese chief of a section. Pateo wants to have two Timorese middle managers this year.

Pateo has the policy to make the employees happy, because happy employees make customers happy. Of course, unexperienced employees make mistakes. In such cases, managers say, "If an employee makes a mistake, that is our mistake." There are tutors on each specific matter. Training is half done if the attitude is good.

The wholesale and distribution of goods is improving year by year, but still there is instability. The problem is that goods are often out of inventory.

### **C. Other Wholesale and Retail Industries**

Toyota Auto is an example of B to B business, and Tiger Fuel is an example of gas stations with diversified businesses lines. Both are owned by foreigners and trying to increase the employment of Timorese.

#### ■Box: Interviews with Other Wholesale and Retail Industries

##### ○Toyota Auto (Automobile Dealer, Workshop)

Toyota Auto Timor-Leste is the only Toyota's regular dealer in Timor-Leste, and is one of the dealers in the Indonesian dealer network. It was established in the 1980s, and ownership changed several times. Now the owner is the owner of Timor Plaza. It sells only new cars, selling 60 cars per year on average.

The main customers are the government, embassies, and NGOs.

Toyota Auto has 43 employees. Three are managers, 16 are mechanics and 24 are in sales and administration.

Among three managers, one is Australian and two are Indonesian. Among 16 mechanics, one is Indonesian and 15 are Timorese. All the 24 sales and administration staff members are Timorese.

There are three levels of mechanics. To promote, the mechanics must attend trainings and pass an examination.

A main problem with human resources is language. The technical language is English. Manual books are written in English.

Toyota Auto hopes that the government thinks of the education of technical English. It is also interested in training in 5S, Kaizen, TQC, Toyota Production System etc. Toyota Auto expects that the training will be carried out in Indonesian or Tetun.

○Tiger Fuel (Gas Station, Workshop, Convenient Store)

Tiger Fuel was founded by an Australian businessman in 1999. It operates an oil station, motor workshop and convenience store. It has only one site in Dili. The present owner bought the company in 2002.

43 Timorese works under the Australian owner and his son. The skills of middle management of ordering, managing personnel and problem solving are necessary to improve.

Tiger Fuel borrows money from a bank in Timor-Leste, which is a rare case. It borrowed money from an Australian bank, ANZ, on the mortgage of the land the family has in Australia.

### (3)-3 Transportation and Storage Industry

Please see (3.1.5) for the transportation and storage industry.

■Box: Interviews with the Transportation and Storage Industry

○Air Timor (Airline)

Air Timor started its airline business in 2008. It operates one chartered line operated by Silk Air between Dili and Singapore. There are three flights a week. The capacity is 128 seats. On average, 60% to 70% of them are occupied.

Air Timor employs 12 persons, of whom three are foreigners, two Australian and one Singaporean managers. All the others are Timorese. 60% of them are from the Dili Institute of Technology (DIT), because it has a course in travel and tourism.

Air Timor signed an MOU with the Indonesian government to fly a chartered plane between Denpasar, Dili and Darwin. The plane can fly among the three cities in a day.

To develop the tourism industry, airlines are necessary. The present Dili Airport is not sufficient. The runway is too short, parking lot is small, and there is only one boarding gate.

○SDV (Transportation)

SDV launched a business in 1999 in Timor-Leste when UNDP started to act a humanitarian intervention after the inner conflict. SDV has gotten a job to supply goods for UNDP.

The business domain of SDV is different from country to country. The domain business in Timor-Leste is freight forwarders, custom brokers and terminal operators. The major customer is Timor GAP.

The current number of employees is 90 consisting of 86 Timorese, two French, and two Indonesian. SDV is increasing employees gradually.

SDV has original training programs and facilities in Paris, Singapore, Malaysia, etc. SDV dispatches several of his employees annually.

A major problem in Timor-Leste is human resources. There is a need for improvement in not only skill/unskilled workers but also businesspersons like public servants, bankers, hotel staff, etc.

○Association of Transportation of Trucks of Timor-Leste (ATCTL) (Association of Truck Drivers)

ATCTL was founded in 2004. It has 97 drivers, including 80 members (35 founders and 45 non-founders) having 100 trucks. The members buy trucks by themselves. The lineup of trucks is 3t, 5t, 8t, 12t and 24t. The members do not have container trailers.

ATCTL had only 50 trucks during the crisis of 2006 but developed rapidly.

ATCTL's business is solely domestic. ATCTL's drivers carry food and other loads mainly between the Dili Port and warehouses all over Timor-Leste. ATCTL does not possess any warehouses, but it is planning to have ones at Tibar Area in the future.

ATCTL receives orders from clients, allocates the orders to the members, collects money from the clients and pays money to the members, subtracting 5% and oil cost. The rate of transportation is negotiated between the clients and ATCTL. ATCTL contracts the procurement of oil with Pertamina, using bargaining power, for the members.

The main clients are Victoria Shop (construction), BTK (construction), Carya (construction), Globus (rice shop), Lay (rice shop), Timor Food, MCIE (rice distribution) and the Ministry of Social Solidarity (for natural disaster and refugees). Also, SDV and Fedex ask ATCTL to serve domestic transportation.

Now, Indonesian transporters carry goods from Indonesia to Dili and other places, but they are only checked at immigration. Indonesian drivers can stay in Timor-Leste for seven days.

### (3)-4 Service Industry

The service industry develops along with the improvement of living of the people and development of various industries. In addition, because the industry is labor-intensive, labor-saving mechanization is difficult as compared to the secondary industry. Its share of the workforce generally increases along with economic development. LFS has expected that the employment in the service industry will increase significantly from 34,000 in 2010 to 155,000 in 2030.

## A. Telecommunication Industry

In the mobile phone market, which had been occupied by two companies of Telecomcel and Timor Telecom, the price competition has intensified with the entry of Telemor, a Vietnamese company. Telemor is working to spread their service to the poor and rural areas.

Telemor has a business model that it advances to one country with a low penetration rate of mobile phones every year, localizes their business in a short period of time, and advances to a next country with a few Vietnamese staff members left in the country. Their business and the methods of training of local staff are thought-provoking on human resource development in Timor-Leste (see the box below).

### ■Box: Interview with Telecommunication Industry

#### ○Timor Telecom (Telecommunication)

Timor Telecom has the longest history and is the biggest telecommunication company in Timor-Leste. Its total number of employees is 244 Timorese, 15 expatriate (all from Portugal) and 100 service suppliers, i.e. cleaners etc. 83% of Timorese employees are university graduates while 17% are high school graduates. 54% are male and 46% are female. The average age of employees is 34 years old.

In the human resources field, Timor Telecom made a lot of investment in language training, both Portuguese and English. Indonesian university graduates study in Portugal as well as in Timor.

Timor Telecom has the human resource policy to employ locals and train them abroad. Timor Telecom's final goal is that one day no expatriate will work in Telecom.

The government should invest in education, especially language education like Portuguese. Education is very important especially for children.

The market of Timor-Leste is not large enough for three telecommunication companies. The competition is very severe against the competitors from Indonesia and Vietnam. Some more regulations are needed. The market was liberalized, but there is no control. The liberalized market needs a referee.

Timor Telecom finances its money from Portugal and loans from BNU.

#### ○Telemor (Telecommunication)

Telemor is owned by a Vietnamese telecommunication enterprise, Viettel. Telemor started the preparation of business in Timor-Leste in 2012. It took one year to prepare infrastructure and to get license. It started business in July 2013.

Viettel has the strategy to enter underdeveloped countries' markets, where the penetration rate of mobile phones is low. It has entered eight foreign countries including Timor-Leste. The countries are as follows from the older to newer.

(1) Laos, (2) Cambodia, (3) Haiti, (4) Peru, (5) Mozambique, (6) Tanzania, (7) Cameroon, and (8) Timor-Leste.

Viettel is preparing the starting of business in 2015 in Burundi.

Telemor has 200 staff members. Among them 40 are Vietnamese. Timorese employees are trained in Vietnam. Local staff who graduated from college is in charge of techniques, marketing, information technology, etc. High school graduates are in charge of call centers.

Telemor does not care differences between local college graduates and foreign college graduates.

Telemor's Vietnamese staff is moving from one country to another, transferring skills to local staff quickly. Telemor expects local staff to promote and take higher positions.

The good model is the Honda in Vietnam. Honda has a large business and factory in Vietnam, but the number of Japanese staff decreased rapidly, and now it now has only five or 10.

Telemor rapidly increased its customers and now has the second position, after Timor Telecom. Telemor has local offices in all the 13 districts.

Telemor's rate is one cent per minute, while other company's was 15 to 17 cents per minute before the entry of Telemor.

## **B. Other Service Industries**

### **■Interview with Other Service Industries**

#### **○Grafica Nacional (Printing)**

Grafica Nacional was established as a joint venture of Timor-Leste and Indonesia. The printing products of UN and the government were imported from Indonesia before Grafica Nacional was established.

Grafica Nacional has 26 employees, among whom five are Indonesian.

The problem of Timorese workers is low motivation to work. The opportunities of work are not sufficient. Grafica Nacional interviewed a candidate for designer who studied industrial engineering at an Indonesian university. He did not have a chance to use his techniques, worked for a custom broker, and forgot how to use CAD system.

#### **○Guide Post (Advertisement)**

Guide Post is publishing a magazine "Guide Post", free guide map "Rustic Guide" and managing "Guide Post" website. Also, it operates a coffee room.

2,000 copies of "Guide Post" magazine are delivered to 116 places. 560 companies are registered for the business matching site of "Guide Post" website.

There are eight employees. Among them, two engage in graphics, one in the website, and one in bookkeeping while two are drivers and two are editors.

The situation of the industries of Timor-Leste in the eyes of an advertiser is as follows.

The construction and related industry is a success case in Timor-Leste. An example is the EDS group which does business in car rentals, plant hire, heavy equipment, construction, engineering and meat shops. Also, RMS engineering and construction is another case of success.

Hotels, restaurants, travel agencies, adventure service are the major sources of advertisement. The tourism industry in Timor-Leste is sound and vital.

IT business has a potentiality in Timor-Leste. HALSION corporation in Timor Plaza is one of the

most prospect companies.

Timor-Leste needs more reliable printing companies.

○Halsion (IT outsourcing)

Halsion started its business in April 2012 with two directors and two staff members. Now, it has 13 staff members. Six of them are expatriates, three Australians and three Indonesians, and seven Timorese.

Halsion does IT outsourcing business. All their clients at present are corporations. There are no clients in the government, although there will be ones. Its business grew rapidly and operates at full capacity now.

Among the local staffs except for a receptionist, almost all are from foreign colleges, in the Philippines, Australia and Indonesia because the level of Timorese college graduates are by far below those from foreign colleges. One exceptionally good graduate from UNTL is employed by Halsion, but that is really an exception.

The biggest problem is immigration procedures. Halsion understands that the Timor-Leste government prevents all the jobs from being occupied by foreigners. So it is reasonable that the immigration of unskilled workers is restricted. However the procedures are not reasonable. It takes three months to earn a working visa. Immigrants need a health certificate issued in their own countries, but they cannot arrange a visa in their countries. Visas are issued only at the immigrant office in Dili. The health certificates are reviewed at the Ministry of Health. Also SEPFOPE and law department are related.

Halsion hopes to increase the employment of local people, but it needs foreigners to manage and train Timorese.

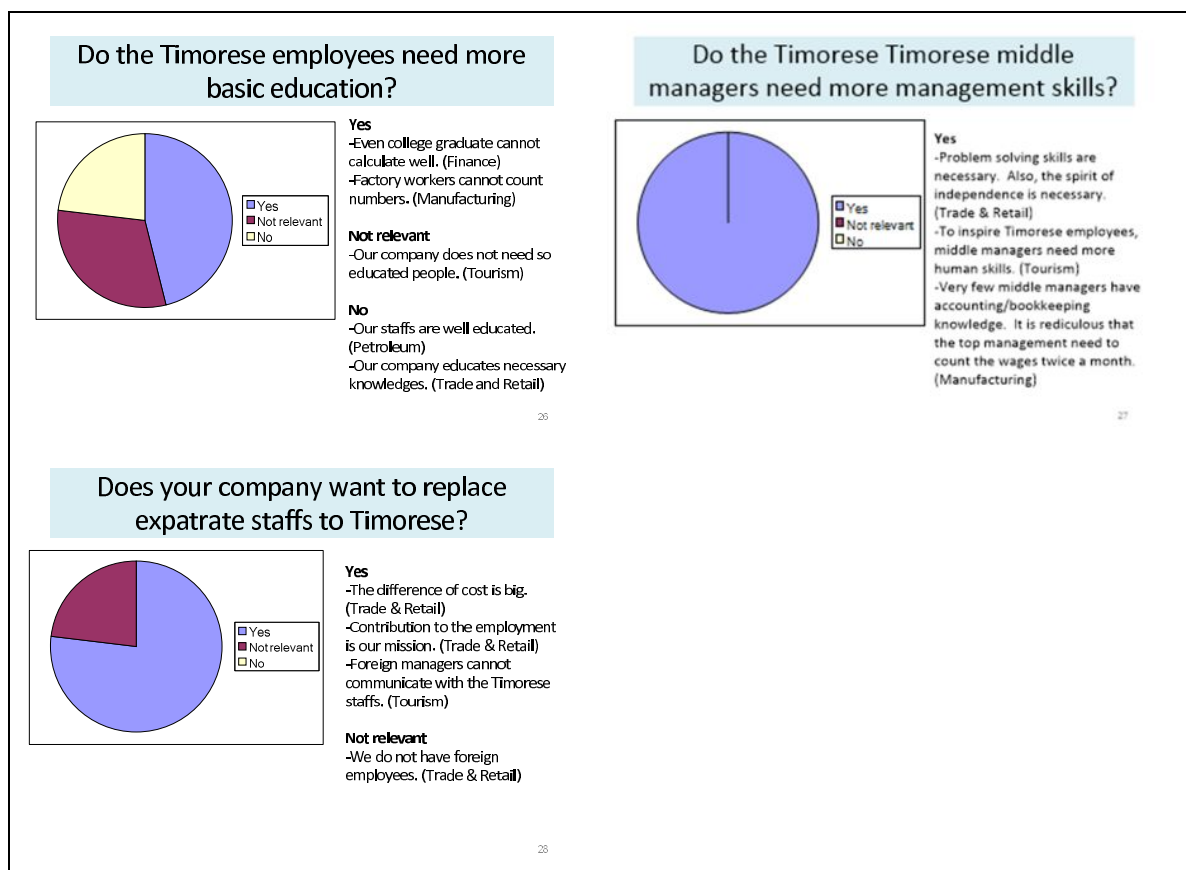
■Box: The result of questionnaire on the Human Resource Development

The study team asked the three questions to the enterprises interviewed, "Do the Timorese employees need more basic education?", "Do the Timorese middle managers need more management skills?", and "Does your company want to replace expatriate staffs to Timorese?"

On the basic education, a little less than half of the enterprises answered "yes", and a little more than 30% answered "not relevant" and a little more than 20% answered "no". Many of the enterprises that answered "yes" complained on lack of basic mathematical abilities. The enterprises that answered "not relevant" do not need so educated employees. The enterprises that answered "no" already hire well educated employees or educate employee necessary knowledge.

To the question, "does your company want to replace expatriate staffs to Timorese?", a little more than 75% answered "yes" and a little less than 25% answered "not relevant". The reasons of "yes" are "the difference of cost is big," "contribution to the employment is our mission," and "foreign managers cannot communicate with the Timorese staffs." The enterprises that answered "not relevant" do not hire expatriate staffs.





### 3.1.2 The Situations of Business Development Services

The main player in business development services in Timor-Leste is the Institute for Business Development Support (IADE).

The Union of Small Enterprises (UNAPE) plays some roles in the business development services.

#### (1) Institute for Business Development Support (IADE)

IADE was founded in 2006. It was responsible for the support and promotion of domestic capital investment. Also, it was responsible for training in bookkeeping, business planning and business administration.

By the review of the roles of the governmental institutions in 2012, the support and promotion of the investment of domestic capital were transferred to TITL and the IADE was to dedicate in the development of the private sector.

IADE supports micro, small and medium enterprises, while MCIE supports micro and small enterprises focusing on the micro enterprises. The roles of the two institutions are overlapped.

The following are the services that IADE is providing.

### (1)-1 Corporate Training

The example of the corporate training programs that IADE is providing with its network of the Center for Development of Enterprise (CDE) are as follows.

BIN (The Pursuit of Ideas to Business)
CIN (Early Ideas to Business)
MSN (Improve Your Business) - With National Certificate Level 1
MSHE (Improve Your Ability to Display or Exhibition)
GEJF (Generous Enterprises Together Forward)
MANAGEMENT (Business for Contractors or Dealers) - With National Certificate Level 4
Preparation and Submission of Proposals for the Budgetary Process Competition (tender) - With National Certificate Level 4
Training the Business Groups
GANP (Management of Associations of Small Business)

### (1)-2 Disclosure and Information Dissemination and Enterprise Promotion

IADE has its role to provide information to contractors on business opportunities and investment within the country.

To provide or arrange information on the process of budgetary competition (tender) and business opportunities to others through SICO or SIT
To identify and facilitate business through business registration
To conduct fair to promote local products (grown and produced within the country)
Competition of business plans
To conduct dialogue seminar or to share information about the services of IADE
Promotion of laws that relate business entities

### (1)-3 Monitoring and Counseling

IADE is providing programs to help enterprises which face difficulties or problems by coaching and mentoring.

To help identify simple practices to start with business idea
To assist in creating or founding companies through the business planning process
To develop programs and actions in respect of technical assistance in business aspects
To support participation in public tenders
To assist in the preparation of documents to gain access to credit or bank loan

#### (1)-4 Business Support

IADE offers services to enterprises in operation.

To establish the development of value chain
To establish the program of FIN (Facility for Business Innovation)

#### (1)-5 Market Reserach

The Market Research Program is a program to identify markets that have the possibility of sustainable development. Moreover, it is to identify the potential of products that exist in districts to decrease the action of importing from abroad and also to develop the private sector at the sub-district level through the promotion of local products.

To develop a methodology for research and analysis (Technical and Scientific)
To develop a questionnaire and interview guide
To implement market research (Local Products)

IADE's new role is to support MSMEs, especially in i) training, ii) business matching, and iii) pilot projects.

A pilot project in horticulture developed market links and taught farmers how to produce organic fertilizers, thereby increasing their incomes

In cooperation with the Faculty of Agriculture, National University of Timor-Leste (UNTL) and the Ministry of Agriculture, a pilot project in cattle rearing trained the Agency of Livestock (APS: Advanced Pest Solutions) in districts, which served as extension officers, to grow quality cattle and vaccinate them.

UNAPE plays a role in matching activity between foreign investors/importers and domestic companies.

IADE commenced new programs: i) Business Start-up Competition and ii) Business Innovation Facilities (BIF).

The Business Start-up Competition selects innovative and marketable business plans, provides training, and conducts follow-up monitoring. Last year, out of 285 entries, three plans for chicken, mushrooms, and therapy-treatment won.

The BIF program renders assistance, such as technical training, market studies, and equipment provision and funds from the National Commercial Bank of Timor-Leste (BNCTL) under the State Secretary. The government allocated USD 10 million to BNCTL to support private sector development.

■Box: Union of Small Enterprises (UNAPE)

UNAPE was established in 2003 for the promotion of small industries in Timor-Leste. UNAPE does not receive any subsidies from the government. UNAPE has a close relationship with the Department of Commerce, MCIE as well as the Ministry of Agriculture.

Currently UNAPE has 2,000 small enterprises in the trade sector 1,000 in the industrial sector and 2,500 small enterprises in the agriculture sector in all the 65 sub-districts. The member of UNAPE is categorized as the small enterprise whose employee is from five to 10 persons and/or its annual income is between USD 60,000 to 100,000.

**People’s shop**

UNAPE plays a role in establishing “people’s shop” in rural areas together with MCIE. The opening ceremony will take place on 14<sup>th</sup> March in Ainalo, and 15<sup>th</sup> March in Cobalima.

**Matching activity**

UNAPE plays a role in matching activity between foreign investors/importers and domestic companies.

**Stabilizing prices**

UNAPE has a role in stabilizing prices in the market. In case the price of rice rises, UNAPE will import rice from abroad and distribute to the market. The real operation will be done by each member company of UNAPE.

It is the implementation of the policy of MCIE, i.e. 1.2 Normalization of price in the market and assurance of supply of essential goods in the national market for the timely control of the negative effect of inflation.

**Distribution of rice mills**

UNAPE distributes rice mills to the members in sub-districts with a budget of USD 3 million per year.

**3.1.3 The Situations of the access to financial services**

**(1) Financial services**

Generally, financial services in Timor-Leste are under developed.

There are only 4 commercial banks in Timor-Leste, three of which are the branches of foreign banks, and 2 of them have only 1 branch in Dili. The players of the financial services are as follows.

Central Bank (Central Bank of Timor-Leste, BCTL)

Commercial Banks: BNU (Portuguese bank) branch

ANZ (Australian bank) branch

Mandarin Bank (Indonesian bank) branch

National Commercial Bank of Timor-Leste (BNCTL)

Micro finance: Implemented by BNCTL and NGOs  
 Insurance: NITL (Canada/Singapore)  
 Sinarmas (Indonesia)

\*Insurance has rather developed functions. (see (1)-5)

At present, there do not exist stock exchanges or institutions to offer long term finance. SDP mentions the establishment of the National Development Bank and the Timor-Leste Investment Corporation, and these two are under preparation.

#### (1)-1 Central Bank of Timor-Leste (BCTL)

The Central Bank of Timor-Leste (BCTL) is the central bank of Timor-Leste. It is the monetary authority of Timor-Leste, and enjoys legal, operational, and administrative, and financial autonomy.

BCTL was formally established on 13 September 2011 under law No.2011/5 in accordance with Article 143 of the Constitution. Previously, central banking functions in Timor-Leste were carried out by predecessor organizations, the Central Payment Office (2000-2001) and the Banking & Payments Authority of Timor-Leste (2001-2011). Both were created by the United Nations Transitional Administration of Timor-Leste (UNTAET).

The functions of the previous central banks are as follows.

**Table 3.1.5 The functions of the previous central bank**

Central banks in the past	Functions
Central Payment Office (2000-2001)	Government account, government payments, bank licensing & supervision, and operation of Dili Clearinghouse
Banking & Payments Authority of Timor-Leste (2001-2011)	In addition to above, licensing and supervision of insurance companies, the publication of monetary and banking statistics and other economic information, the operational management of the petroleum fund, the issuance of centavos coins, and the operation of the credit registry information system (CRIS) and the large value transfer system (LVTS)

BCTL' vision is as follows.

To be a credible lender in preserving price stability to foster economic development in Timor-Leste

BCTL's organization consists of the following three organizations.

**Table 3.1.6 BCTL's organization**

Organizations	Roles
Departments	The Department of Financial System Supervision
	The Department of Administration
	The Department of Petroleum Fund
Independent Divisions	Accounting and Budget
	Economics and Statistics
	Information Technology
Specialized Supporting Offices	Legal Office
	Internal Audit Office

### (1)-2 Commercial Banks

The banking system in Timor-Leste consists of the following institutions.

**Table 3.1.7 Banking System**

Classes	Names	Main Office	Timor-Leste
Central Bank	Central Bank of Timor-Leste (BCTL)	Dili	Dili, Oecusse
Banks	Caixa Geral de Depositos (CGO)/BNU	Portugal	8 Offices
	Australia New Zealand Bank (ANZ)	Australia	Dili
	Mandarin Bank	Indonesia	Dili
Local Quasi-bank Institution	National Commercial Bank of Timor-Leste (BNCTL)	Dili	11 Offices

Total loans and advances of the banks were as follows.

**Table 3.1.8 Total loans and advances of the banks**

(Unit: million US dollars)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Balance	68.6	87.3	92.2	100.3	105.3	111.0	110.9	131.4	155.8	176.9

(Source: BCTL interview and website)

### (1)-3 Micro-finance

BNCTL was founded in 2001 as Instituição de Micro Finanças de Timor-Leste in order to help poor people and small enterprises using international aid and ADB fund. Under the new name of Banco Nacional Comercial de Timor-Leste since 2012, it has 11 branches including Dili and lends up to \$5,000 to small and micro enterprises. It lends money for working capital of small and micro enterprises. To market traders and farmers, it lends from USD 1,000 to 2,000 at an interest rate of 16% to 18% for from 6 to 9 months. It also lends money to public servants at 18% for 2 years up to their monthly salary.

Micro-finance for individuals, which resembles the Grameen Bank, exists. They lend a small amount

of money to the groups of women etc.

Table 3.1.9 BNCTL Finance Scheme

Category	Criteria	Group Credit	Market Vendor	Agriculture Credit	Business Loan	Payroll Loans
1	Good Charactaristic, Honesey and responsible	✓	✓	✓	✓	✓
2	Diligenet and hard worker	✓	✓	✓	✓	✓
3	On productive business	✓	✓	Owner of land (Coffee, Rice etc)	✓ good future	Salry should be through BNCTL account
4	Always stay in the center( weelky)	✓	Active Business Lincese in Market	Salay, land certicicate, STNK etc.	MCIE business liecense	Government Staff or NGO
5	Ready to take a responsible	✓	-	✓	-	-
6	Experience in business	✓	✓	-	Minimu 2 years	✓
7	Maximum credit platform (U\$)	1,000	1,000	2,000(Coffee) 1,000(Rice)	Unlimited	Unlimited (Check slarly level)
8	Duration time Weeks (Months)	24 week 6 months	24 week 6 months	9 months	24 months 2 years	24 months 2 years
9	Interest rate per year %(per month) flat rate	16(1.33)	18(1.5)	18(1.5)	18(1.5)	18(1.5)
10	Administration cost from the credit platform %	2	2	2	2	2
11	Delay payment cost % per year (per months)	12(1)	12(1)	12(1)	12(1)	12(1)
12	Payment system/deposit ( fixed instalment)	Each week	Each week	Each month	Each month Interest and Loan	Each month Interest and Loan

#### (1)-4 Long-term Capital

In Timor-Leste, there is no formal stock exchange market. So it is difficult for enterprises to collect money from the open market.

Since long term borrowing from banks is difficult, private enterprises use the owners' own money, private borrowing and retained earnings for their investment.

SDP plans the establishments of the National Development Bank and the Timor-Leste Investment Agency in order to promote industry.

The National Development Bank, which is now under preparation of establishment, will offer loans at affordable rates to satisfy the unmet demand for long-term finance estimated around \$50 million.

The Timor-Leste Investment Agency is an investment company modeled on Tamasek Holding of Singapore. Its capital of \$2 million has been already prepared in the budget of 2012. It is planned to be established soon.

#### (1)-5 Insurance

There are two (2) insurance companies in Timor-Leste: NITL based in Canada and Singapore and Sinarmas based in Indonesia. While NITL has all the functions except for reinsurance in Timor-Leste, Sinarmas has the judging and reviewing function in Indonesia.

The following is information of NITL, which the Survey Team visited.

NITL offers insurance products to industrial clients as well as individual clients. As shown in the brochure, the industries NITL covers are as follows.

Agriculture	Health Care
Automotive	Hospitality
Aviation	Infrastructure
Communications, Media & Technology	Manufacturing
Construction & Design	Marine
Education	Mining, Metals & Minerals
Energy	Power & Utilities
Financial Institutions	Real Estate
Fisheries	Retail / Wholesale
Forestry & Integrated Wood Products	Sports & Events
	Transportation

(Source: Interview, brochure and website of NITL)

NITL offers all the insurances except for life insurance. Thus, in Timor-Leste access to insurance is possible. The products that NITL has on the brochure are as follows.

**Table 3.1.10 Product type of insurance**

Class of Insurance	Product Type
Property Insurance	Fire Insurance Consequential Loss / Business Interruption Loss Industry All Risk / Industrial Special Risk Insurance Equipment All Risk Insurance
Liability Insurance	Public Liability Insurance Product Liability Insurance Employers' Liability / Work men's' Compensation Insurance Professional Liability / Indemnity Insurance
Construction Insurance	Constructors' All Risk Insurance Erection All Risk Insurance
Motor Vehicle Insurance	Third Party Bodily Injury Only Third Party Bodily Injury & Property Damage Third Party, Fire & Theft Comprehensive Cover
Marine & Aviation Insurance	Marine Cargo Insurance Marine Hull Insurance Goods-In-Transit Insurance
Financial Insurance	Bid Bond Advance payment Bond Performance Bond Customs Bond
Accident & Health Insurance	Personal Accident Insurance Hospital & Surgical Insurance Travel Insurance
Miscellaneous Insurance	Money Insurance Fidelity Insurance Trade Credit Insurance Political Risk Insurance

(Source: Interview, brochure and website of NITL)



Since bid bond in Timor-Leste is difficult and expensive, bid bond by insurance companies is popular. Insurance sometimes replaces the function of banks to cope with difficulty in access to banks.

■Box: Interview with Insurance Company

○NITL (Insurance)

NITL was founded in April, 2010, by its parent company, First Capital Insurance in Singapore, which is the subsidiary of First Fairfax in Toronto, Canada.

NITL has five foreign managers and eight local staff members, because the company wants to build the capacity of the personnel in Timor-Leste.

NITL offers all the insurance services except for life insurance. The law of compulsory motorcycle insurance was enacted in December 2010. The law requires insurance of USD 50/year for vehicles and USD 25/year for motorcycles. NITL has 5,000 to 6,000 contracts of motor vehicle insurance.

In the industrial sector, Hera power plant, ferries between Dili and Oecusee and Malaysian helicopters are insured by NITL.

The move of firefighters is slow in Timor-Leste. Firefighters cannot discharge water, maybe because of lack of water.

The biggest problem that Timor-Leste has is human resources. The quality of human resources is quite low, lacking basic English and mathematics. Elementary schools in Timor-Leste teach more than 10 subjects, which are too many to understand. Students cannot achieve basic knowledge. This situation will be an obstacle to the development of the financial industry and all the industries of Timor-Leste.

## (2) The Base of Finance

Timor-Leste has the problems that there is much land whose ownership is not certain and that land ownership by foreigners and foreign enterprises is prohibited. Therefore, financing with land collateral is difficult.

On the matter of the ownership, SDP mentions the bill of "Land Law to provide security of land for lease or ownership".

On the borrower side, the low literacy of finance is an obstacle to the loans. The diversity of languages and the low ability of calculation also cause the low literacy of finance.

### (2)-1 Collateral System

Usually, the collateral of land etc. is necessary to borrow money for investment from banks. However, land-collateral borrowing is difficult in Timor-Leste.

A. There is much land, the owners of which are not clear. There are many cases that there are two certificates of ownership on one land area, one of which was issued in the Portuguese era and the other was in the Indonesian era. So, the basic condition of the collateral of land is not ready. The draft law under consideration, "Land Law to provide security of land for lease or ownership", is mentioned in SDP.

B. The ownership of land by foreigners is prohibited by the constitution and law.

## (2)-2 The literacy of finance

Taken together information collected at government offices, companies and financial institutions, the literacy in finance of Timorese companies and personnel seem low.

By interviews with the banks, there are many small and medium enterprises that do not prepare balance sheets. Since knowledge of accounting is not prevailed in the society, it is difficult to keep books.

The low literacy of accounting seems to be based in the fact that literacy of letters and calculation skills are low.

Payment by cash is common in not only personal transaction but also business to business transaction, in which the business to business transaction is not done through the banks.

### ■Box: Activities to improve the literacies of language and mathematics

#### Science of Life System 24/7 (SOLS24/7)

SOLS 24/7 is an international NGO, which offers two year training program. SOLS 24/7 Timor-Leste has its headquarters (HQ) in Dili. SOLS 24/7 has some 700 students. Most of them are high school graduates in the 18-25 age range.

Stage 1: Training at a district center in English and life skills

Stage 2: Training at HQ in English, maths, life skills, and computer

Stage 3: Assistant teacher at a district center

Stage 4: Training at HQ in advance English, maths, and computer as well as basic academic skills such as accounting, administration, and management

Students learn computer skills, such as Word, Excel, PowerPoint, and Publisher, for 1 hour per day, or five hours per week.

After training, students have an opportunity to go abroad for work or voluntary services. 4,000 students have been dispatched to Australia since 2006. Overseas experience enables students to broaden their horizons and grow while building their self-esteem and filling their parents with pride.

SOLS 24/7 has two dormitories, each of which accommodates 250 students. Students are from all over the country. Being from different districts sometimes arouses negative feelings among them.

The dormitories provide an environment where they live together and develop mutual understanding, thereby contributing to unity and peace building.

SOLS 24/7 offers seminars to nearby people, which are a source of the budget.

SOLS 24/7 signed an MOU with the Secretary of State for Professional Training and Employment Policy (SEPFOPE) and also with the Ministry of Petroleum and Mineral Resources. However, the training program of SOLS 24/7 is currently outside the national qualification framework.

### 3.1.4 Industry Supporting Organizations

#### (1) Financial services

##### (1)-1 Secretary of State, Support and Promotion of the Private Sector (SEAPRI)

SEAPRI is a governmental office with the mission of the promotion of investment by the private sector, and has the Institute for Business Development (IADE), Specialized Investment Agency (AEI), National Commercial Bank of Timor-Leste (BNCTL), Bamboo Center. The annual budget is US 3,011 thousand in 2014.

##### (1)-2 Chamber of Commerce and Industry, Timor-Leste (CCI-TL)

The Government of Timor-Leste established CCI-TL in 2010 with 19 industrial associations as members. CCI-TL signed an agreement on the support of enterprise development with IADE, and is implementing business matching, business training, counseling, trade exhibitions, support of the announcement of governmental procurement, etc. At present, CCI-TL 22 private enterprises, including foreign ones, of construction, telecommunication, trade etc. as private members.

Table 3.1.11 List of the members of CCI-TL

No.	Association
1	Timor-Leste Woman's business association
2	Timor Business Association
3	National Youth Business Association of Timor-Leste
4	Timor-Leste Chinese Business Association
5	Timor-Leste National Tourism Business Association
6	Timor-Leste National Business Union
7	Timor-Leste National Business Association
8	Timor-Leste Commercial Agriculture Industry Association
9	National Small Enterprise Union
10	Timor-Leste Construction Business Association
11	Barcos Nao Solas Association
12	Timor-Leste Popular Business Association
13	Christian Business Man Community
14	National Transport Association
15	Civil Construction and Public Works Business Association
16	Timor-Leste FETP Cooperative
17	Sorumutu Financial Credit Cooperative
18	Cooperative Café Timor
19	Lanamona Maliana Cooperative Association

Table 3.1.12 List of the private members of CCI-TL

Platinum Members		Silver Members	
1	Timor Telecom	1	Masterlink Motors
2	Ensul	2	Cadoras Unipessol
3	Digicel	3	Victoria Lda
4	Worley Parsons		
5	Rosario Lda	Bronze Members	
6	SDV Logistics	1	Asamana
7	BNU	2	Mukun Timor Diak
8	Jacinto Group	3	Fitbus
9	Monte Veado	4	Café Brasil
10	Quidgest	5	Vairoque Unip Lda
11	Leader Group	6	Globus Unip Lda
Gold Members		7	W-Four
1	China Harbour		

#### (1)-3 Specialized Investment Agency (AEI)

AEI, which is also called the Trade Investment Timor-Leste, TITL, was established in 2006, in the same year of the establishment of IADE. AEI is an institution to promote investment in Timor-Leste both by domestic and foreign investors. The 2014 annual budget is USD 356 thousand. The targets of AEI's support are investments of USD 50,000 or more by domestic investors and investments of USD 1,500,000 or more by foreign investors. On private investment, Decree Law No. 10/2011 is enforced, which justifies the privileges for promotion of private investment such as exemption from corporation tax and import duties, grant of labor permission etc. The periods of the privileges are 5, 8 or 10 years, which differ by the site of investment. AEI has approved 163 private investments from 2006 to 2013.

The sectors of private investment that AEI approved from 2006 to 2013 are as follows. 28 hotels, 19 real estates/properties and 14 wholesale/retail trades were approved.

Table 3.1.13 Number of Private Investment (2006-2013)

No.	Sector	Investment
1	Hotel	28
2	Real Estate, Property	19
3	Construction	14
4	Transportation	12
5	Construction Material	12
6	Agro Business, Coffee	11
7	Whole Sales, Retail, Trade	10
8	Energy	10
9	Car rental car workshop	8
10	Fishing product	7
11	Bank Insurance	4
12	Tourism	4

13	Telecommunication	3
14	Health	3
15	Electrical	3
16	Water	2
17	Security	2
18	Engineering	1
19	Salt	1
20	Entertainment	1
21	Auditor	1
22	Garment	1
23	Others	6
	Total	163

### 3.1.5 Logistics

Regarding international conditions, Timor-Leste has natural features suitable for deep-sea port development, and is located halfway between ASEAN and Australia; ASEAN countries require large quantities of natural resources due to soaring industrial growth, while Australia has an abundance of such resources and is a huge supplier.

Regarding domestic conditions in the logistics sector, Timor-Leste has many problems such as narrow roads, few facilities for long-distance passenger transportation, and many waiting ships due to small cargo handling capacity, hindering industrial development.

Donors such as Japan, Germany, ADB, and IDA under the World Bank have supported most infrastructure development in the transportation sector in Timor-Leste in recent years.

Table 3.1.14 Trend of Donor Support (Unit: Million USD)

Year	2010	2011	2012
Australia	0.03	0.03	-
Germany	0.09	-	-
Japan	14.94	2.54	33.10
Sub-Total of DAC member	15.07	2.56	33.10
ADB	46.0	-	40.00
IDA	-	20.0	-
Sub-Total of International Agency	46.0	20.0	40.00
Total	61.07	22.56	73.10

Source: OECD

This section outlines the current conditions and issues of the logistics industry such as ports and roads in Timor-Leste as fundamental infrastructure.

The National Logistics Center operated by MCIE plays an important role by storing foodstuffs in case of emergency such as natural disaster or a sudden rise in the price of rice due to excess demand. In an emergency, MCIE would provide rice from the National Logistics Center.

**(1) Port Sector**

<Current Conditions and Issues>

The department in charge of port development in Timor-Leste is the Administration of Port Timor-Leste, Ministry of Transport and Communication (APORTIL).

Dili Port, which is the major port in Timor-Leste, is basically open 24 hours a day, but the port does not operate at night as the customs office at the port is open only from 7 a.m. to 5 p.m.

Customs procedures at Dili Port have already been computerized by the ASYCUDA system. However, actual customs procedures are done on paper, causing many containers to pile up within the port. The logistics companies and cargo owners request that customs procedures be speeded up.

<Development Plan>

The port sector plays an important role for industrial development, and requires not only “hard” infrastructure development but also “soft” infrastructure development, such as organizational and institutional reform, human resource development, establishment of new regulations, etc.

New port development takes the highest priority in the Strategic Development Plan in Timor-Leste.

**Table3.1.15 Port Development Goals in SDP**

Short-term Objectives (–2015)	Mid-term Objectives (2016–2020)
<ul style="list-style-type: none"> <li>- To start operation of Suai Port</li> <li>- To replace port facilities of Com Port, Atauro Port, Vemosse Port, Oecussi Port.</li> <li>- To start construction of Tibar New Port</li> </ul>	<ul style="list-style-type: none"> <li>- To start operation of Tibar New Port as a gateway to Timor-Leste</li> <li>- To newly develop Cuarabela Port and Beaso Port</li> </ul>

(Source: Strategic Development Plan 2011-2020)

Based on the results of the F/S on the Tibar New Port Development Plan financed by the International Finance Corporation (IFC), the Ministry of Transport and Communication approved new development with a Public Private Partnership (PPP) scheme in March 2013.

**(2) Current Conditions and Issues in the Road Sector**

(Current Conditions and Issues)

The department in charge of road development is the Directorate of Road, Bridge and Flood Control, Ministry of Public Works. The annual budget for road development was around 10 million USD in 2013.

There are almost no trunk roads in good enough condition for heavy cargo transport. The mountainous roads are narrow and their surface is in bad condition, and there are many overturning accidents. Large trucks cannot be used due to the current state of the roads, so the efficiency of cargo transport by road is low. Donors such as ADB, WB and JICA have recently launched projects to develop the trunk road network by a loan scheme.

(Development Plan)

Most trunk roads have only just started to be developed, and all sections except a small section in Tibar District are still undergoing feasibility studies, detail design, and construction supervision.

The major donor in regard to trunk road development is ADB and JICA. A project management unit (PMU) established under the road department plays a coordinating role among the donors that are assisting trunk road development. The project manager of the PMU is dispatched from ADB. The International Labor Organization (ILO) has also launched a project to develop some district roads in recent years.

**Table 3.1.16 Summary of Trunk Road Development Projects**

	Section (km)	R.N.	Status	Donor
1)	Dili – Baucau	1	D/D	JICA, Loan
2)	Dili – Liquisa	3	D/D, C/S	ADB, Loan
3)	Tibar – Gleno	4	C/S	ADB Loan
4)	Dili – Ainxo	2	D/D	WB Loan
5)	Manatutu – Natabora	9	D/D	ADB, Loan

(Source: Directorate of Road, Bridge and Flood Control)

Footnote : D/D...Detail Design, C/S...Construction Supervision, R.N...Road Number

### **(3) Airports**

The main gateway of Timor-Leste is Dili International Airport, which was constructed while Timor-Leste was still part of Indonesia. Since then, the technical classification of the airport has been changed to a domestic airport to accommodate short-distance aircraft, but it has not responded to the increase in passenger and cargo volume since the country gained independence. Currently there is only one Australian flight and one Indonesian flight daily, and three Singaporean flights per week. Almost all flights are fully booked. There is a plan to expand the airport to accommodate medium-distance aircraft under a PPP scheme supervised by the IFC. In 2013, an investor conference was held.

The current specifications of Dili International Airport are as follows:

Runway	1,850m
Width	30m
Facility	Control Tower, Passenger Terminal
Officials	122
Passengers (2012)	179,493
Cargo	Import 365,161kg, Export 111,548 kg, Total 476,749kg

The number of flights increased by 1.34 times in 2008, whereas the number of passengers increased by 1.83 times and the volume of cargo by 1.46 times in the same year.

Table3.1.17 Flight, passengers and cargo at Dili airport

Year	Flight	Passengers	Cargo (Kg)
2008	3,328	97,807	326,407
2009	4,056	125,722	421,368
2010	4,980	149,962	415,652
2011	4,150	151,488	426,029
2012	4,474	179,493	476,709
2013	2,454	89,048	137,781

According to a presentation by the IFC, the number of passengers will reach 300,000 in 2030.

The list of airlines is as follows:

Table3.1.18 Airline list

No.	Airline	Remarks
1	Airnorth	Australia Darwin Daily (2 flight on Wednesday)
2	Air Timor	Timor-Leste, (Charter flight of Silkair) 3 flights per week
3	Sriwijaya Air	Indonesia. Denpasar Daily
4	MAF	Air Force
5	CHC Helicopter	ConocoPhilip Platform
6	GAP-MHS Aviation	Timor Gap for Platform
7	Charter Flight	

The Dili Airport Expansion PPP Project is still in the pipeline. The length of the runway and location for expansion is still not decided: construction at sea or on the Comoro River. The former involves the potential problem of sea depth and latter involves difficulties in estimating the river water volume in the rainy season. The latter approach may involve the relocation of many inhabitants living in the area. According to the latest plan, the target airplane to be accommodated is the A-320, and the length of the runway will be 2,050 m (extended to 2,500 m in phase 2) and the width 45 m. Reconstruction of the passenger terminal and control tower will be included.

In addition to Dili Airport, there are seven rural airports in Timor-Leste: Ataurio Island, Oecusse, Maliana, Baucau, Fuiloro, Viqueque, and Suai. To promote tourism, all airports have a modernization plan. Priority is given to Oecusse and Baucau Airports. Suai Airport is part of the Tasi Mane project and the EPC contractor started construction in 2014.

#### **(4) Current Conditions and Issues for Logistics Enterprises**

A small number of foreign global companies such as SDV, Toll, Fedex, DHL, and TNT which have global logistics networks collaborate with the local trucking association and many local truckers that cover the domestic cargo haulage business.

SDV is the leading logistics company among foreign logistics companies in Timor-Leste, and has its own staff training program and facilities in Singapore. SDV constantly conducts staff training.

Meanwhile, the local trucking union and owner-drivers cannot afford to invest in renewing truck,



driver training and containerization. The skill gap between foreign and local logistics companies is gradually widening.

In general, the foreign companies cover international transport between overseas countries to Dili Port, and the domestic companies cover domestic transport from Dili Port to domestic storage warehouses.

Some of the local logistics companies and owner-drivers established a union/association consisting of 80 entities with 97 trucks. This union/association operates large-scale domestic transport business entrusted from foreign companies, the Government, state enterprises, and so forth. The other local truckers operate small to medium-scale businesses from small shops, individual orders, and the like.

The cost of domestic transport by the local logistics union and owner-drivers is high, and transportation quality and efficiency are low. The logistics conditions in Timor-Leste hinder growth of the export industry.

There are three border posts between Indonesia and Timor-Leste. Indonesian trucks carrying imported cargo from Indonesia can enter Timor-Leste through regular procedures of customs, immigration, etc., and stay for 7 days under a bilateral agreement between the Indonesian and Timor-Leste Governments. On the other hand, trucks of Timor-Leste do not enter Indonesia due to the little cargo being carried from Timor-Leste to Indonesia.

## **(5) Logistics Issues for Industrial Promotion**

### 1) Logistics route development with the potential development of natural resources

Timor-Leste has good potential in the agricultural sector, with promising exports of organic vegetables and fruits, animal products, etc. Due to the underdeveloped logistics infrastructure, however, facilities for pickup, storage, packing, shipping, etc. are inadequate in the agricultural sector. It would be useful to develop the strategic transport infrastructure by establishing a national logistics master plan.

### 2) Cooperation and correspondence with ASEAN accession

To build the ASEAN economic community, all ASEAN members are working to develop the ro-ro vessel network and ease customs procedures in order to establish ASEAN economic corridors by sea. Timor-Leste is now trying to become an ASEAN member, and it would be useful to promote logistics connectivity with ASEAN countries to boost the unified ASEAN market (AEC: ASEAN Economic Community).

### 3) Integrated development approach between road and port infrastructure

It is important to jointly develop roads and ports for creating an efficient logistics network to promote industry. Road development by the Ministry of Public Works and port development by the Ministry of Transport and Communication are individually being conducted with enormous support from international agencies and donors. It would be useful to develop road and port infrastructure in an integrated manner for the sake of promoting industry.

#### 4) Well-balanced development between hard and soft infrastructures

Most hard infrastructure in the transport sector in Timor-Leste is developed with enormous support from international agencies and donors. It is also important to develop the soft infrastructure, including human resources for operation and maintenance, institutional reform and establishment of the legal system. Especially, operation and maintenance for transport infrastructure should be developed under a unified plan because it might take a long time to develop human resources in comparison to hard infrastructure.

### 3.2 Industrial Policy of Timor-Leste and MCIE

#### 3.2.1 Industrial Policy of Timor-Leste

The economy of Timor-Leste has continued to grow since the restoration of public order, and aims to become an upper-middle-income country by 2030 with the key industries of agriculture, tourism and petroleum. The implementation structure of the SDP is centered on the Office of the Prime Minister, with four strategic sector committees. Industrial development is planned and implemented by the Economic Strategic Sector Committee which has four sub-sector committees of Agriculture, Tourism, Petroleum/Natural Resources and Commerce and Industry under its umbrella.

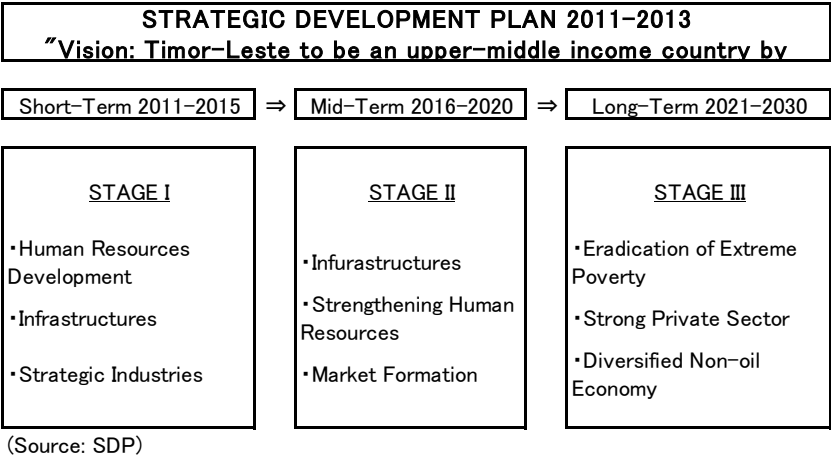


Figure 3.2.1 Strategic Development Plan

The industrial policy of Timor-Leste was drawn up by relevant ministries and agencies based on the Strategic Development Plan 2011-2030 and the program of the V Constitutional Government 2012-2017 legislature.

According to the SDP, Timor-Leste will become an upper-middle-income country by 2030, with a modern diversified economy and high-quality infrastructure including roads, power, ports, airports, and telecommunications. The key industries are agriculture, tourism and petroleum. Subsistence agriculture will be replaced by commercial, smallholder agriculture. Timor-Leste will become self-sufficient in food and will produce a range of agricultural products for world markets including staples, livestock, fruit and vegetables and other cash crops, as well as forestry and fisheries products. Tourism, in particular eco-tourism, will be a major contributor to the national economy, with light industries complementing and diversifying the economy. The petroleum sector, including oil and gas production and downstream industries, will provide an industrial base for the economy of Timor-Leste. To build a modern and productive economy, core and productive infrastructure including roads, ports, airports, power, water and sanitation, and tele-communication will be built.

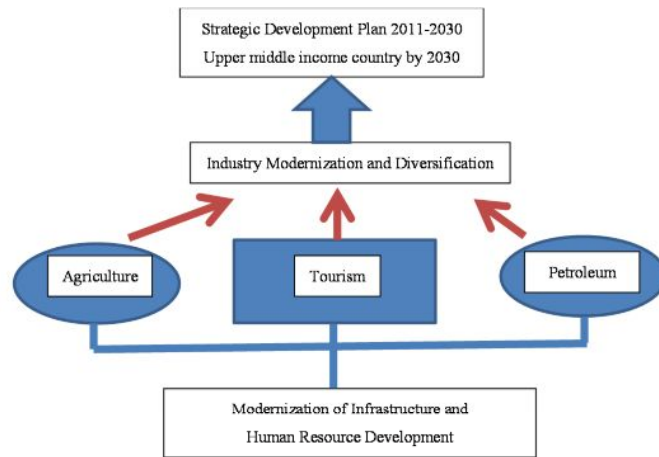


Figure 3.1.1 SDP and Industrial Promotion

The implementation structure for socio-economic development is as follows. The Economic Strategic Sector is co-chaired by the Ministry of Finance (MOF), MCIE and Ministry of Agriculture (MOA). The Economic Strategic Sector is divided into the four sub-sectors of Agriculture, Tourism, Petroleum & Natural Resources and Commerce & Industry. The ministries in charge of the respective sub-sectors are MOA, MOT, Ministry of Petroleum and Natural Resources and MCIE. The policies of the Commerce and Industry sub-sectors are implemented by the Secretariat of State for Support and Promotion of the Private Sector (SEAPRI) and MCIE. MCIE is in charge of the economic strategy of SMEs. Both SEAPRI and MCIE are in charge of soft infrastructure to promote industry, such as investment law and regulations relating to industrial promotion. Financial support is planned through the National Development Bank and National Bank of Commerce Timor-Leste as well as direct investment by Timor-Leste Investment Company. Human resource development is implemented by the Chamber of Commerce and Industry (CCI), Secretariat of State for Vocational Training and Employment (SEPFOP) and Institute for Business Development Support (IADE).

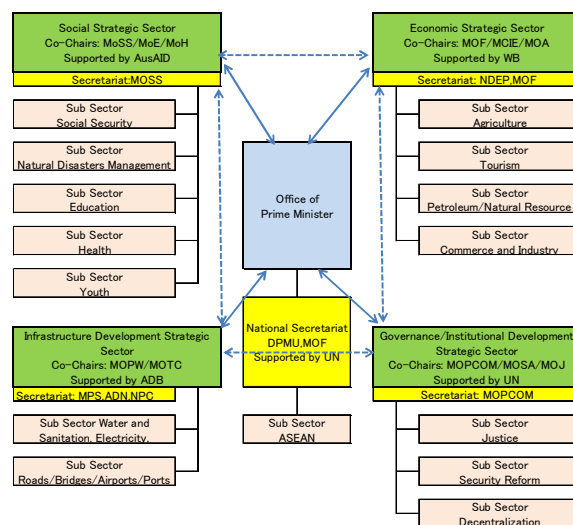


Figure 3.1.2 Implementation structure of SDP

Note: Labor force projections in data collection survey on pragmatic framework study of labor force plan

Labor force projections for Timor-Leste by 2030 were made, based on the growth rates of labor force by industry in Malaysia and Thailand. A sensitive analysis of job creation Timor-Leste by 2030 was performed, utilizing the manufacturing sector as the parameters to emphasize the influence of manufacturing development. Case 1 is the base case utilized the Malaysian rate, while Case 3 is the most optimistic case utilizing the Thailand model. Case 2 is the medium case. The result of Case 3 shows that 300,000 jobs will be created by 2030 with the manufacturing industry playing a main role. According to the abovementioned study, approximately 300,000 new workers are estimated to join the labor market by 2030, and so Case 3 is the only case where labor supply and demand will be balanced in 2030. Thus, the result of this estimation shows the importance of promoting the manufacturing industry in considering the industrial policy of Timor-Leste to balance the supply and demand of the labor force in 2030. This report utilizes Case 2 because Case 1 is too conservative while Case 3 is too optimistic, in view of the current infant stage of the manufacturing industry in Timor-Leste.

INDUSTRY	2010	2030
AGRICULTURE, FORESTRY, FISHING	127,000	137,000
MINING & QUARRYING	1,000	1,000
MANUFACTURING	8,000	67,000
CONSTRUCTION	13,000	36,000
WHOLESALE & RETAIL TRADE	44,000	58,000
TRANSPORTATION & STORAGE	8,000	14,000
ACCOMODATION & FOOD	8,000	16,000
PUBLIC ADMINISTRATION	5,000	8,000
OTHERS	34,000	155,000
TOTAL	248,000	492,000

Source : Data collection survey on pragmatic framework study of labor force plan

Currently, due to the fact that more than half of the labor force of Timor-Leste did not complete basic school education and there are very few holders of certificates from technical and vocational education institutes, diplomas, bachelor degrees and master degrees, many expatriates are employed as managers, engineers and skilled workers in Timor-Leste. Therefore, there is an urgent need to replace such expatriates by Timorese.

Note: According to the labor force projections made in the data collection survey on pragmatic framework study of labor force plan, it is assumed that the programs to be funded by the Infrastructure Fund of the 2014 state budget have the potential for directly creating an estimated 16,000 jobs equivalent to 137,000 person-months. The top three programs which have the potential for creating large numbers of jobs are the Tasi Mane Project (south coast oil and gas development), roads and electricity. These programs also have the biggest budget allocation. The 16, 000 jobs are categorized into: 1,700 managers/engineers, 6,000 skilled workers, 1,500 semi-skilled workers and 6,800 unskilled workers. Due to the current quantity and quality limitations of Timorese workforce, 78% of managers/engineers, 58% of skilled and semi-skilled workers and 12% of unskilled workers would be expatriates.

OCCUPATION	EMPLOYED
MANAGER	7,000
PROFESSIONAL	22,000
TECHNICIAN	19,000
CLERICAL	2,000
SERVICE & SALES	19,000
SKILLED AGR. WORKER	39,000
CRAFT & RELATED TRADE	14,000
MACHINE OPERATOR	8,000
ELEMENTARY OCCUPATION	118,000
TOTAL	248,000

Source : Labor Force Survey 2010

Percentage of Expatriates in Laborforce created by Infrastructure fund 2014

Occupation	Expatriates
Manager/Engineer	78%
Skilled Worker	58%
Un-Skilled Worker	12%

Source : Data collection survey on pragmatic framework study of labor force plan

There are two main types of industrial policy. One is the “laissez faire” policy to minimize intervention by the government and to let industrial development be guided by market principles. This policy is selected by countries in Europe and the US where private capital has grown strong. The other policy is to let the government play a leading role in industrial development. This policy is selected by countries in Asia where industry remains weak. Most Asian countries have achieved industrial development by implementing mid- and short-term industrial policies based on long-term industrial development goals. Their industries have steadily gone through the cycle of import substitution, labor-oriented industrial development, promotion of export industry by foreign investment, resource oriented heavy industrialization, technology oriented industry development, service industry development, and high value-added/cutting-edge advanced technology industry development.

Malaysia has a similar industrial environment to Timor-Leste. Malaysia, divided into peninsula Malaysia and Kalimantan, did not succeed in agriculture due to lack of flat land suitable for cultivation. Its population is rather small compared with neighboring countries. The contribution of the petroleum industry to GDP is extremely high. The Malaysian economy is often described as a typical Asian industrial development model because its industry was developed based on import substitutes, labor-oriented manufacturing, product export industry, resource-based heavy industry, growth of the

domestic market, high value-added manufacturing industry, and expansion of the service industry. The lessons learned in the industrial development of Malaysia are that industrial development requires strong political leadership: the government should plan and implement suitable industrial policies at each stage of development, offer suitable financing schemes, and develop human resources alongside industry. Compared with Malaysia, development of the Timor-Leste economy has several issues to solve: lack of industrial policy, lack of finance structure, and inadequate industrial human resource development.

Table3.2.1 Comparison of industrial development in Malaysia and Timor-Leste

Element	Malaysia	Timor-Leste
Economic Development Policy	New Economic Policy Vision 2020	SDP
Industrial Policy	Industrial Policy, Industrial Master Plan	Under development
One Stop Center	MIDA	SERVE, TITL
Finance	Malaysia Industrial Development Finance	BNCTL, Subsidy
Human Resource Development	UNIMAS, Mara Technical Institute, JMTI	UNTL, DIT, IOB, DonBosco
Political Leadership	Dr. Mahatir	Mr. Xhanana

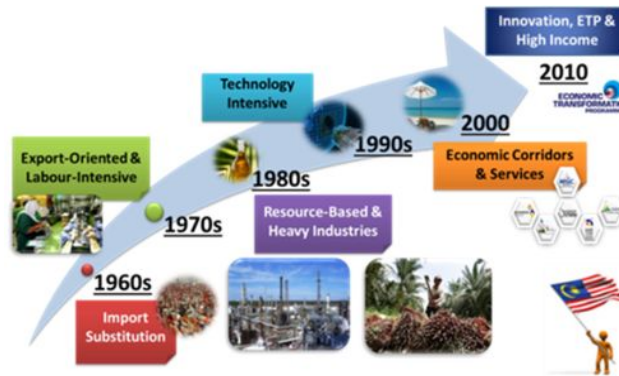
■Box: Malaysian economic development and industrial policy

In Malaysia, industrial strategies were planned to solve development issues decade by decade.

Year	Development Issues	Strategy
1960's (US\$300 ⇒ 380)	<ul style="list-style-type: none"> <li>•Unemployment</li> <li>•Dependency of export commodities (rubber, tin)</li> <li>•Narrow economic base</li> </ul>	<ul style="list-style-type: none"> <li>•Promotion of Import Substitution Industries (Food, beverages, building materials, printing and publishing industries, Consumer products)</li> <li>•Tax Incentive</li> <li>•Provision of Infrastructure (industrial estates, power and telecommunications facilities)</li> <li>•Establishment of MIDA (1967)</li> </ul>
1970's (US\$400 ⇒ 1,490)	<ul style="list-style-type: none"> <li>•Unemployment is still high</li> <li>•Constrained by small domestic market</li> <li>•Lack of capital, technologies and managerial expertise</li> </ul>	<ul style="list-style-type: none"> <li>•Manufacturing considered as strategic sector</li> <li>•Efforts to promote industrial development intensified</li> <li>•Promotion of labor-intensive industries</li> <li>•Push for foreign direct investment               <ul style="list-style-type: none"> <li>- Attractive tax incentives</li> <li>- Establishment of FTZ</li> <li>- 100% foreign equity owner allowed for 80% export industry</li> </ul> </li> </ul>
1980's (US\$1,820 ⇒ 2,240)	<ul style="list-style-type: none"> <li>•Global recession (1985-1987) ⇒ Increase in unemployment</li> <li>•Narrow manufacturing base</li> <li>•Lack of processing local resources (rubber, palm oil, timber)</li> </ul>	<ul style="list-style-type: none"> <li>•Widen and deepen industrial base               <ul style="list-style-type: none"> <li>- Export and resource based industries (Petroleum, Gas)</li> <li>- Develop selective heavy industries (car, steel, Cement)</li> </ul> </li> <li>•Introduction of Promotion of Investment Act</li> <li>•Launching of First Industrial Master Plan</li> </ul>
1990' (US\$2,370 ⇒ 3,350)	<ul style="list-style-type: none"> <li>•No longer competitive in labor intensive industries</li> <li>•Labor shortages, both skilled and unskilled</li> <li>•Lack of industry linkage</li> </ul>	<ul style="list-style-type: none"> <li>•Promotion of industries               <ul style="list-style-type: none"> <li>- High technology , Capital intensive industries, Services based industries, R &amp; D activities</li> </ul> </li> <li>•Accelerate the development of indigenous technology</li> <li>•Development of supporting industries</li> <li>•Human resource development</li> <li>•Development of SMI (Establishment of SME Corp Malaysia)</li> </ul>
2000's (US\$3,420 ⇒ 7,560)		<ul style="list-style-type: none"> <li>•Promotion of Service Sector</li> <li>•Economic Corridors</li> <li>•Economic Transformation Program</li> <li>•National Key Economic Areas</li> </ul>

Note: \* 2010 to 2013; US\$8,090 ⇒ 10,687

Figure: Malaysian industrial development journey



In Malaysia, the sector's contribution to GDP was changed as follows: The share of agriculture declined from 33.6% in 1970 to 7.3% in 2010. Manufacturing increased from 12.8% in 1970 to 32.6% in 2000 and Services increased from 42.6% in 1970 to 57.7% in 2010.

Sector	GDP Contribution (%)			
	1970	1990	2000	2010
Agriculture	33.6	19.3	8.8	7.3
Mining	7.2	9.8	6.7	7.0
Construction	3.8	3.4	3.4	3.3
Manufacturing	12.8	26.5	32.6	27.6
Services	42.6	42.1	53.0	57.7

Source : Economic Reports/Bank Negara Annual Report, Malaysia 2012/2013

Lessons learned from industrial development in Malaysia are as follows:

1. To plan and implement adequate industrial policies up to the development issues time by time.
  - 1960s Industrial Policy
  - 1971-1990 New Economic Policy (NEP)
  - 1986-1995 Industrial Master Plan
2. Proper and smooth coordination among the ministries and authorities concerned.
  - 1967 Establishment of MIDA as one stop center
  - Authorities related to industrial development were established under the umbrella of MITI



3. Introduction of adequate finance schemes.
4. Human resource development was implemented along with the industrial policy
5. Economic development was led by the strong political leader.



### 3.2.2 Industrial Policy of the Ministry of Commerce, Industry and Environment

#### (1) Vision and role of MCIE

MCIE was established in 2012 under the fifth Constitutional Government. It has three main directorates: Directorate of Commerce, Directorate of Industries and Cooperatives, and Directorate of Environment. The Industries and Cooperatives Directorate is mainly in charge of industrial policy, but it has not yet drafted an industrial policy but is implementing the “Priority programs from 2012 to 2018” as well as “Policies to be achieved by Budget 2014”.

According to the Decree-Law No.01/2013, MCIE is the central organization of the government, responsible for the conception, execution, coordination and the evaluation of the policies, define and approve by the Council of the Ministers for the areas of commerce, economic activities, industries and the cooperative sector as well as the environment. It is delegated from the Secretary of State of Industry and the Cooperatives to appreciate and give licenses to the installations of the projects and functioning of the commercial investments and industries, to inspect and account fiscal activities and commercial investment and industries, to maintain and to administer a center of information and documentation in regard companies, to issue qualification and the classification with the Minister of Agriculture and Fisheries, to give an importance of the cooperative economic sector and the micro and small companies and to promote the formation of the constitution, organization , management and accountability of the cooperative and the small companies and to organize and to administer the registry of the industrial property.

The purpose of MCIE is to develop social well-being, the environment and the economy of the nation, via productive areas of commerce and industry. The vision of MCIE is as follows:

1. To promote and to develop a stable economy based on commercial productivity to guarantee the wellbeing of the people of Timor-Leste;
2. To define development policy in the areas of commercial productivity, industry, and the cooperative sectors, with the view that mechanisms to combat poverty and reduce unemployment can contribute to social stability and politics in the country;
3. To give incentives to enterprises in terms of the growth of trade, additional competitiveness and the capacity to take part in a globalized economy;
4. To introduce new industrial technologies to transform industry and gradually reduce import dependency;
5. To develop a diversified sustainable economy and integrate the concept of environmental conservation;
6. To promote healthy competition and protect costumers, as well as to give incentives to partners in commerce between small, medium and large companies.

And to realize the vision mentioned above, following policies have the priorities.

1. Food Security: To secure national food stock in preventive ways to face possible food crisis.
2. Community Economic Development: To give incentives, to develop and to promote commerce and cooperative industries in a way to create self-employment and promote a better life of people in rural, semi-urban and urban areas.
3. Infrastructure: To construct the new building of MICE, the Center for Education and Formation of Cooperatives and Micro and Small Businesses, and markets like municipal commercial centers.
4. Designs and Studies: To design and study municipals commercial centers, the Taibesi Commercial Center, and the Laboratory for Products Quality Test and the Environment.
5. Human Resources Development: To develop the capacity to perform duties effectively and efficiently through professional courses. From this perspective, capacity building programs for quality and professional competence are given not only to public servants at MCIE but also to economic agents, commercial partners, and agents of the cooperative and environment sectors.
6. Professional Training: To provide training in product quality standardization (establishment of chemical, physical, and biological laboratories), trade law and statistical analysis.
7. Marketing and Promotion: To develop products for the promotion of the one village one product movement and valorization in the domestic market and to promote products abroad in order to provide potential clients with information about the advantages of products and how to buy them.
8. International Cooperation: To reach bilateral, multilateral, and regional agreements, as well as to ratify international conventions and to promote regional cooperation for the integration of Timor-Leste into ASEAN.
9. Subsidies: To support development and research and public services, to offer working capital for micro and small enterprises and to develop infrastructure for commerce, industry, and environment.

■Box: The Budget 2014 of MCIE

MCIE's budget for 2014 is USD 20,918,000. It is to be used for the following:

1. Development, incentives, and promotion of commercial activities
  - 1.1. Consumer protection (product quality assurance, food safety and hygiene inspection, calibration of measuring apparatus, and inspection of advertisements)
  - 1.2. Normalization of market prices (price monitoring, product release due to rising prices, establishment of the National Logistics Center and people's shops)
  - 1.3. Commercial regulations (price control, law on hoarding and crime, decree-law on inflation, and a review of taxes on alcoholic beverages and cigarettes)
  - 1.4. Food security (food reserve)
  - 1.5. Dynamic economic activities (operation of a one-stop-shop "SERVES" and issue of certificates of origin)
  - 1.6. Exploitation of potential products (promotion of the one village one product movement)

- 1.7. Identification of potential business (mapping)
- 1.8. Public subsidies (support to micro enterprises)
2. Industrial development with the introduction of new technologies
  - 2.1. Support to small industries (identification of potential industries, provision of machines and equipment, market expansion of 10 products, and support for priority products (salt, ethanol, crafts and food))
  - 2.2. Production of substitutes for import goods (food industry)
  - 2.3. Public subsidies (support to 100 groups of handicrafts, etc. and small and medium enterprises)
3. Industrial zone (legal support, promotion of domestic and foreign investment, and development of basic facilities)
  - 3.1. Development of cooperatives
  - 3.2. Support for the sustainability of cooperative activities (microcredit to 100 groups, BNTL credit, and establishment of new cooperatives)
  - 3.3. Technical assistance (knowledge transfer, accounting skills, placement of motivators)
  - 3.4. Public subsidies
4. Environmental preservation and biodiversity protection
  - 4.1. Environmental protection and conservation ( environmental awareness, regulations on hazardous materials, World Environment Day, septic tanks, waste treatment, establishment of the Environmental Impact Assessment Commission, and community nurseries)
  - 4.2. Management of coastal zones
  - 4.3. Public subsidies (purchase of substitutes for timber)
  - 4.4. Climate change (NAPA, UNFCCC)
  - 4.5. Chlorofluorocarbon reduction (law development and provision of hydrochlorofluorocarbon products)
  - 4.6. Biodiversity conservation (forest monitoring, protection of coral reefs, and establishment of botanic gardens)
5. Institutional capacity development
  - 5.1. Research (gem, recycling, hospitality, manufacturing and service industries, business consultation for 10 cooperatives, micro and small companies, examination of substitutes for wood, development support strategies, monitoring of public subsidies, statistical data updates, and joint research with UNTL)
  - 5.2. Training of MCIE personnel
  - 5.3. Vocational training (standards, quality standards, trade law)
  - 5.4. Promotion and capacity development of economic agents
  - 5.5. Studies of overseas economic agents
  - 5.6. Development of industrial companies (training of 25 industrial groups and management training)
  - 5.7. Development of cooperatives and micro and small businesses (training of training managers)
6. Decentralization

- 6.1. Promotion of regional development (MCIE services in regions)
- 7. Promotion and Marketing
  - 7.1. Market expansion
  - 7.2. Identification of potential export products (coffee, copra, peanuts, buffalo, international exhibitions, and export promotion)
  - 7.3. Promotion of investment in Timor-Leste
- 8. International cooperation
  - 8.1. International cooperation in trade (strengthening of relations with Indonesia, Portugal and China, and quota allocation)
  - 8.2. International cooperation in cooperatives (participation in international meetings)
  - 8.3. International cooperation in environment (ratification of multilateral environmental agreements and participation in international meetings)
- 9. Formation of projects
  - 9.1. Construction of MCIE buildings (new building in Dili and regional offices)
  - 9.2. Construction of various facilities (municipal markets)

## **(2) The role of MCIE**

As per the Degree Law under which MCIE was set up, its scope is commerce and industry and is not limited to small and micro enterprises. However, according to the Budget 2014 and its policies noted above, MCIE's scope is limited to issuing business licenses, promoting small and micro enterprises, promoting local industries, subsidies, micro finance arrangements, operation of a vocational training center for small and micro enterprises, and quality management of export food products. The planned free trade zone and industrial zone are still in the pipeline.

In addition, MCIE has a plan to develop the National Logistic Center in Tiber. The National Logistic Center is a storage center for focusing on rice to address the food crisis that may occur. Currently, a temporary storehouse has been set up near Tiber. Moreover, a laboratory for quality assurance and quality control has been planned. MCIE requested assistance for its operation of SUCOFINDO, which is an inspection agency in Indonesia. SUCOFINDO is currently under investigation.

One reason for promoting exports is "To give incentives and help business sectors where trade is growing, and to take part in a globalized economy to gain competitiveness and capacity" and also there is the vision of import substitutes, such as "Introducing new industrial technologies to transform and gradually reduce the import dependency towards some products". However, due to the lack of an industrial policy, MICE does not clearly envisage which industry to promote in order to boost products, nor which industry to be modernized will produce import substitute products.

The trade balance of Timor-Leste shows that imports reached USD670 million, against USD31 million for exports excluding oil and gas. Timor-Leste is heavily dependent on the import of fuel, food, and daily consumables. The SDP sets a goal of reducing the dependence on imports. Thus, there is an urgent need to set up an industrial policy to improve the situation.

Table 3.2.2 Trade Balance of Timor-Leste (2012)

Item	Comodity	U\$MM
Import	Power plant	244
	Fuel	104
	Automobile, parts	53
	Steel, Irons products	35
	Cerial (Rice etc)	31
	Machinery, parts	30
	Others	173
	Total	670
Export	Coffee	19
	Others	12
	Total	31
	Oil and Gas	2,280
	Grand Total	2,342

Source: BCTL 2013

■Box: Current situation of small and micro enterprises and cooperatives

The current status of small and micro enterprises and cooperatives MICE is promoting is as follows:

1) Small and micro enterprises

The number of micro and small enterprises registered with the Directorate of Industry and Cooperative in MCIE was 1,349 companies with 5,340 employees in 2012. There were increases of 515 enterprises and 2,026 employees from 2011. The district with the largest number of enterprises was Dili, which had 273 enterprises and 1,288 employees. The district with the second largest number of enterprises was Bobonaro, which had 211 enterprises and 477 employees. Baucau was third with 173 enterprises of 490 employees. 16% of employees in Dili were expatriates.

Micro and Small Enterprises in 2011 and 2012

No.	District	Number of Enterprises		Total number of employees							
				2011				2012			
				Male		Female		Male		Female	
2011	2012	Local	Foreigner	Local	Foreigner	Local	Foreigner	Local	Foreigner		
1	Aileu	21	41	93	-	88	-	149	-	84	-
2	Ainaro	24	41	39	-	20	-	133	-	52	-
3	Baucau	110	173	126	-	88	-	242	-	248	-
4	Bobonaro	96	211	39	-	20	-	320	-	157	-
5	Covalima	43	148	109	-	68	-	250	-	186	-
6	Dili	185	273	525	163	323	17	667	149	414	58
7	Ermera	34	43	189	-	140	-	210	-	153	-
8	Liquisa	60	62	111	-	109	-	162	-	141	-
9	Lautem	61	95	175	-	55	-	195	-	177	-
10	Manatutu	42	45	123	-	126	-	136	-	153	-
11	Manufahi	35	47	110	-	69	-	136	-	90	-
12	Oecusse	65	105	123	-	81	-	222	-	163	-
13	Viqueque	58	65	148	-	37	-	225	-	68	-
Total		834	1349	1910	163	1224	17	3047	149	2086	58
						3314				5340	

The types of industries with large numbers of employees are as follows. The largest industry is carpentry, followed by salt production and tailoring.

Table: The number of employees by type of industry

No.	Type of Industry	Enterprise	Employee
1	Carpenter	169	660
2	Salt Production	293	558
3	Tailor	79	531
4	Motor Cycle Garage	129	425
5	Tais Weaver	51	336
6	Building Block Producer	59	327
7	Cooking	50	195
8	Rice Mill	43	135
9	Weaver	32	132
10	Coffee Mill	14	124
11	Crisp Production	16	110
Total		935	3,533

## 2) Cooperatives

The number of cooperatives registered to the Directorate of Industry and Cooperative, MCIE was 99 cooperatives, which had 7,639 employees in 2012. The largest type of cooperatives was credit unions, which were 52, followed by the multi sector and fisheries. By district, first, Dili had 17 cooperatives of 2,700 members. Next, Baucau had 14 cooperatives and 881 employees. Third, Viqueque had eight cooperatives and 830 members.

Table: The number of cooperative and employee

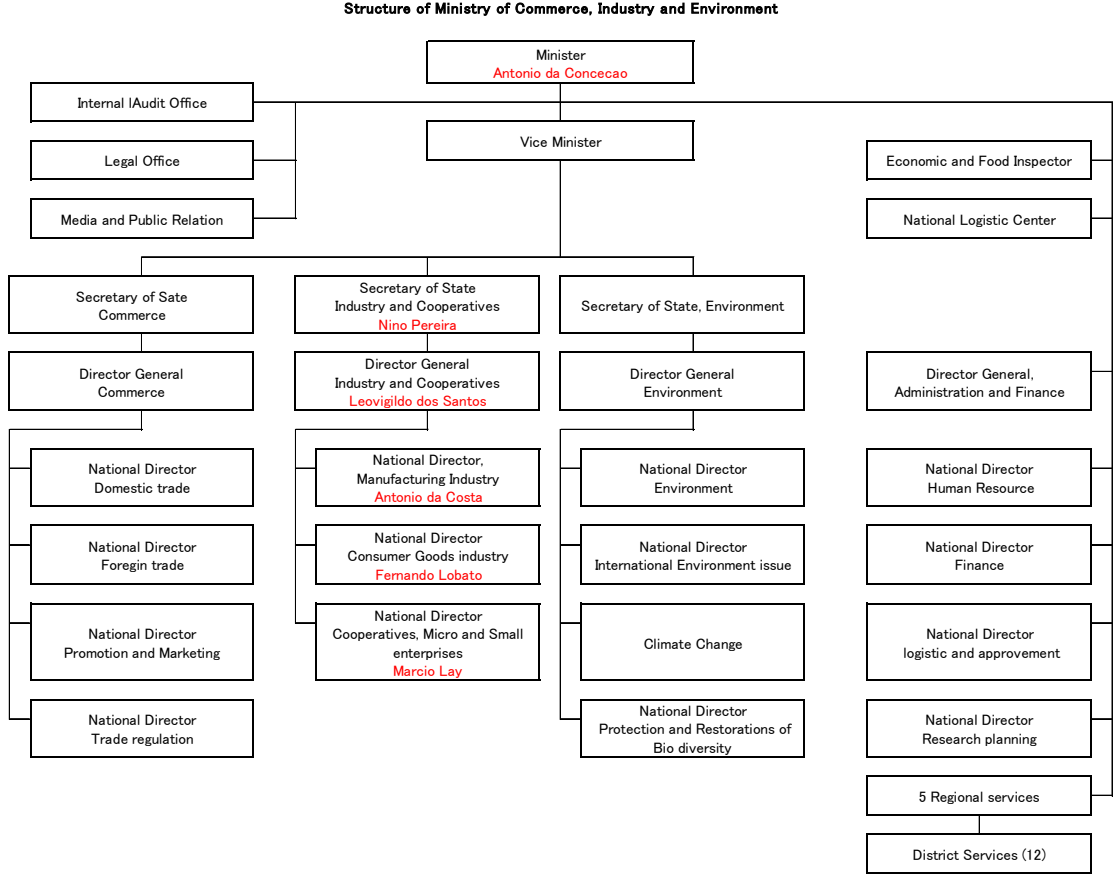
No.	District	Quantity	Employee		
			Male	Female	Total
1	Aileu	2	67	55	122
2	Ainaro	6	320	72	392
3	Baucau	14	484	397	881
4	Bobonaro	5	499	206	705
5	Covalima	5	64	59	123
6	Dili	17	1,533	1,167	2,700
7	Ermera	5	199	161	360
8	Liquisa	6	105	70	175
9	Lautem	8	271	156	427
10	Manatutu	12	176	97	273
11	Manufahi	6	174	129	303
12	Oecusse	5	229	119	348
13	Viqueque	8	527	303	830
Total		99	4,648	2,991	7,639

## (3) The organization, Staff and Budget of MCIE

### (3)-1 Organizational structure of MCIE

In MCIE, under the Minister, there is a Vice Minister, a Secretariat of State and a Director General in each of the Directorate of Commerce, Directorate of Industry and Cooperative, and Directorate of Environment. There is another Director in the Administration and Finance Directorate. Directly under

the Minister are the Internal Audit Office, Legal Office and Media and Public Relations office. Like these three offices, the Economic and Food Inspectors and National Logistics Center are directly under the Minister. There are five regional offices and district offices in twelve districts excluding Dili. The structure of the Ministry of Commerce, Industry and Environment is as follows.



(Source : MCIE)

Figure 3.2.4 Structure of MCIE

**(3)-2 Officers of MCIE**

The total number of officers in the Ministry of Commerce, Industry and Environment in 2014 is 476. Of these, 294 are permanent staff, 80 are directors and leaders, and 102 positions are vacant. The total number of officers in the Ministry of Commerce, Industry and Environment is 682, including 178 temporary staff and 28 political appointments. The 80 directors and leaders include 4 Directors General, 21 National Directors and 53 Department Chiefs.

Table 3.2.3 The number of Officers in MCIE

Labor force	A	B	C	D	E	F	G	Total
Current Civil Servant	2	10	34	69	135	33	11	294
Vacancies	5	12	27	38	17	3	-	102
Directors and Leaders	4	5	18	45	8	-	-	80

Total labor force in 2014	11	27	79	152	160	36	11	476
Personal Map 2014	5	13	46	50	39	17	8	178
Personal Map 2015-2018	5	13	46	50	39	17	8	178
Political appointment	5	11	1	5	1	5	-	28
Directors and Leaders								
Director General	1	4	-	1	-	-	-	6
National Director	2	1	8	10	-	-	-	21
Department Chief	1	-	10	34	8	-	-	53
Total	4	5	18	45	8	-	-	80

Note: A-G are classification of government officers degree. A-E is the officials and F-G is the assistant officials.

(Source : Budget Book 2014 4B)

### (3)-3 Budget of MCIE

The total budget in 2014 of the Ministry of Commerce, Industry and Environment is USD20,918,000, up USD5,336,000 from the budget in 2013 of USD15,582,000. The main difference is Goods and Services (USD2,339,000) and Goods and Public Transfer (USD2,700,000).

Table3.2.4 Total Budget of MCIE

(USD)

	2012 Actual	2013 Budget	2014 Budget	2015 Projection	2016 Projection	2017 Projection	2018 Projection
General Budget of State	17,953	15,582	20,918	21,755	22,625	23,530	24,472
Applicants	16,572	15,239	20,278	21,089	21,933	22,810	23,723
Salary	1,679	2,339	2,339	2,433	2,530	2,631	2,736
Goods & Service	14,010	11,900	14,239	14,809	15,401	16,017	16,658
Public Transfer	883	1,000	3,700	3,848	4,002	4,162	4,328
Capital	1,381	343	640	666	692	720	749
Minor Capital	674	343	640	666	692	720	749
Development	707	-	-	-	-	-	-
Combined source of fund	17,953	15,582	20,918	21,755	22,625	23,530	24,472
Applicants	16,572	15,239	20,278	21,089	21,933	22,810	23,723
Capital	1,381	343	640	666	692	720	749

(Source : Budget Book 2014 4B)

The largest budget allocation in the 2014 Budget of the Ministry of Commerce, Industry and Environment is USD7,983,000 for Food Security Expense, which is used for storing crops especially rice in case of emergency. Among the Directorate, the largest budget of USD4,559,000 was allocated to the Administration of Accounting Directorate, USD3,396,000 to the Industry and Cooperative Directorate, USD1,733,000 to the Directorate of Commerce and USD1,198,000 to the Directorate of Environment.



Table3.2.5 The budget of MCIE by Department

(USD)

Department	Salary & Wages	Goods & Services	Transfers	Minor Capital	Total Expenses
<b>Total</b>	<b>2,339</b>	<b>14,239</b>	<b>3,700</b>	<b>640</b>	<b>20,918</b>
Office of the Minister	77	116	-	-	303
Office of the Vice-Minister	65	193	-	-	258
Office of the Secretary of State for Commerce	63	150	-	-	213
Office of the Secretary of State for Industry and Cooperatives	63	175	-	-	238
Office of the Secretary of State for the Environment	63	177	-	-	240
Internal Audit Office	42	39	-	-	81
Legal Office	14	102	-	-	116
Director-General of Administration and Finance	452	2,307	1,200	640	4,599
Director-General of Trade	567	896	270	-	1,733
Director-General of Industry and Cooperatives	342	1,104	1,950	-	3,396
Director-General of Environment	426	492	280	-	1,198
Food and Economic Inspectorate	98	462	-	-	560
Food Security Fund	67	7,916	-	-	7,983

(Source : Budget Book 2014 4B)

■Box: Organization, Staff and Budget of Directorate of Industry and Cooperative

The Directorate of Industry and Cooperative of MCIE is in charge of industrial policy.

1) The priorities programs from 2012 to 2017

The Directorate of Industry and Cooperative listed the following programs as the priorities program from 2012 to 2017:

1. To identify and develop industries and cooperatives that has potential in terms of intervention in all sectors according to priority. Sectors are agriculture (fisheries, livestock/husbandry, agro-industry), education and others.
2. To develop human resources through informal education like capacity building/ vocational training especially for youth/ community members who are recruited based on the potential industries and cooperatives. To make comparative studies of the selected industries and cooperatives to add and enrich their knowledge.
3. To build infrastructure such as training centers and centers for production facilities, and refurbish centers for small and medium industries and cooperatives.
4. To create an industrial zone
5. To create markets to sell the products of industries and cooperatives
6. To produce media and leaflets as a means of information to communities
7. To help public industries and cooperatives to motivate youth groups in communities

8. To prepare the legal base for the operation of the industry and cooperatives (industrial law), revision for Decree Law of Cooperatives no. 16/2014
9. To create working networks and communication in regard to industry and cooperatives
10. To promote the development of the selected sectors of industry and cooperatives.
11. To promote export industries
12. To promote bilateral cooperation

2) The budget of the Directorate of Industry and Cooperative of MCIE

The budget 2014 of the Directorate of Industry and Cooperative is as follows. The public transfer of the Cooperative Department is the largest budget allocation.

Table: The budget of Directorate of Industry and Cooperative for 2014

(USD thousand)					
Department	Salary & Wages	Goods & Services	Transfer	Capital	Total Expenses
Cooperative	144	358	1,150	0	1,652
Consumer Goods Industry	86	347	400	0	833
Manufacturing Industry	85	347	400	0	832

(Source : Budget Book 2014 4B)

3) The organization of the Directorate of Industry and Cooperative of MCIE

In the Directorate of Industry and Cooperative, under Director General, there are three National Directorates, namely Manufacturing Industry, Consumer Goods, and Micro & Small Enterprises and Cooperatives.

The National Directorate of Manufacturing Industry has the Industrial Development Department, Chemical Department, Rural industry development Department and Industrial License Department.

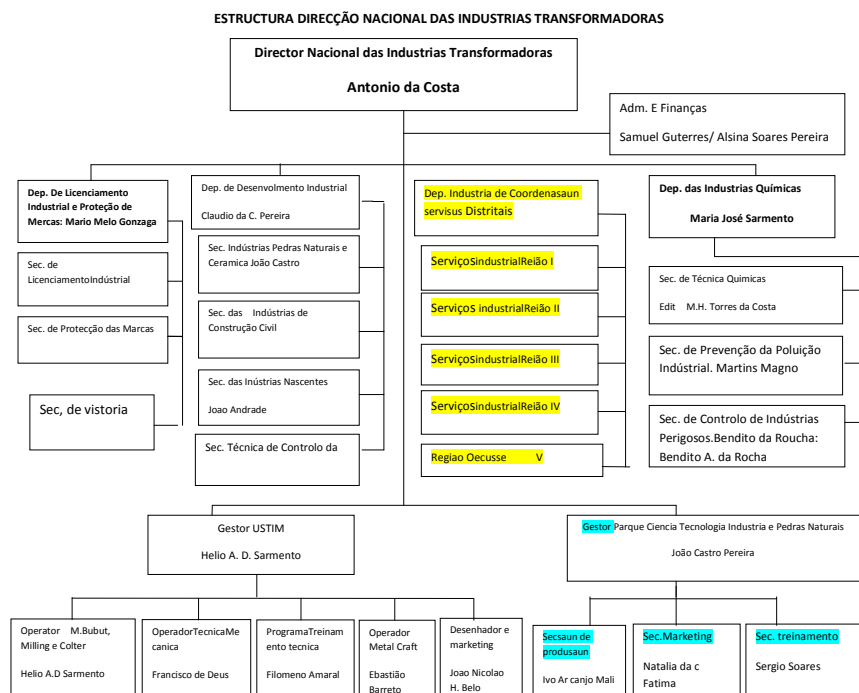


Figure: Structure of National Directorate of Manufacturing Industry

The National Directorate of Consumer Goods Industry, there are the Food Industry Department, Hazardous Industry Department, Service Industry Department and Small Industry Department.

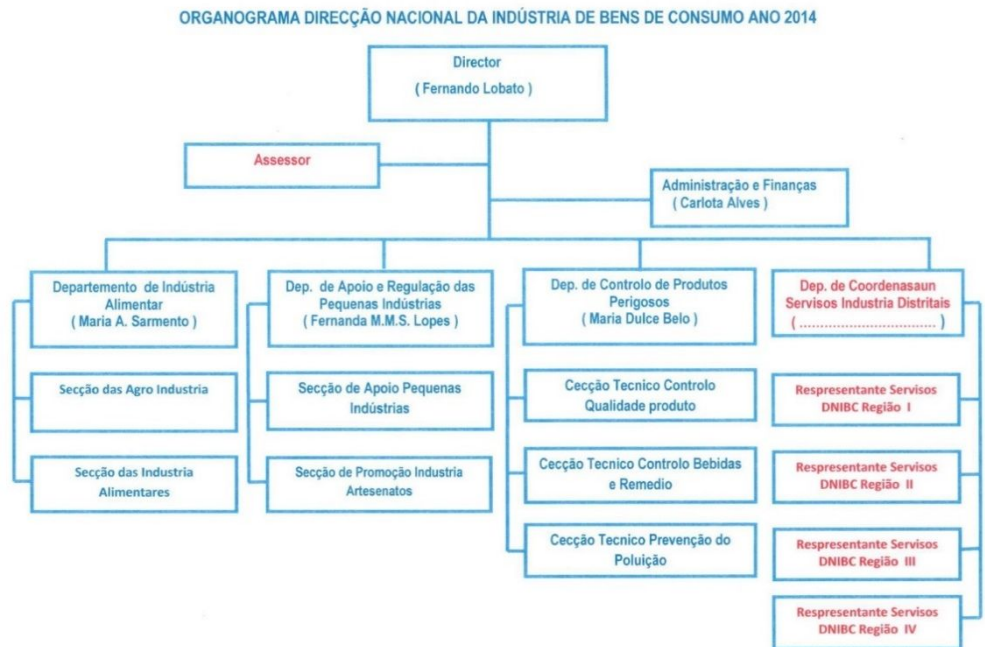


Figure: Structure of National Directorate of Consumer Goods Industry

The National Directorate of Micro & Small Enterprises Cooperatives has the Micro, Small Industry Department, Organization and Education Department, Cooperative support Department, Research Department and Auditing Department under the Directorate. Also, an advisor is allocated.



Figure: Structure of National Directorate of Micro and Small Enterprise and Cooperative

#### **(4) Challenges of Industrial Development**

Timor-Leste is facing challenges of industrial development as follows;

The first challenge is the enhancement of organization. Plural ministries and authorities are in charge of industrial development for duplicate subjects. For an example, TITL under SEAPRI is in charge of investment promotion of private enterprises other than MCIE. The other example is IADE under SESPRI is taking care of similar kind of industrial training of SEPFOPE. Furthermore, there is a difficulty for the smooth coordination among ministries and authorities due to the organizational wall are too high.

The second challenge is the enhancement of capacity of government officials. Since all the Indonesian officials left Timor-Lest in 2002 at the time of independence, existing government officials are Timorese officials continually serving from the Indonesian period and fresh intake after the independence. Therefore, the number and quality of government officials did not reach to the certain level for the operation. For an example, 27.2%, 178 out of 654 official posts are vacant in MCIE. In the directorate general of industry and cooperative, which is in charge of industrial policy, director general is the first recruited official in 2002, national director of manufacturing industry and national director of consumer goods are government officials since 1991 in Indonesian period and national director of cooperative is the newly recruited in 2008.

Therefore, several expatriates are working in the MCIE for policy making including the industrial policy which is being drafted by Malaysian expatriates supported by UNDP. The government is facing the same kind of challenge to replace management position from expatriates by Timorese as private enterprises.

### **3.3 Industrial Human Resource Development**

This section looks into the current status of programs served for human resource development as well as issues to be addressed for their further improvement.

In Timor-Leste, the National Qualification System (NQF) was formulated and got into effective in 2012 which institutionally covers both school education system and vocational training system. Firstly, the outline of the NQF is overviewed (3.3.1). Secondly, relating education and training programs implemented by institutions concerned, i.e., vocational training institutions, higher education institutions, and policy implementation institutions, are reviewed (3.3.2). Then thirdly, the three priority industrial sectors identified in the SDP (Agriculture, Tourism, and Oil-related industry) as well as construction industry which develops/improves infrastructures necessary for supporting growth of the priority industries are summarized respectively focusing on their needs in human resource development and evaluated in a view of efficiency of the HRD related programs (to what extent satisfactory/ relevant to the needs) (3.3.3). Based on the steps aforementioned, recommendations for HRD programs improvement in priority sectors shall be made (3.3.4).

#### **3.3.1 Overview of HRD System in Timor-Leste**

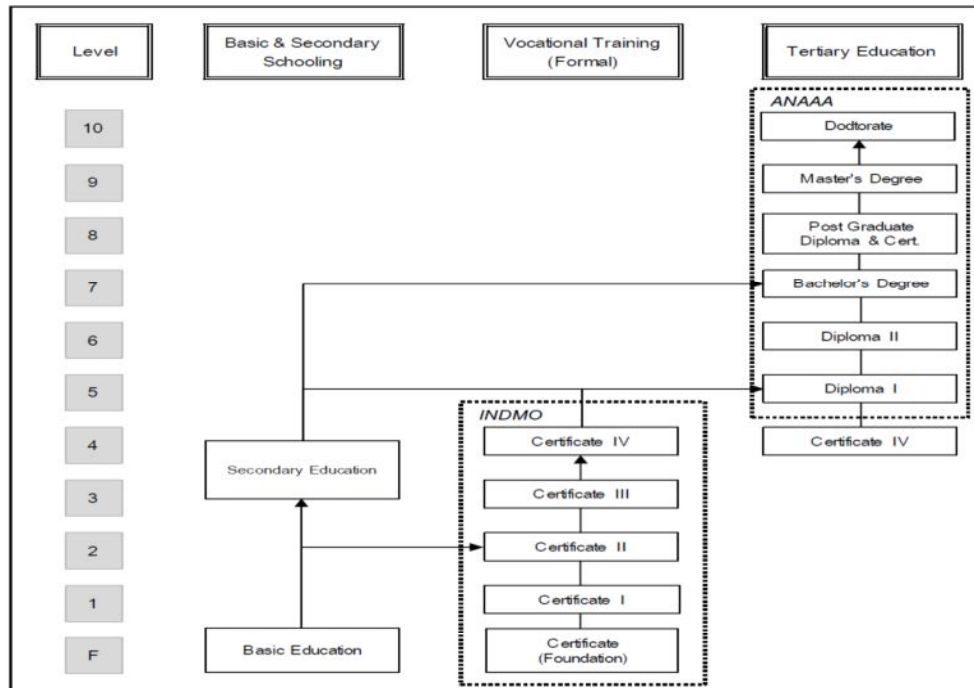
It is an important factor for a country to effectively bring up human resources that would help to lead to the economic and industrial development. Site supervisor or heavy equipment operator at construction sites are considered to be necessary human resource of “*skilled-workers*” supporting the construction sector. Meanwhile, management staff engaged in major positions in foreign companies are regarded as human resource of “*company managers*” active in international business. Farmers/ producers processing such marketable goods as coffee, virgin coconut oil (VCO) and so on in groups/ cooperatives, or university students who start up new business in advertisement design are recognized as “*business entrepreneurs*”.

As all the three types of human resource, namely skilled-workers, company managers, business entrepreneurs, are indispensable driving forces to support and develop industries, the country needs to establish proper framework for human resource development in terms of education and training service and employment creation as well, thereby to effectively supply competent human resources to the labor market.

This section overviews the NQF as a base formulated in Timor-Leste for providing quality education and training services to the people of the nation.

#### **Overview of the NQF**

The NQF was formulated officially in 2011 and became effective in 2012. The following Figure illustrates the concept of the NQF, in which qualifications of school curriculum and qualifications and certifications vocational training courses are related each other.



Source : INDMO

Figure 3.3.1 National Qualification Framework (NQF)

Professional training courses are standardized and the training institutes are certified by the National Institute for Manpower Development under the authority of the Secretary of State for Professional Training and Employment (SEPFOPE). While, the National Agency for Academic Assessment and Accreditation under the Ministry of Education is in charge of certifying tertiary education which is higher than the diploma level.

According to INDMO, professional training system and tertiary education are separated each other at this moment. Because of this, mutually complementary relationship between the professional system and the tertiary education system, including such matter as shifting from professional training system to tertiary training system, are currently under discussion among the institutions concerned. Under this situation, it is not possible in principle that a student qualified as the level 1 jumps up to the level 3, or starting from the level 3 without qualification for the level 1 nor 2.

As mentioned above, the NQF has launched recently, student transfer from a vocational training course to tertiary education or grade-skipping has not been prescribed. However, a student qualified as junior high school graduation may enroll in the level 1 of vocational training course, or a person who had ever graduated elementary school but could not continue to study at junior high school then due to economical constrains could enroll in the level 1 of vocational training course if he/ she is qualified in the foundation course while working.

In general, SEPFOPE and INDMO are considered to put priority on development of “skilled-workers”, while the tertiary education institutions including the UNTL tend to contribute to developing “managers” who could be engaged in the near future in major positions in private company of

governmental organizations. As for development of the human resource of “entrepreneurs”, the policy implementation institutions such as the MCIE or MOT have been conducting industrial promotion programs so far, some vocational training institutions such as the IADE has been recently undertaking new type of entrepreneur development program (a sort of contest format) assisted by a foreign aid organization. These situations are detailed in the following section.

### **3.3.2 Current Status of Education and Training Service for Industrial HRD**

As for the technical and vocational education and training (TVET) or tertiary education, both the public and private sector organizations have been providing education and training services under the supervision/ authority of SEPFOPE or Ministry of Education. In addition, the policy implementation institutions such as the MCIE and MOT have been conducting industrial promotion programs for years, also covering human resource development components. Given these situations, this sub-section looks into major vocational education and training institutions in their service programs/ activities respectively by those under authority of SEPFOPE as well as the Ministry of Education, noting the actual situation that not a few institutes have been supported for the program design/ implementation by international organization/ donor countries in technical or financial aspects. These international assistances are also reviewed here.

#### **TVET institutions**

According to the official definition by SEPFOPE, TVET institutions are classified into three types; i.e., ATP<sup>1</sup>, Registered Institute and Community Institute. As of December 2013, there were 29 certified institutes which provide vocational training courses certified (including those currently under procedure for certification) by INDMO. Certified training courses provided through training institutes are advised in its design as well as evaluated after implementation by a national committee which INDMO administrates. Other institutes which do not provide certified training courses but registered in SEPFOPE are defined as registered institutes. Community institute is those not registered nor certified.

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<sup>1</sup> INDMO grants accreditation to education and training courses, not to institutions. Institutions providing accredited courses are referred to as accredited training providers, namely ATPs.

Table 3.3.1 List of Accredited Courses

Sectors	Qualifications/ Certificates	No. of ATP
Administration, Finance, and ICT	Certificate I in Administration	12
	Certificate II in Administration	11
	Certificate I in Basic Computer Operations	2
	Certificate II in Information Technology	2
	Certificate II in Financial Services	1
	Certificate III in Financial Services	1
	National Certificate in Basic Computer Skills	0
	National Certificate in Improve Your Business Operation for Micro and Small Enterprises	1
	National Certificate in Managing Small Construction Bids and Contracts	1
	Certificate I in Agriculture	3
Agriculture	Certificate II in Agriculture	1
	Certificate II in Horticulture	0
	Certificate II in Tree Crops	0
	Certificate II in Automotive Servicing - Light Vehicles	1
Automotive	Certificate II in Service and Repair of Small Engines	1
	Certificate II in Light Vehicle	2
	Certificate II in Automotive	1
	Certificate I in Motorcycle Mechanics	1
	Certificate II in Motorcycle Mechanics	1
	Certificate III in Training and Assessment	4
Education, Training, and Assessment	Certificate IV in Training and Assessment	3
	Diploma I in Training and Assessment	0
	Foundation Certificate	10
	National Certificate in Training	1
	Certificate I in General Construction	6
	Certificate II in General Construction	1
	Certificate I in Carpentry	2
	Certificate II in Carpentry	4
	Certificate I in Electrical	1
	Certificate II in Electrical	3
Construction	Certificate I in Masonry	1
	Certificate II in Masonry	3
	Certificate I in Plumbing	1
	Certificate II in Plumbing	3
	Certificate II in Welding	1
	Certificate I in AC/Refrigeration Technology	1
	Certificate II in AC/Refrigeration Technology	1
	National Certificate in Small Scale Solar Power Systems	1
	National Certificate in Operation and Maintenance of Village Water Systems	1
	National Certificate in Labour Based Technology for Rural Road Construction	1
Health	Certificate III in Essential Eye Care	1
	Certificate IV in Refraction	1
	Certificate III in Police Investigation	1
Public Safety	Certificate IV in Police Investigation	1
	Certificate IV in Police Management	1
	Certificate IV in Media and Communication (Public Sector)	1
	Certificate II in Tour Guiding	1
Tourism and Hospitality	Certificate I in General Hospitality	12
	Certificate II in General Hospitality	3
	Certificate II in Food Production	8
	Certificate I in Bakery	1
	Certificate II in Bakery	1
	Certificate I in Tailoring	1
	Certificate II in Tailoring	1
	National Certificate in Preparing and Serving Espresso Coffee	0

Source : JICA Study Team based on INDMO's document and interviews

The following are summary of characteristics of the certified institutes;

- Certified training courses of the level 1~2 are supposed to be provided sufficiently, while higher level courses are considered necessary to be designed. In particular, such priority industries as agriculture, tourism and construction designated in the National Strategic Development Plan are not yet provided with proper training courses of the level 3~4, despite those industries are expected to have a large demand of labor in near future.
- The training course for training and evaluation has high level course of the level 3~4, while skill training courses for construction, hotel/ restaurant, mechanic, processing and administration & management are still in the basic level 1~2. Entrepreneurship development training course is provided only by IADE. In addition, training courses for agriculture seem to be insufficient.

To develop more advanced courses and break through the present conditions of high unemployment ratio and low local employment, ILO (development of foundation-level certificated course and hospitality course of the level 3~4) and ADB (development of the level 3~4 for construction and automotive) have been supporting training courses development meeting the labor market demand. Foreign countries have been assisting the development and operation of vocational training institutes. However, the operation is being transferred to Timor-Leste as the assistance is decreasing or coming to an end. For example, CNEFP was handed over from Portugal in 2007, STVJ Comoro from Norway in 2011 while SENAI is to be handed over from Brazil in 2014. The aforementioned three training institutes are observed to be highly sufficient in facility and equipment in comparison with other



private ones, therefore they are considered to be able to be utilized further effectively/ efficiently for development of human resources in response to the labor market demand.

**Tertiary Education Institutions**

There are 11 tertiary education service institutes, nine of which have been accredited by ANAAA<sup>2</sup>. The accredited institutes and academic disciplines are shown in the table below.

**Table 3.3.2 Accredited Institutes and Academic Disciplines**

	Agriculture	Engineering	IT	Petroleum	Medicine and Health	Economy	Education	Law	Management	Tourism	Social Sciences	Social Service	Humanities	Religion
Dili Institute of Technology (DIT)		V	V	V					V	V				
East Timor Coffee Academy (ETICA)	V													
Institute of Business (IOB)			V						V					
Instituto Católico para Formação de Professores (ICFP)							V							
Instituto Ciências Religiosa (ICR)												V		V
Instituto Profissional de Canossa (IPDC)			V						V					
Instituto Superior Cristal (ISC)					V		V							
Universidade da Paz (UNPAZ)	V				V	V		V	V		V		V	
Universidade Nacional Timor Lorosa'e (UNTL)	V	V	V	V	V	V	V	V	V	V	V	V	V	V

Source : JICA Study Team based on ANAAA "Publication of Higher Education Statistical Data"

Only a few institutes such as UNTL and UNPAZ cover more than three disciplines, including agriculture, engineering, petroleum, and tourism highly relevant to the priority industries. IT and management are taught in four to five institutes, meaning that these areas may attract young generation.

UNTL represents tertiary education of the country and covers a relatively wide range of areas. The engineering faculty has been improved from the qualification level of junior college to the level of university graduation, technically assisted by a JICA Technical Cooperation Project. Graduates in technical courses like engineering tend to work for private construction companies while many others obtain government jobs.

<sup>2</sup> ANAAA website.

■Box : Capacity Development of Teaching Staff in Faculty of Engineering (CADETES) Project

UNTL was established in November 2000 as the single national tertiary education institutes including the faculty of engineering, on the basis of the polytechnic school founded during the period of Indonesia reign, aiming at development of engineering human resources that would contribute to the national development. However, due to some reasons such as instructors less competent in skills/ know-hows for teaching students or insufficient facility/ equipment caused by physical destruction (more than 70% destroyed) at the time of confusion after the direct vote in August 1998 on the issue of independent recovery from Indonesia, quality of tertiary education had been significantly low, therefore the Government of Japan has been granted so far necessary equipment and technical cooperation (dispatch of experts) as well for the purpose to support in capacity development of the instructors. The CADETES Projects has been technically supporting the engineering faculty since 2011 for upgrading the three-year diploma program to the four-year bachelor program through improvement the instructors in their capability for research/ study as well as enhancement of the faculty management. In this way, the Project has been contributing to the human resource development of the country in the field of high technology of engineering.

Source: JICA Website "Summary of CADETES Project"

■Box : Group interview with UNTL students

The Study Team had a group interview with 20 students of the Faculty of Engineering at UNTL about their awareness of professions.

Their overall awareness to profession was as follows.

- Want to be a technician utilizing expertise to contribute to their communities and country.
- There is a concern whether private companies prefer to employ Timorese or not.
- Want to go on to a Master's degree course

Their responses to a question about what kind of occupation they want to be were;

- Engineer in their areas of expertise: 18 respondents
- Entrepreneur: 2 respondents

(reasons)

- Want to contribute to their communities and country and economic development: 8 respondents
- Want to construct infrastructure: 5 respondents
- Want to develop natural resources: 5 respondents
- Want to utilize expertise: 2 respondents

In a free discussion, they were concerned about their future as below.

- It is not easy to find a job in Timor-Leste after graduation.
- Foreign-affiliated companies prefer students who graduated from overseas universities, because they evaluate them better than graduates from UNTL.

Also, more than 80% of students remarked that they were interested in continuing study in Master's degree courses overseas, because there is not a Master's degree course in engineering in Timor-Leste.

## **Policy Implementation Institutions**

Given the situation that it is an urgent issue to develop/ grow competent human resources that could contribute to the development of the four priority industries, namely agriculture, tourism, oil-related and construction, this section presents the current situation of their measures and programs, based on materials obtained from the policy implementation institutions, i.e., MCIE, MAF, MOT, MPRM and SEPFOPE related to the priority industries and the results of interviews.

### **(1) Ministry of Commerce, Industry and Environment (MCIE)**

MCIE supports producers (groups or cooperatives) in various trainings, subsidies, equipment provision, and marketing through exhibitions.

The training of MCIE has provided dealt with a variety of products such as food processing (cassava crisps, banana crisps, marmalade, tamarind candy, etc.), coconut and candlenut oil, salt, handicrafts using bamboo or coconut leaves, traditional sewing/ weaving/ dyeing, carpentry, ethanol, and metallurgy. In order to effectively achieve the outcomes through the trainings as aforementioned, the MICE is aware that the internal human resources (governmental staff) should be improved in their capability so that they are able to train/ instruct target producers more effectively. Because of this, they have a plan to establish a national education and training center under the MICE.

Subsidies are granted every year to the small-sized producers groups selected officially through a certain selection procedure. There is a tendency that majority of the applicants have ever experienced to some extent in real business, while the new start-up are rare to apply. Reportedly, 75% of the applicants have been granted with subsidies.

Especially for coffee products, the MCIE has been putting emphasis on promotion of production/ marketing of coffee in small sachet since 2013 through provision of capital, equipment, and packaging material in order for development the domestic coffee market, while watching the rapid growth of the overseas market assisted by foreign aid organization.

### **(2) Ministry of Agriculture and Fisheries (MAF)**

The Ministry of Agriculture and Fisheries (MAF) has extension officers whose mission is to provide technical guidance on cultivation and post-harvest technologies to the farmers in order to improve productivity through introduction/ dissemination of modern agricultural techniques in nationwide. Pre-service trainings to the extension officers are conducted by the MAF with support from foreign/ international aid organizations such as EU and GIZ. Two to three extension officers are supposed to be assigned to each of all the 441 villages across the country, while currently one village has one extension officer or none counting to 500 extension officers (high school graduates) and senior extension officers (degree holders) since 2009<sup>3</sup>.

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<sup>3</sup> JICA "Data Collection Survey on Potential for the Development of New Industries in Timor-Leste": Final Report in 2013.

There are some cases in which the MCIE provides technical trainings for food processing (ex. tapioca (cassava powder) or corn powder) to the farmer groups that had been guided technically by the MAF up to the level of post harvest technology, proving that the Ministries do coordinate their programs to a certain extent.

### **(3) Ministry of Tourism (MOT)**

The Ministry of Tourism (MoT) conducts training programs for the human resources working in the areas of hotel or restaurant in cooperation with SEPFOPE and NGOs like the East Timor Development Agency (ETDA) and the World Vision. As part of them, the MOT dispatched 15 persons to Bali, Indonesia in 2012. The participants were willing to work in tourism business in Timor-Leste. In 2013, instructors were invited from Bali for training the workers in the tourism sector in Tomor-Leste.

The Community-Based Tourism Development Program has been under implementation since 2007, which provides financial assistance for the development/ improvement of hotels, restaurants, and souvenir shops managed/ operated by the local people's initiative.

As taxi business is considered to be one of the important factors which shall support tourism promotion, necessary measures must be taken in an urgent manner to improve the service quality in response to the claims reportedly reached from the tourists, such as bad manners of attracting customers at the airport, ambiguous billing system, etc. The MOT has a willingness to cope with this issue in coordination with the Ministry of Transport and Communications. Necessary measures may include establishment of acceptance and processing system of customer complaint, Introduction of appropriate tariff levels / billing system, introduction of vehicle maintenance rules, manners guidance to the taxi drivers, etc.

### **(4) Ministry of Petroleum and Mineral Resources (MPRM)**

The Ministry of Petroleum and Mineral Resources (MPRM) had commenced a scholarship program in 2008 for those who want to study undergraduate courses in universities abroad (ex. Australia, Indonesia, Portugal and Thailand) in the relevant areas, such as geology or chemistry. Likewise, scholarships for Master's degrees abroad are available. In addition, a 10-month English training in India is granted to those who completed undergraduate in Indonesia. The scholarships and English training have been given to a total of 200 persons since 2008. An agreement is made with the scholars that they must return to Timor-Leste after their studies and work for MPRM or relevant institutions for 10 years at least<sup>4</sup>.

The MPRM also conducts the Tasi Mane Skills Development Program, as a local employment promotion support, to provide English and computer trainings to the community/ local people in the Suai area. In the Program, the MPRM provides facilities and computers whereas training implementation is entrusted to the Science of Life Systems 24/7 (SOLS24/7). At present, 400 persons are being trained.

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<sup>4</sup> Those who wish to pursue further studies are allowed to continue their studies as long as they can finance by themselves.

## **(5) SEPFOPE**

SEPFOPE has the International Guest Worker Program to provide the people in Timor-Leste with overseas employment opportunities. Dispatch to South Korea started in 2009 and that to Australia in 2013.

South Korea offers jobs in agriculture, fishery and manufacturing. The program is three years long and can be extended, depending on performance. Prior to departure, six-month Korean language training is given. Korean may deter candidates from being dispatched because of the linguistic capability. Australia offers employment in hospitality and tourism, and horticulture. The program is two to four years long. A certificate in hospitality is prerequisite for participating in the hospitality and tourism program. Australia does not provide language training course before dispatch, but English ability should be examined in the selection procedure. After completing the program and returning to Timor-Leste, participants are expected to start-up their own businesses, making the use of acquired experience, due in part to limited job opportunities in the country. For this, support from line ministries including the MCIE and the MAF is available.

SEPFOPE is attempting to increase recipient countries. A program for construction in New Zealand is under preparation, while those for hospitality in Qatar and domestic helpers in Taiwan are under bi-lateral negotiation.

As observed above, policy implementation institutions relating to the four priority industrial sectors in general tend to implement programs mainly for micro and small business promotion, incorporating human resource development. The MPRM is characteristic, because under the long-term perspective, its overseas scholarship programs are granted to the young generation in order to develop human resources responsible for the country's oil industry in the future.

### **3.3.3 HRD Needs in Priority Industries and Relating Programs' Efficiency**

This section looks into the programs implemented by the related institutes (i.e., TVET institutes, Tertiary Education institutes and Policy Implementation Institutes,) for human resource development, based on the observations as summarized in the prior sections, in views of relevance (*how the programs meet the human resource development needs in the three priority industries, namely agriculture, tourism and oil-related industry, as well as construction industry which develops/improves infrastructures necessary for supporting growth of the priority industries*) as well as effectiveness (*to what degree the programs contribute to improvement/ increase of the human resources meeting the labor market needs*).

Human resource development needs are identified according to the three categories as explained in the section 3.3.1 (skilled-workers, managers, entrepreneurs) in consideration of results of the interviews with the companies/ organization concerned both in the public and private sectors. Meanwhile, relevance/ effectiveness of the related programs are evaluated based on the data/ information or the interview results obtained from the institutions concerned, in a way of qualitative analysis that to what

extent the programs meet the human resource development needs and contribute for satisfying them<sup>5</sup>.

In evaluation of relevance/ effectiveness of the programs, attention must be paid to the variation of the enterprises in scale and maturity of business lying among the priority industrial sectors or even within the same sector. For instance, the oil-related sector is consisted of relatively large-scaled and matured enterprises, while the tourism sector incorporates various enterprises in business scale/ maturity. As for the HRD needs, the oil-related sector may require managers or competent engineers (skilled-worker), while the tourism sector, in case of middle to large-scaled hotels, may need quality managers or skilled cooks. On the other hand, small-scaled hotel may require entrepreneurs or multi talent staff. In this way, the HRD needs may vary depending on the characteristics of each industrial sector, or even in the sector, different types of HRD may be needed depending on the scale or maturity of enterprises.

The Box in the following page titled “*Government measures for supporting private enterprises according to the scale*”, may help to understand the HRD needs by the scale/ maturity of enterprises. The following describes, in reference to the Box, HRD needs observed in general in each of the four priority industrial sectors:

- Agricultural sector is consisted of micro to small-scaled producers. The relevant governmental institutions (ex. MAF, MCIE) provide supporting programs for improvement of agricultural technology or start-up of agri-business. These programs are supposed to be continued further facilitated by the field staff in charge of technical guidance. For this, it is expected that the staff in charge would improve in their knowledge/ skills so that they could contribute more effectively to the improvement of technology necessary in nationwide.
- Various scales of enterprises are active in both the tourism and construction sector in needs of a variety of human resources (skilled-workers, managers) from the basic to advanced level. In addition, entrepreneurs engaged in the tourism business (starting-up small-scaled hotel/ restaurant business) are also expected to increase, so that they could contribute to the tourism promotion even in the remote areas of the country.
- As the oil-related sector’s main players are large-scaled/ matured enterprises, they may need relatively high level of human resources, such as engineering staff competent internationally or management staff with business administration skills of the international level.

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<sup>5</sup> As the time allocated for each interview was limited due to the operational reason during the field works, some information were referred/ quoted from the written material obtained from the relevant institutions or the website.

■Box : Government measures for supporting private enterprises according to the scale

Large-scaled enterprises are considered to be sufficient in general with capital and human resources as well. It is expected that they would employ/ utilize more local human resources when/ if they develop their businesses in a larger scale. The government should give appropriate incentives to the enterprises in order to increase employment of local people, in such ways as providing salary compensation or exemption of corporate income tax, and supporting facilitation to the enterprises in their internal training implementation making use of the certified training institutes.

Under the assumption that medium-scaled enterprises are in the transition stage to become large enterprises, more investments (capital and human resources) are demanded. To increase capital, the financial service sector (ex. bank) is expected to be more active in providing financial scheme supported by the relevant governmental programs, in addition to be subsidized by the government. Employees should be trained appropriately in a recurrent manner. Market promotion to the overseas in particular may be a big challenge for them, therefore the government shall support as required.

Micro to small-scaled enterprises, including producers groups or cooperatives, are weak/ vulnerable in general in their financial capability as well as the human resource availability. Because of this, relevant governmental institutions such as MAF, MCIA and MoT shall continue to implement supporting/ aiding programs for them, in order for making successful cases which would be model cases to be disseminated in nationwide. In addition, such entrepreneurship development programs as conducted by CCI-TL are worth considering for increasing competent small-scaled enterprises.

Source : JICA Study Team

Putting in mind the points of consideration mentioned above, the four priority industrial sectors are reviewed according to three categories of HRD, i.e., skilled-workers, managers and entrepreneurs, and the related programs conducted by the three types of institutes, i.e., TVET institutes, tertiary education institutes and policy implementation institutes. The results are summarized in a table format which is followed by the evaluation on effectiveness of programs meeting HRD needs.

**(1) Agricultural Sector**

HRD Needs	Related Program		
	TVET	Tertiary Education	Policy Implementation
<p><b><u>Skilled-workers</u></b></p> <ul style="list-style-type: none"> <li>Capacity building of Farmers for improvement of agricultural productivity and quality.</li> </ul>	<p><b>[SEPFOPe]</b> Training standard for agriculture level-1 is designed by INDMO and provided at the ATPs (CDC Baucau, Lafaek Foundation).</p>	<p><b>[MoE]</b> Tertiary education (ex. Faculty of Agriculture, UNTL)</p>	<p><b>[MAF]</b> Assignment of agricultural extension staff in the districts to provide technical guidance to farmers.</p>

	[IADE] Organic fertilizer processing training, Pilot activity for productivity improvement through vaccination of livestock, in cooperation with the MAF.		
<b><u>Managers</u></b> • Management that can control a series of operations from production to transport and sale and manage operating resources effectively and efficiently	[IADE] Organic fertilizer processing training, Pilot activity for productivity improvement through vaccination of livestock, in cooperation with the MAF.	[MoE] Tertiary education (ex. Faculty of Agriculture and of Economics and Management, UNTL)	None
<b><u>Entrepreneurs</u></b> • Capacity development of farmers (groups) for agro-industry in processing materials and market promotion	[IADE] ※Not only agriculture – Entrepreneurship development training – Business consultation/ business matching – BIF – New business contest	[MoE] Tertiary education (ex. Faculty of Agriculture, UNTL)	[MAF] Community fund (subsidy) to farmers: USD 500/ farmer. [MAF] Agro-processing training is provided to farmers in coordination with the MCIE. [MCIE] Technical guidance, provision of equipment and product exhibition are provided to farmers group/ cooperative producing such products as VCO, salt, etc. making use of local resources. [MCIE] Agro-processing training is provided to farmers in coordination with the MoA. [MCIE] Facilitation for coffee processing farmers to develop domestic market. [SEPFOP] Overseas employment program

### **Needs and Programs for Skilled-workers**

“Capacity building of farmers for improvement of agricultural productivity and quality” is considered to be needed for Skilled-workers in the agricultural sector.

In response to the needs above, certificated training courses for agriculture are prepared in the NQF, while the number of training institutes providing them is limited to three out of 29 institutes. In addition, currently the courses are basic the levels 1 and 2. CNEFP provides extra training courses



of irrigation and organic compost technologies with necessary facilities equipped. Therefore it is considered that human resources for skilled-workers are trained to a certain extent so that they could contribute to improvement of productivity and quality, but there may still be a room to increase the number of institutes which provide the training courses for agriculture, taking into account the actual needs quantitatively.

IADE in cooperation with MAF conducts an advanced pilot activity for organic farming, namely “Josephina Farm Project”. In the Project, the Farm teaches organic farming to the partner farmers, and connects to the markets. It is reported this support led to productivity improvement and market development, resulting in increase of farmers’ incomes. This is appreciated as a good practice model of agricultural promotion through growing organic vegetables, and expected to be disseminated to the rest areas of the country.

### **Needs and Programs for Managers**

“Management that can control a series of operations from production to transport and sale and manage operating resources effectively and efficiently” is considered to be needed for Managers in the agricultural sector.

Josephina Farm Project aforementioned is regarded as a pilot case which has been challenging to strengthen supply chain management in organic vegetable farming. Similar to what mentioned for “Skilled-workers”, appropriate dissemination is expected to be undertaken by the relevant institutions (ex. MAF, IADE). Meanwhile, the tertiary education institutes, namely the faculty of agriculture or the faculty of economy/ management of UNTL, provide classes/ lectures to the students. It is considered that the students could master knowledge/ theory about management but still difficult for them to put into practice in the real business situation.

In this way, training programs for managers in the agricultural sector is currently limited to a few pilot cases which should be disseminated/ increased further.

### **Needs and Programs for Entrepreneurs**

“Capacity development of farmers (groups) for agro-industry in processing materials and market promotion” is considered to be needed for Entrepreneurs in the agricultural sector.

IADE provides supporting facilitation, such as training and business consultation for business development. One of the entrepreneur training courses is “Improve Your Business<sup>6</sup>” which is an accredited certificate course of level 2. It is not certain if anyone from the agricultural sector ever participated in this training course, but this course is worth considering to be applied to entrepreneurs in the agricultural sector as the course is appreciated to be effective and efficient enough in spite of short-term.

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<sup>6</sup> IYB is consisted of six modules: marketing, procurement, stock control, financial forecast, cost management, and book keeping. The whole course takes 18 days with three days per module. Between 2010 and 2013, approximately 780 persons participated, 70% of whom were female. IADE’s assessment of 2010 training shows that 28% of participants increased their incomes while 77% improved the operation of their companies. Eighty-eight percent stated that training quality was good. Trainers were IADE staff. Twenty-three of them hold Certificate III in Training and Evaluation and 11 Certificate IV. Eighty-eight percent of participants responded that trainers were good. Training materials are ILO materials translated from English into Tetun. Easy language and plenty of illustrations are used to explain concepts and solutions clearly. The content of the course is very fundamental.

No relevant program was provided by the tertiary education institutes other than classes/ lectures on business management theory. Meanwhile, the policy implementation institutes have been conducting several programs for strengthening of supply chain management in the agricultural sector, which are reviewed as follows.

MAF and MCIE implement various support programs to foster producer groups of processed agricultural products. For instance, a coconut oil producer group, *Mada Heliq* received a subsidy from MCIE in 2012 to supplement operational costs. They faced financial difficulty after developing a production base assisted by USAID in technical training and equipment provision from Spain. The subsidy from MCIE helped them to be able to continue production. In 2013, they met an Australian buyer at the time when they participated in an exhibition in Malaysia, supported by MCIE. This case demonstrates that MCIE’s assistance contributed to small-scaled producer groups’ production maintenance and market development.

Another case is a salt producer group, Bee Haas (tentative). They learned a method of enhancing its nutrition value at training in iodizing salt in 2011 supported jointly by MCIE and UNICEF. The participants undertook the same training to other salt producers in the surroundings to share what they learnt at the training. In 2013, Bee Haas ordered a packaging machine under the financial assistance from MCIE. This assistance improved their product quality thus, but they still sell only in neighboring areas. Further support for market development to the city of Dili is expected.

In addition to the cases mentioned above, MCIE in coordination with MAF conducts technical training programs of agro-industry (ex. tapioca processing, corn powder processing) for local farmers who had ever supported by MAF in cultivation techniques of cassava or corn.

On the other hand, SEPFOPE sends workers to South Korea and Australia. The first group of 50 workers is scheduled to return in October 2014. They are expected to start their own businesses and create employment, utilizing knowledge, skills, and money obtained through the program.

As described above, entrepreneurship development in the agricultural sector so far has been undertaken by the policy implementation institutes mainly because the farmers/ local producers should be protected/ fostered. As the farmers’ school education completion level is not really high in general, they are in a difficult situation for learning high level of management curriculum. However, those who graduated from the faculty of agriculture in the tertiary education are considered to be potential target to train/ teach for obtaining practical knowledge/ skills so that they could design and start-up agricultural business with marketable goods such as organic vegetables, food/ beverages processed from the agricultural products.

**(2) Tourism Sector**

HRD Needs	Related Program		
	TVET	Tertiary Education	Policy Implementation
<p><b><u>Skilled-workers</u></b>  <b>[Hotel/ Restaurant]</b>            • Improvement of basic academic skills (incl. English) or proper manners in greeting</p>	<p><b>[SEPFOPE]</b> Training standard for general hospitality level-1,2 and tour guide level-2 are designed by INDMO and</p>	<p>None</p>	<p><b>[MOT]</b> Fifteen trainees from TLS were dispatched to Bali in 2012, while trainers were invited from Bali in 2013</p>

<p>and conversation.</p> <ul style="list-style-type: none"> <li>Improvement of cooking skills.</li> </ul> <p><b>[Taxi]</b></p> <ul style="list-style-type: none"> <li>Improvement of taxi service in driving techniques and service manners.</li> </ul>	<p>provided at several certified institutes (ex. ETDA, CNEFP, STVJ.)</p> <p><b>[ILO]</b> Technical assistance for curriculum design of general hospitality level-3,4.</p> <p>None</p>	None	<p>for training program.</p> <p><b>[MOT]</b> To be addressed the issue in cooperation with Ministry of Transportation.</p>
<p><b><u>Managers</u></b></p> <ul style="list-style-type: none"> <li>Improvement of the ability of management and accounting.</li> </ul>	<p><b>[SEPFPOE]</b> Training standard for administration and accounting level-1,2 is designed by INDMO and provided at several ATPs</p>	<p><b>[MoE]</b> Tertiary education (ex. Faculty of Economics and Management, UNTL)</p>	None
<p><b><u>Entrepreneurs</u></b></p> <p><b>[Hotel/ Restaurant Management]</b></p> <ul style="list-style-type: none"> <li>Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in districts or tourism promotion areas.</li> </ul> <p><b>[Souvenir Production/ Marketing]</b></p> <ul style="list-style-type: none"> <li>Increase of producers (groups) who produce and sell souvenirs</li> </ul>	<p><b>[IADE]</b> ※Not only tourism</p> <ul style="list-style-type: none"> <li>Entrepreneurship development training</li> <li>Business consultation/ business matching</li> <li>BIF</li> <li>New business contest</li> </ul> <p><b>[IADE]</b> Same as above</p>	<p><b>[MoE]</b> Tertiary education (ex. Faculty of Economics and Management, UNTL)</p> <p>None</p>	<p><b>[MOT]</b> Community based tourism promotion program since 2007: financial support (subsidy) for development/ improvement of accommodation facility, restaurant, and souvenir shop.</p> <p><b>[SEPFPOE]</b> Overseas employment program</p> <p><b>[MCIE]</b> Supporting handicraft goods producers through trainings and exhibition facilitation.</p>

### **Needs and Programs for Skilled-workers**

“Improvement of basic academic skills (incl. English) or proper manners in greeting and conversation, and Improvement of cooking skills” (hotel and restaurant) or “Improvement of taxi service in driving techniques and service manners” (taxi) are considered to be needed for Skilled-workers in the tourism sector.

The NQF prepares basic technical training courses, meeting the needs mentioned above, for hospitality which are provided at 12 institutes among 29 in total. The number of trainees during the last two years is reported to have been increased, and most of those who certified after the training were employed by hotels and restaurant. Therefore it is assessed that the current training courses are sufficient to a certain extent in producing human resources with skills/ techniques meeting the requirement of the tourism sector’s labor market. However, according to the results from interviews with the parties

concerned (MoT, association of tourism, etc.), there may be potential needs for human resources with higher level of knowledge/ skills, competent as senior/ chief staff, possibly requiring more advanced training courses to be designed and provided.

In response to the needs above mentioned, no practical courses are provided by the tertiary education institutes other than theoretical lectures. On the other hand, MOT as the relevant policy implementation institute conducts some relating programs such as overseas training or invitation of foreign trainers. These programs are conducted for the purpose to make the participants (trainees) feel and learn the quality services provided in the successful advanced tourism areas/ countries (e.g. Bali, Fiji) of which the characteristics of tourism business are similar to those in Timor-Leste.

No effort to improve taxi services (driver's manner, driving techniques) has been made so far, though there have been considerable claims from the tourists. It is needed that MOT together with the Ministry of Transport and Communications shall address the issue, through necessary guidance or appropriate trainings for the human resources in taxi service. In addition, institutional strengthening is considered to be important, covering such issues as pricing standard and system, and vehicle maintenance standards. The relevant policy implementation institutes are in need of prompt actions.

As mentioned above, more than half of the certified training institutes provide the basic level training courses with respect to the human resource development for skilled-workers, while higher levels of courses are under development. Taking into account the current situation, number of institutes should be increased in consideration of the importance of human resources to support the growing tourism sector.

#### **Needs and Programs for Managers**

Considering that "Improvement of the ability of management and accounting" is needed for Managers in the tourism sector, the NQF prepares the basic level courses of administration and accounting, which are provided at several certified training institutes. In addition, the tertiary education institutes also provided theoretical lectures/ classes to the students.

However, according the result of interviews to private enterprises and organizations concerned, even the university graduates are not competent enough to be employed instantly in the tourism business. It is urgent therefore that human resources with practical skills/ knowledge in administration/ accounting as well as business management shall be produced.

#### **Needs and Programs for Entrepreneurs**

"Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in districts or tourism promotion areas" is considered to be necessary for entrepreneurs in the tourism sector. In addition, souvenir goods development is supposed to be an important factor/ theme for tourism promotion in general, as characteristic and quality souvenirs such as handicraft could attract tourists. Under this understanding, "Increase of producers (groups) who produce and sell souvenirs" is also considered to be needed for entrepreneur in this sector.

IADE as a certified training institute provides entrepreneurship development course along with business consultation service aiming at producing human resources for entrepreneurs to be active also in the tourism sector. However, no successful case has been observed so far. On the other hand, the

tertiary education institute does not provide practical courses other than theoretical ones.

Looking at the policy implementation institutes, MOT has been providing financial support to the potential entrepreneurs under the “Community based tourism promotion program” annually since 2007, aiming at tourism development (accommodations, restaurants, souvenir shops) in local areas or tourism promotion areas in the country. On the other hand, MCIE has been supporting local producers (groups) for development of handicraft goods which may help tourism promotion. For instance, MICA assists a producers’ group named *Moris Foun*, of which the group leader was once dispatched to West Java, Indonesia in 2011 for participating in a one-week handicraft training program, under the bilateral cooperation between MCIE and the Indonesian Ministry of Industry. After the training, *Moris Foun* has been trying to alternate designs and models occasionally for continuously attracting customers/ buyers. In addition to the training, they were given an opportunity to participate in an exhibition under the support from MCIE. They could utilize the opportunity for sales promotion. There has been a slight rise in their sales. This case gives an implication that MCIE’s assistance contributes to the development of those who produce souvenirs.

The International Guest Worker Program supported by SEFPOFE offers employment opportunities in hospitality and tourism in Australia. No one has completed the program since dispatch to the country commenced in 2013. It is expected that participants will establish their own business and generate employment, utilizing the skills, knowledge and money obtained through this program.

As seen above, human resource development programs for producing entrepreneurs have been conducted by both the policy implementation institutes and the certified training institutes. It is concluded at this point that souvenir development and its market promotion is considered to be effective to some extent based on several successful cases, while development of accommodations or restaurants in line with the sector policy is still in the initial stage without remarkable cases.

### (3) Oil-related Sector

HRD Needs	Related Program		
	TVET	Tertiary Education	Policy Implementation
<p><b><u>Skilled-workers</u></b></p> <ul style="list-style-type: none"> <li>Improvement of skills for PC operation and English language</li> </ul>	<p>[SEFPOFE] Training standard for administration and accounting level-1,2 is designed by INDMO and provided at several ATPs.</p>	<p>[MoE] Tertiary education (ex. English Course, Faculty of Education , UNTL)</p>	<p>[MPRM] Tasi Mane Skills Development Program (SOLS 24/7)</p>
<p><b><u>Managers</u></b></p> <ul style="list-style-type: none"> <li>Improvement of personal knowledge and skills required for international business</li> </ul>	<p>None</p>	<p>[MoE] Tertiary education (ex. Faculty of Economics and Management, UNTL)</p>	<p>[MPRM] Overseas college scholarships for learning the chemical industry and petroleum geology [MPRM] Scholarships to study abroad for a Master's degree. [MPRM] English training in India for</p>

			graduates from universities in Indonesia
<p><b><u>Entrepreneurs [Tasi Mane-related]</u></b></p> <ul style="list-style-type: none"> <li>• Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in the project site and its surroundings</li> </ul>	<p><i>✗could be utilized</i></p> <p><b>[IADE]</b></p> <ul style="list-style-type: none"> <li>- Entrepreneurship development training</li> <li>- Business consultation/ business matching</li> <li>- BIF</li> <li>- New business contest</li> </ul>	None	<p><i>✗could be utilized</i></p> <p><b>[MOT]</b> Community based tourism promotion program since 2007: financial support (subsidy) for development/ improvement of accommodation facility, restaurant, and souvenir shop.</p>

**Needs and Programs for Skilled-workers**

“Improvement of skills for PC operation and English language” is considered to be needed for Skilled-workers in the oil-related sector.

The NQF prepares training courses for administration and accounting of the level 1 and 2, which are provided at several certified training institutes, possibly covering basic skills for PC operation but not English language. The tertiary education institutes may give classes/ lectures on PC operation as well as English language as basic requirement to the students, therefore the graduates are supposed to be capable for them.

Looking at the policy implementation institutes, MPRM is currently implementing the Tasi Mane Skills Development Program assisted by SOLS 24/7, an international NGO, involving the local communities. This program provides the local people with English communication as well as life skills. SOLS 24/7 has an achievement for sending 4,000 persons trained at their facility to Australia as employees/ volunteers since 2006. The local people under training in the area are expected to obtain enough skills in English communication or PC skills so that they could obtain job opportunity at private companies coming to the area for the project.

**Needs and Programs for Managers**

“Improvement of personal knowledge and skills required for international business” is considered to be needed for Managers in the oil-related sector.

The tertiary education institutes educates students with management theory/ knowledge, however they are not instantly applicable to the actual business field due to lack of practical experiences. Because of this, as observed through interviews with the oil-related companies, the university graduates are not competent enough to be employed by such companies active in the international business requiring high levels of business skills. Large companies such as Timor GAP has a system for internal training of employees for their capacity improvement.

On the other hand, MPRM a policy implementation institute has been granting scholarships to the young generation who would support the business in the future. The scholarship is provided to the applicants who would like to obtain bachelor/ master degree relating to oil industry/ technology in universities overseas. Some of the first batch of scholars is scheduled to complete in 2014. Personnel with highly specialized in oil related fields are expected to be engaged in MPNR or other institutes.

They are expected to be active even in the private sector for technology improvement through research and development, or new business start-up as well as business diversification.

**Needs and Programs for Entrepreneurs**

“Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in the project site and its surroundings” is considered to be needed for Entrepreneurs in the oil-related sector, for the Tasi Mane Project in particular.

Tasi Mane Project is expected to bring about various economic activities and active movement of the people in the project area and its surroundings. As mentioned in the section of tourism, demands for accommodation, restaurant and souvenir shop will be generated in a large scale in accordance with the progress of the Project. Tasi Mane Skills Development Program, as aforementioned, is under implementation with expecting that local people shall contribute to meeting the demand in many ways, not only as employees. The demand could be satisfied more effectively by putting into together the programs conducted by the training institutes (programs for entrepreneurship development) and the policy implementation institutes (MOT’s program for community based tourism business development).

**(4) Construction Sector**

HRD Needs	Related Program		
	TVET	Tertiary Education	Policy Implementation
<p><b><u>Skilled-workers</u></b>  <b>[Unskilled or Semi-skilled Worker]</b></p> <ul style="list-style-type: none"> <li>• Improvement of basic ability/skills of of reading, writing, arithmetic and English language as well as basic business manners, such as punctuality or attitudes.</li> <li>• Improvement of "safe" or "clean" at the workplace.</li> </ul> <p><b>[Skilled-worker]</b></p> <ul style="list-style-type: none"> <li>• Increase of human resources with knowledge/ skills or experiences in particular in road design and maintenance.</li> </ul>	<p><b>[SEPFPOPE]</b> Training standard for construction level-1,2 is designed by INDMO and provided at several ATPs (ex. CNEFP, SENAI, Don Bosco, DIT Baucau, etc.).</p> <p><b>[ADB]</b> Technical assistance for designing curriculum and training implementation for skilled worker level-3,4, during the period from 2012 to 2016</p>	<p><b>[MoE]</b> Tertiary education (Faculty of Engineering, UNTL)</p> <p><b>[MoE]</b> Tertiary education (Faculty of Engineering, UNTL)</p>	<p>None</p> <p>None</p>
<p><b><u>Managers</u></b></p> <ul style="list-style-type: none"> <li>• Human resources that can be served as a management</li> </ul>	<p>None</p>	<p><b>[MoE]</b> Tertiary education (Faculty of Management, UNTL)</p>	<p>None</p>

<p><b><u>Entrepreneurs</u></b></p> <ul style="list-style-type: none"> <li>• Business development in the non-construction sector (business diversification )</li> </ul>	<p><b>[IADE]</b> ※Not only construction</p> <ul style="list-style-type: none"> <li>- Entrepreneurship development training</li> <li>- Business consultation/ business matching</li> <li>- BIF</li> <li>- New business contest</li> </ul>	<p>None</p>	<p>None</p>
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### **Needs and Programs for Skilled-workers**

“Improvement of basic ability/skills of reading, writing, arithmetic and English language as well as basic business manners, such as punctuality or attitudes” or “Improvement of safe and clean at the workplace” are needed for unskilled level worker. Meanwhile “Increase of human resources with knowledge/ skills or experiences in particular in road design and maintenance” is required for skilled worker.

In response to the need above, the NQF prepares training courses for construction of level 1 and 2, which is provided at many certified training institutes. It is reported that the persons who completed the courses are relatively easy to be employed. Therefore, the current basic courses are assessed enough to increase unskilled level workers required in construction business. However, according to the result of interviews with some construction companies/ associations, such basic skills as ability of 3Rs (reading, writing, arithmetic), business manner, or consciousness of safety and cleanliness are still insufficient with those workers, necessary to be improved.

As for skilled worker, there is a tendency observed in many construction works so far that expatriate workers tend to occupy the relevant position. To cope with this situation, domestic human resources for competent skilled worker (ex. heavy equipment operation and maintenance) are necessary to be increased/ produced. Currently, SEPFOPE technically assisted by ADB is designing higher level course for skilled worker, which shall be put into practice on a trial basis in the middle of 2014, and expected to be widely provided at many training institutes aiming at replacement of the expatriate workers to domestic ones in the near future.

Considering the high foreign employment ratio in many cases as aforementioned, the current tertiary education does not meet the market needs.

### **Needs and Programs for Managers**

“Human resources that can be served as a management” is identified as a need/ challenge through interviews with the construction companies/ association. For this, the tertiary education institute provides classes/ lectures of economy or management but at theoretical level. Practical level of education is not yet given to the students possibly causing a lack of competent human resources for management, resulting in many expatriate managers employed in construction companies. To cope with this situation, not a few companies have a suggestion for providing education/ training of more practical management skills/ knowledge at the certified training institutes or the tertiary education institutes.



### **Needs and Programs for Entrepreneurs**

Small to medium scaled construction companies may have a common problem of management that business orders throughout the year is not stable or leveled. Because of this, some of them may take actions for business development into non-construction areas so as to optimally utilize company resources including employees. Several construction companies visited during this study, such as *ASZ* (canned fish production), *Virgo Amor Unip* (instant coffee production), are under the process for business diversification to new areas by using a part of the capital accumulated in the construction business. These companies are considered to be more potential in quick business start-up than those start from scratch, as they already have sufficient knowledge/ skills of business management obtained through their original business, namely construction business.

It is recommended under the goal of business diversification promotion that programs conducted by IADE for business entrepreneurship development (business planning, market research, etc.) should be utilized also for business diversification of existing business players including construction companies, thereby to reach the ultimate goal efficiently in short-term period.

#### **3.3.4 Areas to improve in human resource development for industrial promotion**

Up to this point, it has been reviewed that the effectiveness of the relevant policies and programs for industrial human resource development classified into three types of human resources like skilled worker, management and entrepreneur in four priority areas: agriculture, tourism, oil-related industry and construction. In this section, areas to improve of human resource development for industrial promotion in Timor-Leste will be shown in the form of a table with current situation as well as human resource development needs.

Table 3.3.3 Areas to improve in human resource development

	Agriculture	Tourism	Oil-related industry	Construction
Skilled worker	<b>【Needs】</b> Capacity building for improvement of agricultural productivity and quality improvement of agricultural produce	<b>【Needs】</b> <b>[Hotel and restaurant]</b> •Persons with English and basic academic skills •Improvement of manners/customer service in conversation •Improvement of cooking skills <b>[Taxi]</b> •Improvement of taxi service in driving techniques and service manners	<b>【Needs】</b> Persons with sufficient PC skills and English proficiency	<b>【Needs】</b> <b>[Unskilled, semi-skilled worker]</b> •Basic academic skills such as reading, writing and arithmetic •Basic manners of business, such as punctuality or attitudes to boss •Awareness of "safe" or "clean" in the workplace <b>[Skilled worker]</b> •Skilled workers with the knowledge and experiences, especially for road design and maintenance
	<b>【Current Situation】</b> •A few vocational training centers provide training courses of agriculture. •Accredited courses of agriculture is only for the basic level (Level 1 and 2). •The training for organic cultivation in Josefina farm brought the improvement of agricultural productivity, extension of market and income improvement to farmers.	<b>【Current Situation】</b> •Around one half of vocational training centers provide basic training courses of tourism and hospitality. In recent years, the number of students increased. Also, employment situation in tourism area is relatively good. •MoT sent trainees overseas to promote tourism and hospitality. In addition, MoT invited trainers from abroad to conduct training in Timor-Leste. •There are complaints against taxi.	<b>【Current Situation】</b> •Vocational training centers provide basic course of business administration and finance •Higher education institutions provide English language course and PC training	<b>【Current Situation】</b> <b>[Unskilled, semi-skilled worker]</b> •Vocational training centers provide basic course of technical skill training for construction •The workers lack fundamental skills such as reading, writing and calculation as well as business etiquette. <b>[Skilled worker]</b> •Many foreigners are employed instead of local people. It is urgent to develop domestic human resources.
	<b>【Areas to Improve】</b> •Increment of the training centers providing training course of agriculture •Improvement of the training courses (e.g. GAP(Good Agricultural Practice) training) •Expansion of the training for organic cultivation like Josefina farm project	<b>【Areas to Improve】</b> <b>[Hotel and restaurant]</b> •Improvement of training course of tourism and hospitality at vocational training centers •Increase vocational training centers which provide training course of tourism and hospitality •Expansion of conducting the training in neighboring area where tourism industry has been advanced •Enhancement of English language courses <b>[Taxi]</b> •Encourage taxi drivers and owners of taxi	<b>【Areas to Improve】</b> •Promotion of human resource development through programs implemented by government, institutions and private organizations	<b>【Areas to Improve】</b> <b>[Unskilled, semi-skilled worker]</b> •Improvement of business etiquette and work ethics through OJT <b>[Skilled worker]</b> •Promotion of training courses at vocational training centers
Management	<b>【Needs】</b> Management skills to manage a set of features such as production-transportation-sale as well as to operate management resources effectively and efficiently	<b>【Needs】</b> Persons with knowledge and skills of administration, accounting and management	<b>【Needs】</b> Persons with knowledge and skills for working in the international businesses	<b>【Needs】</b> Human resources that can be served as a management
	<b>【Current Situation】</b> •There are efforts of supply chain management of organic farming training in Josefina farm, but it remains in the experimental implementation •Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills	<b>【Current Situation】</b> •Some vocational training centers provide basic training courses of business administration and finance. •Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills	<b>【Current Situation】</b> •Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills •Leading companies conduct in-house training •MPRM provides scholarships to study abroad and English training program in India	<b>【Current Situation】</b> •Higher education institutions provide business administration and accounting classes, but it has not been able to turn out human resources with practical skills •Leading companies conduct in-house training •Many foreigners are appointed management position instead of local people
	<b>【Areas to Improve】</b> •Expansion of the agricultural development model like supply chain management in Josefina farm •Enhancement of agricultural department and faculty of business administration in higher education institutions.	<b>【Areas to Improve】</b> •Development of human resources with knowledge and skills of accounting, finance and marketing •Development of human resources with knowledge and skills of installation and management of hotel and restaurant •Enhancement of tourism department and faculty of business administration in higher education institutions	<b>【Areas to Improve】</b> •Enhancement of in-house training in leading companies •Expansion of scholarship programs by MPRM •Provide appropriate field for highly professional personnel in order to demonstrate their expertise •Enhancement of faculty of business administration and management in higher education institutions	<b>【Areas to Improve】</b> •Provide practical management training at vocational training centers and/or higher education institutions
Entrepreneur	<b>【Needs】</b> Capacity development of farmers (groups) for agro-industry in processing materials and market promotion	<b>【Needs】</b> <b>[Hotel and restaurant]</b> Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in districts or tourism promotion areas. <b>[Souvenir production and sale]</b> Increase of entrepreneurs (groups) who manage souvenir production and sale	<b>【Needs】</b> <b>[Related to the Tasimane Project]</b> Increase of entrepreneurs (groups) who manage and operate hotel, restaurant, souvenir shop in the project area	<b>【Needs】</b> Human resources that can achieve business development to non-construction sector (business diversification)
	<b>【Current Situation】</b> •MCIA and MoA support farmers (groups) to improve their technical skills through funding, exhibition, technical training, agro-processing training etc.) •IADE provides entrepreneurship development training and business consultation	<b>【Current Situation】</b> •MoT financially support to develop tourism facilities and infrastructures through community based tourism program •MCIA support handicraft goods producers in ways of technical training in Indonesia and facilitation for exhibition •IADE provides entrepreneurship development training and business consultation. There has not been a success story. •There is not any related programs in higher education institutions. •Overseas employment program of SEPFOPE	<b>【Current Situation】</b> •NGO provides English language training and PC skill training to the community people living near Tasimane project area.	<b>【Current Situation】</b> •Some companies started other businesses because small construction companies often suffer from funding problems due to unstable orders.
	<b>【Areas to Improve】</b> •Strengthening of support and training for farmers (groups) and producer leaders who are trying to new business in cooperation with IADE, MOA, CCI-TL and other related institutions. •Support for acquiring skills and knowledge of management and business administration for university graduates •Enhancement of business training and consultation of IADE •Expansion of Overseas employment program of SEPFOPE	<b>【Areas to Improve】</b> •Development of human resources with knowledge and skills of souvenir promotion •Development of human resources with knowledge and skills of installation and management of hotel, restaurant and souvenir shop •Enhancement of business training and consultation of IADE •Expansion of Overseas employment program of SEPFOPE	<b>【Areas to Improve】</b> •Promote community based tourism programs of MOT •Development of human resources with knowledge and skills of installation and management of hotel, restaurant and souvenir shop •Enhancement of business training and consultation of IADE •Expansion of Overseas employment program of SEPFOPE •Promote partnership with NGO •Incorporate development of tourism facilities	<b>【Areas to Improve】</b> •Increase opportunities to learn knowledge and skills for business diversification •Enhancement of business training and consultation of IADE •Expansion of Overseas employment program of SEPFOPE (expected job creation and starting a new business after returning home)

The areas to improve human resource development for “skilled worker”, “Management”, and “entrepreneur” will be summarized as below.

#### 1) Skilled worker

The program for developing skilled worker has been implemented relatively large, but also for all priority areas, the more professional training of advanced technology is required. For example, in agricultural area, the programs such as the improvement of productivity and quality are necessary. Also, in tourism area, the English training course should be enhanced.

For these programs, the training courses shall be carried out in the accredited courses of vocational training centers which are supervised by SEPFOPE / INDMO.

#### 2) Management

Currently, the courses for management level are not fulfilled. Higher education institutions like UNTL educate students focusing on specified theory and knowledge, but it is not enough to practice in the business industry.

As it is obviously pointed out the problem of lack of the middle management people, practical management courses are expected to be provided in all priority areas.

#### 3) Entrepreneur

The program for developing entrepreneur, government organizations including MCIE and IADE are implementing the courses for the purpose of protection of industry as well as cultivation of new entrepreneur. However, it has not become successful. Making the model for entrepreneur and the model dissemination are expected.

In addition, it also be worth consideration to implement the support program for starting new business as a way of diversification of construction industry.

## IV Conclusion

### 4.1 Industrial Promotion

#### 4.1.1 Industrial Policy

The SDP shows that Timor-Leste will become a higher low-income country by 2030 and its key industries will be agriculture, tourism and petroleum. Therefore, in agriculture, there are policies to expand the cultivation of crops such as vanilla and to construct irrigation facilities, as well as to rejuvenate coffee trees. Meanwhile, in the tourism industry, there are policies to open tourist centers and improve the convenience for tourists. In the education sector, there are policies to establish a polytechnic specializing in agriculture, tourism, and the petroleum industry. However, a long-term industrial policy has not been created to determine what kind of industry is to be developed, how to develop the industry, and what steps are to be taken by 2030.

MCIE, which has jurisdiction over industrial policy, continues to develop small and micro enterprises and cooperatives, to promote the “one village, one product” movement, to select priority products such as salt, ethanol, handicrafts, and food, and to arrange funds by BNCTL small loans and grants, etc. Also, MCIE is conducting studies on promoting buffalo, peanuts, copra exports, manufacturing, the service industry, and the recycling industry. It is necessary to study how to protect and foster young industries until they grow sufficiently to participate in international competition because after joining ASEAN, the companies of Timor-Leste will be exposed to international competition in the region.

As seen in Malaysia and Thailand, the typical economic development model in Asia is to start by exporting natural resources, then shift to import goods substitutes, labor intensive export industries (manufacturing) by foreign investment, capital-intensive and technology-based industries, and then to the service industry. The export of oil and gas resources has already started in Timor-Leste, and the import substitute industry such as the drinking water business has also started. MCIE adopted a policy to substitute imports gradually. However, according to JETRO’s country wage comparisons, the wage level of Timor-Leste has already reached that of Vietnam and now exceeds the level of Cambodia, Laos, and Myanmar. Also, the labor population of Timor-Leste is only 250,000, and so it will be difficult to promote foreign investment for labor-intensive export industries in Timor-Leste.

For these reasons, a possible alternative for Timor-Leste is to proceed with a capital-intensive, technology-based industry and then the services industry stage by skipping the stage of the labor-intensive export manufacturing industry. Another possible alternative could be a logistics center of dry bulk cargo utilizing the geographical advantage of being located at the crossroads of maritime traffic between Australia, Indonesia, and China. Other alternatives are a brokerage trade port and international financial center business like Singapore, a tax haven business like the Caribbean island countries, the engineering industry, the information technology industry, accommodation for foreigners, and tourism. Also, it is advisable to promote industries which have the advantage of producing locally, such local beer breweries using high-quality water in Timor-Leste, and the confectionery manufacturing business.

More infrastructure facilities such as telecommunications, roads, bridges, ports, and airports need to be improved utilizing the Infrastructure Fund fueled by oil revenues, and related laws and regulations must be complied with.

#### **4.1.2 Expansion of MCIE's scope**

MCIE is conducting the planning and implementation of small and micro enterprises as well as cooperatives, considering the size, resource constraints and past activities. However, considering the constraint of the population and resources, the government should formulate and implement an industrial development scenario utilizing the lessons learned by MIDA in Malaysia and IEAT in Thailand. Considering the current situation of industry with the start of large-scale development projects, signs of industrial diversification are emerging, so a long-term industrial policy should be formulated promptly. This requires the fostering of directors for planning and policy skills for coordinators and planning officers in MCIE. When the Philippines BOI was established in the 1990s, the Thailand BOI helped it to design systems and train officers; accordingly, it is recommended to receive training in IEAT Thailand or Malaysia MIDA. This training would include industrial policy planning, budget and execution. The training will be effective if the officers stay for more than one year and thus experience the cycle of annual budget planning and execution.

#### **4.2 Industrial Human Resource Development**

It is recommended to plan and implement training of industrial human resources, especially middle management, to create the strong middle management that is urgently required by the private sector. The trainees are expected to come from all industrial sectors because they all need middle managers.

In the tourism sector for example, by creating middle management, the hotels in Dili could open international-standard hotels in districts such as Baucau, Suai, Betano, and Viqueque where big projects have started, and in Mauvise in Ainalo district and Oeccussi district.

In the construction industry, such as contractors, consultants, and engineering firms, fostering middle management and engineers will accelerate the replacement of expatriates by Timorese. According to interviews, leading construction, engineering, and consulting companies such as DALAN, ENSUL, PTPP and CARYA would like their assistant managers and engineers to participate in middle management training.

In the manufacturing industry, fostering middle management would enable the replacement of expatriate managers and engineers. Also, it would contribute to reengineering of production processes, improvement of the health, safety and security of factories, and thus boost exports by satisfying the health and safety standards of import countries. GOTA and BEE MORE are interested in middle management training.

After Timor-Leste joins ASEAN, import duties will be gradually reduced and eventually eliminated. Also, employment restrictions in the professions within the country will be phased out. Timor-Leste

would open professional jobs to expatriates. For example, there may be foreign direct investment in medical clinics for foreigners and dentists. There would be an impact on local products which are less competitive, such as rice, maize, oil and gas products. On the other hand, products which are original and have cost advantages, or organic Fairtrade products such as coffee, mineral water, and cement, may gain advantages in the global competition. The middle management such as general managers, department managers, engineers and supervisors created by the training will contribute to economic growth as core human capital.

The training offered by the Japan Center is configured as follows. In industrialized countries, traditionally middle management training, quality assurance training, and health and safety training are carried out by each company in their own premises. However, recently this approach has been abolished due to cost cuts, and companies’ corporate training is now usually outsourced to an external specialized organization or basic training is outsourced to an industrial association. Training materials and manuals have been developed and are used for the business course in the Japan Centre.

Considering availability and lecturers, the candidate agencies for providing the training are UNTL and IADE. At the initial stage, lectures will be conducted by Japanese lecturers with a Timorese assistant lecturer to transfer the technology. IADE could be the first to implement the training because it is a business development service organization currently conducting business training for small and micro enterprises, and has lecturers. IADE and MCIE were the same organization until 2011, and IADE is now located in a building adjacent to MCIE.

For and content of the Japan Centers by JICA in transition countries would be helpful as precedents. Using the experience in Japan Centers, the Study Team propose the implementation of Middle Management Training (4.2.1) and Advanced Technical Training (4.2.2).

■Box: Japan Center Project

1. Overview

The Japan Center for Human Resources Development (“Japan Center”) was founded in 2001 to foster human resource development and develop networking among Japanese enterprises. It is also considered to be a form of "aid with a human face".

Currently, there are ten centers in nine countries in Asia: Laos, Uzbekistan, Vietnam, Mongolia, Kazakhstan, Kirgiz, Cambodia, Ukraine and Myanmar. The centers provide three main programs: a business course, a Japanese course, and a mutual understanding program.

Each center is outlined as follows.

Table1 : Overview of Japan Centers

Country	Timing of opening	Place	Implementing agency	JICA project
Laos	May 2001	Vientiane	National University of Laos	1. Japanese human resource development center project Phase1: 1 <sup>st</sup> Sep. ,2000 to 31 <sup>st</sup> Aug., 2005 Phase2: 1 <sup>st</sup> Sep. ,2005 to 31 <sup>st</sup> Aug., 2010 2. Japan center / business human resource

				development project 1 <sup>st</sup> Sep., 2010 to 31 <sup>st</sup> Aug., 2014
Uzbekistan	August 2001	Tashkend	Ministry of Foreign Economic Relations, Trade and Investment	1. Japanese human resource development center project Phase1: 1 <sup>st</sup> Dec. ,2000 to 30 <sup>th</sup> Nov., 2005 Phase2: 1 <sup>st</sup> Dec. ,2005 to 30 <sup>th</sup> Nov., 2010 2. Japan center / business human resource development project 1 <sup>st</sup> Dec., 2010 to 30 <sup>th</sup> Nov., 2015
Vietnam	Hanoi: March 2002 Ho Chi Minh: May 2002	Hanoi, Ho Chi Minh	Foreign Trade University	1. Japanese human resource development center project Phase1: 1 <sup>st</sup> Sep., 2000 to 31 <sup>st</sup> Aug., 2005 Phase2: 1 <sup>st</sup> Sep., 2005 to 31 <sup>st</sup> Aug., 2010 2. Japan center / business human resource development project 1 <sup>st</sup> Sep., 2010 to 31 <sup>st</sup> Aug., 2014
Mongolia	June 2002	Ulan Bator	National University of Mongolia	1. Japanese human resource development center project Phase1: Jan. 2002 to Jan. 2007 Phase2: Jan. 2007 to Jan. 2012 2. Japan center / business human resource development project 22 <sup>nd</sup> Jan., 2012 to 21 <sup>st</sup> Jan., 2015
Kazakhstan	September 2002	Astana	Kazakh University of Economics	1. Japanese human resource development center project Phase1: 1 <sup>st</sup> Oct., 2000 to 30 <sup>th</sup> Sep., 2005 Phase2: 1 <sup>st</sup> Oct., 2005 to 30 <sup>th</sup> Sep., 2012 2. Japan center / industrial promotion project 1 <sup>st</sup> Oct., 2010 to 30 <sup>th</sup> Sep., 2012 → JICA project was completed.
Kirgiz	May 2004	Bishkek	National University of Kirgiz	1. Japanese human resource development center project Phase1: 1 <sup>st</sup> Apr., 2003 to 31 <sup>st</sup> March, 2008 Phase2: 1 <sup>st</sup> Apr., 2008 to 31 <sup>st</sup> March, 2013 2. Japan center / business human resource development project 1 <sup>st</sup> Apr., 2013 to 31 <sup>st</sup> March,

				2016.
Cambodia	February 2006	Phnum Penh	Royal University of Phnom Penh	1. Japanese human resource development center project Phase1: 1 <sup>st</sup> Apr., 2004 to 31 <sup>st</sup> March, 2009 Phase2: 1 <sup>st</sup> Apr., 2009 to 31 <sup>st</sup> March, 2014 2. Japan center / business human resource development project 1 <sup>st</sup> Apr., 2014 to 31 <sup>st</sup> March, 2019.
Ukraine	May 2006	Kiev	Kiev Institute of Technology	Japanese human resource development center project Phase1: May 2006 to May 2011 → JICA project was completed.
Myanmar	August 2013	Yangon	Chamber of Commerce and Industry	Japanese human resource development center project Aug. 2013 to Aug. 2016

(Source: JICA Home page)

Initially, the Japan Center was set up in Laos in 2001. The most recent office to be established was in Myanmar in 2013. Of the 10 centers, JICA projects have been completed in Kazakhstan and Ukraine, but the centers are continuing their activities in both countries.

Except Kazakhstan, Ukraine and Myanmar, other JICA projects are currently underway in all centers: Laos, Uzbekistan, Vietnam, Mongolia, Kyrgyzstan and Cambodia.

In Uzbekistan, the Ministry of Foreign Economic Relations is organizing the Japan Center and in Myanmar, with the Chamber of Commerce as the implementing agency. In other countries, the national university is responsible for implementation.

## 2. Business course

As noted, the Japan Center provides three main programs: a business course, a Japanese course, and a mutual understanding program.

To promote industrial development in Timor-Leste, it is essential to develop middle management personnel. Accordingly, Table 2 shows the business courses of the Japan Center to consider when conducting a similar business course in Timor-Leste.

Table2 : Business Course

Country	Business course program	Contents	Target
Laos	MBA Program (one and half year)	Theory and Practice of Japanese-style management	people with more than two years working experience
	Practical Business Course (two weeks)	Theory and Practice of Japanese-style management	—
Uzbekistan	Professional Management Program (PMP)	Corporate Management, Business Planning	manager, middle manager, entrepreneur
	Specialized Course (short term)	Practical knowledge of corporate management	manager, middle manager, entrepreneur
	Specialized Course for young business person (short term)	Knowledge and skills for young business person, university students, job seeker etc.	young business person, university students, job seeker



	Open seminar (short term)	Basic understanding of business	students, job seeker
Vietnam	Management(one year)	Management strategy, Financial management, Human resource strategy	manager, government officers, university official
	Intermediate course	Human resource management, Product management	middle manager of human resource management/product management at Vietnam and Japanese-affiliated company
	Short-term course	Product management, Human resource development	manager, middle manager, leader, staff of product management
Mongolia	Regular class (5 months)	Management strategy, Financial management, product management	manager of small and medium-sized enterprise
	Specialized Course (short term)	Problem resolution and decision making, leadership, performance control	manager of big/small and medium-sized enterprise
	Special class (short term)	Product management, quality control, shop management, accounting, support for entrepreneur, business planning	manager of manufacturing, manager of service industry, accountant, entrepreneur
	Business computer (short term)	Basic of commuter and internet, business documentation	Business person, student
	Remote seminar (one day)	Marketing	manager of small and medium-sized enterprise, entrepreneur
	Seminar at local region (one day)	Shop and product control	manager of small and medium-sized enterprise, entrepreneur
	In-house training	Based on the request	big/small and medium-sized enterprise
	Diagnostic model enterprises	Based on the request	big/small and medium-sized enterprise
Kirgiz	Lecture (Long-term)	MBA business training	senior/middle manager, specialist, entrepreneur
	Customized training (Short-term)	Based on the request	Enterprises
	Seminar for the experienced(Short-term)	Product and quality control, Human resource management	senior manager, entrepreneur
	IT course(Short-term)	Basic course	those who are interested in the course
Cambodia	Entrepreneur course (six months)	Business idea, business knowledge	young people who want to be an entrepreneur
	Business management (three months)	Practical business skill, management, organizational management	middle management
	Business training(two months)	Knowledge and skill on specialized course	business person
	Craft business and brand strategy (short term)	Improvement design of craft products	those who are interested in Khmer craft business

	Japanese business (short term)	Japanese business manner	those who want to work at Japanese-affiliated company/Those who want to start business with Japanese-affiliated company
	Service industry (short term)	Business manner for service industry, “Omotenashi”	those who are working in service industry/Those who want to work in service industry
	Business study tour	Business study tour in Vietnam	manager, business person
	Manager course (short term)	Japanese style of management and human resource development, Japanese small and medium-sized enterprise	Manager
	Business seminar (short term)	Most recent business knowledge	those who are interested in the seminar

(Source: JICA Home page)

The general business management course for managers exists in all Japan Centers. On the other hand, there are some characteristic courses in Vietnam and Cambodia. For example, the course for product and quality control is common in Vietnam in the context of developed manufacturing industries. There are also some courses for Japanese-affiliated companies in Vietnam as well as in Cambodia. In addition, there are IT and computer courses in Kyrgyzstan and Mongolia.

Moreover, in Cambodia, there are some distinctive business courses for the craft business, service industry, and “Omotenashi”. In Mongolia, the Japan Center provides in-house training and seminars for enterprises at their request. Thus, the Japan Centers in Cambodia and Mongolia have more diverse contents compared to the other centers.

Generally, these business courses are offered at night for the long-term courses. Most of the courses are charged, while some courses and seminars are free.

### 3. The type of business course

The courses of the Japan Center can be roughly divided into three categories by type of training.

Figure1 : The type of business course



Each Japan Center runs a business course for managers, which is their main course. There are some practical business courses and specialized courses for middle managers, as well as courses for young businesspeople persons and students.

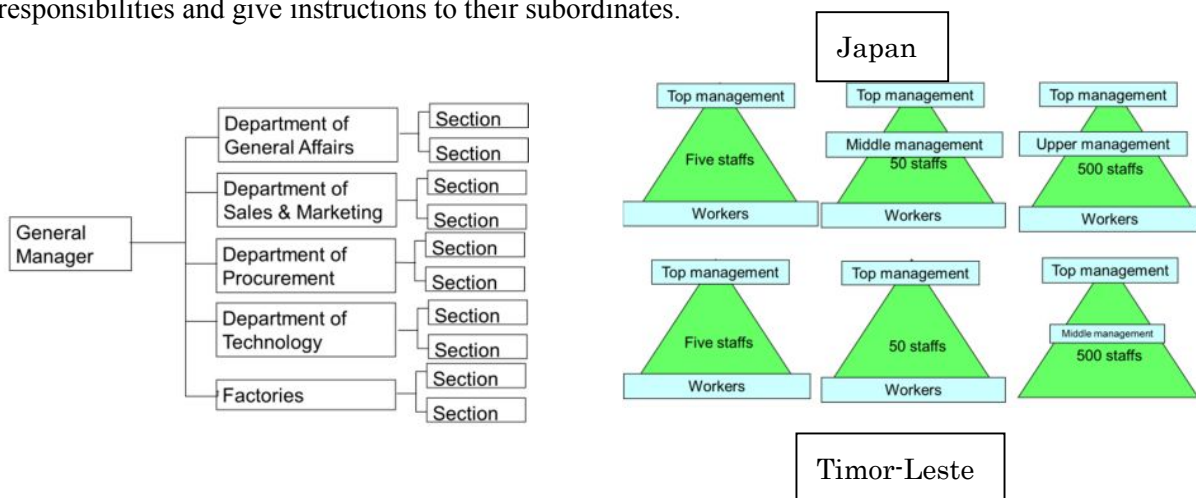
Most Japan Centers also run a course for entrepreneurs, although there are differences among the trainees. For example, in Kyrgyz and Uzbekistan, the courses for managers apply to entrepreneurs. In Cambodia, however, there is a long-term entrepreneur course for young people who want to start their own business.

When setting up the Japan Center in Timor-Leste, it is important to identify the target trainees and training needs in the context of industrial development in Timor-Leste.

The Study has suggested the implementation of a general business course, such as management, quality control, financing, IT, and business English, for businesspeople as well as junior officials those who are working on developing the country. Moreover, high-level training such as for engineering, environmental technology and analytical technology are required to compete with other countries like ASEAN countries in the future.

#### 4.2.1 Middle management training

Middle management are personnel who have both a higher manager and lower subordinates. Middle managers receive orders from their superiors, or make their own decisions within the scope of their responsibilities and give instructions to their subordinates.



Middle management are the heads of departments and sections in the general corporate organization chart above. But, as shown in the figure on the right in Timor-Leste, there is no middle management in reality.

In 2030, the GDP of Timor-Leste will increase by 5.7 times and the labor force will double, and almost all the companies interviewed stressed the necessity of middle management. Thus from both macro and micro points of view, there is high demand for middle management personnel.

Middle management in Japan have traditionally been developed internally by on-the-job training within the lifelong employment system. However, the role of training such as MTP and TWI cannot be overlooked. Considering the structure of companies in Timor-Leste, human resource development by off-the-job training for middle management would be effective. Therefore, it is recommended to

organize business courses utilizing the know-how obtained in the Japan Center projects.

### **Business course: standard course**

The same as the Japan Center projects, to develop the people who will build the nation in the future such as private-sector business personnel and young officials, this course provides the specific know-how of Japanese management which led the postwar economic growth. The classes are held from 17:00 for 2 hours for several months to one year. A certificate will be issued to the graduates.

Course contents (example): business management, quality assurance, finance and accounting, information technology, business English

Based on information obtained from companies, there is high demand for general administration, subordinate management, financial and bookkeeping, and business English.

At first, the practical training course will develop the ability to handle operations at the discretion of the management within their responsibility, even without being given specific instructions from management.

Quality assurance is a bottleneck due to the different level of quality between European and other industrialized countries in foreign trade or services for foreigners. Japan's method of managing quality by organizations is recommended in Timor-Leste.

Also, financial, bookkeeping, the basic sense of handling money, and computer technology training are required for middle management in Timor-Leste. This will also complement the trainees who require the necessary knowledge for layers which are not rated as elementary education.

For the tourism industry, engineering, consultancy, and customer service require basic business English skills, both oral and reading. There was a strong request by CCI-TL and TITL for an intensive business English course. This standard business course is provided at the Japan Center business course, which accepts 20 to 50 trainees per class. Based on the results of the Study, a total of 40 applicants from private companies and Government agencies are expected for one year.

#### **■Box: Japan Center Project “Corporate Management Course”**

The Cambodia-Japan Cooperation Center (CJCC) formulated a curriculum of the “Human Resource Development Course” in the year 2005 to first, conduct practical training for cultivating Cambodian entrepreneurs and managers, second, prepare various subjects to meet local needs and third, pass on the experience and knowhow of Japanese corporate management. The structure of the courses was: “Entrepreneurship Course”, “Corporate Management Course” and “Seminars on objective basis”. The ‘Corporate Management Course’ was for providing business skills to cope with various issues which many managers may have. The course consisted of ‘Marketing’, ‘Human resource management’, ‘financial management’ and others.

The CJCC made a survey: whether graduates from the Corporate Management Course carried out a management improvement with the learning at the Course. Number of graduates from the Course was 228. The survey could get response from 184 (81%). There were 148 graduates (65%) who answered that they improved their operations with learning at the Course. The high rate came

from: systematic course structure, practical lectures which matched the needs of Cambodia environment, recruitment of local lecturers and enhancement of individual guidance of the course participants. Examples of the management improvement were (the said report):

- Improved sales performance by thorough marketing strategy
- Understood current market situations by conducting strategic market research
- Adopted 5S and Kaizen
- Motivated sales staff
- Reformulated management strategy
- Started to consider management improvement by using the SWOT analysis

**NGO worker**(Interview: June, 2008)

Ms. Bota Cheng Li works for NGO (PATH), having a headquarter at Washington in the US, as a Senior Administrative Officer in Phnom Penn office. She took a full course of the Corporate Management Course. She was interested in the Human resource management and Financial management. Since she was a specialist of pharmacy, she did not have any structured knowledge on administration. This was her motivation to study at the CJCC. After learning at the CJCC course, the knowledge helped her in supervising the administrative job at her work place. Now the office was kept clean and good environment. She was interested in taking other intensive courses that the HRD course provided.

**Real estate consulting company** (Interview: June, 2008)

Mr. Sophal Siev took the Corporate Management course in 2005. He was working for a pharmacy, and mainly in charge of marketing. Also he had a working experience in the accounting department at another company. He learnt every process of his work through the on-the-job training. The knowledge that he learnt at the CJCC course helped him to understand the process or work flow by the structured idea.

The knowledge that he adopted in his current work was preparing financial statement and management of cash flow. This was very important for him to manage his company. He also held a seminar to talk about his experiences coping with management issues.

#### **4.2.2 Advanced technical training course (training level differs from the existing course)**

In addition to the standard business course for middle management, there is an urgent need for advanced technical training. These courses are same as short-term course for specialists in Japan Center Business Course project.

#### **(1) Engineer Training**

Engineer training is an urgent issue because large-scale projects have started. The target trainees are assistant engineers and assistant managers of construction companies. The scope of training is basic project management skills such as project management, engineering management, risk management, contract management, material control, documents control, budget management, health and safety, and

environmental management.

The target trainees are assistant engineers and assistant managers in the 7,400 construction companies in Timor-Leste. By receiving the training, assistants are expected to be promoted to project manager or engineer. A requirement for trainees is an engineering bachelor degree or diploma, and more than five years of work experience in a construction company. The training hours are 17:00 to 19:00, and the duration is 6 months. Similar training was conducted in Laos, Cambodia, Vietnam, Malaysia, Thailand and Myanmar; each course took 40 trainees at one time. As a result of discussions with construction and engineering companies, 20 trainees are expected in one class from construction companies and engineering firms.

## **(2) Environmental Technology Training**

Because large-scale projects have started, environmental technology training is recommended. The target trainees are environment engineers of construction companies and consultants as well as government officers in the environment department of MCIE. The scope of training is environmental guidelines and environmental impact assessments for port, airport, refinery, and cement manufacturing facilities.

The environmental guidelines of the World Bank or JICA are used as texts, to learn about the methods of conducting social and technological environment impact assessments for specific facilities. Also, the technical principles of environmental protection facilities for air pollution, water pollution, soil pollution, noise, equipment and basic structure will be taught.

This training allows environmental engineers of construction companies and consultants to estimate the impacts of facilities and select the most appropriate environmental protection facilities. Technical officials and assistants of the MCIE Environment Bureau will thus learn how to evaluate environmental protection facilities and equipment. Based on discussions, about 20 trainees in one class are expected from relevant ministries and agencies as well as from construction and engineering companies.

## **(3) Analysis technology training**

Since import substitute production has begun, exports of canned food will be implemented soon, so analysis technology training is recommended for the officers and assistants of the MCIE Laboratory Center. The training will cover food testing and analysis of nutritional ingredients, additives, microbes, pesticides, heavy metals, toxic substances, residual solvents, mineral water ingredients, technologies, and analysis exam practice training.

This training is expected to boost exports by training officials who can analyze and issue certificates for export products that meet the quality standards of the importing country.

In this training, practical training is included in addition to the theory. For the practical training, analyzing facilities such as analytical instruments and agents are needed as well as laboratory facilities with telecommunications, power, sewage facilities, and waste processing facilities. One candidate

place for this practical training is the MCIE National Laboratory in Timor. Approximately 15 trainees are expected in one class, including technical staff from MCIE, MOH, MAF, MOPW and Timor-Gap.

# Appendix

- Appendix1: Presentation at the seminar on 7<sup>th</sup> May, 2014  
“Industrial Development of the Republic of Timor-Leste  
Role of MCIE in Industrial Human Resource Development”  
“Lesson Learned in Malaysia”
- Appendix2: Schedule of the study



# Industrial Development of The Republic of Timor-Leste

## Role of MCIE in Industrial Human Resource Development

7 May 2014  
International Development Center of Japan Inc.  
KRI International Corp



1

## Contents

- Present Role of MCIE
- Future of Industry and Labor Force
- Current situation of Industry and Labor Force
- Current Human Resource Development



Suggestion

- Enhancement of Management Training

2

## Background of the Study

[Policy] Strategic Development Plan (SDP) 2011-2030

[Population and Labor Force]

- It will double in 2039.
- 15,000 to 16,000 people are expected to enter the labor market every year

[Industrial Development]

Diversification of industries by development of new industries is necessary

[Human Resource Development]

Government started the industrial human resource development programs through SEPFOPE, IADE, TVET and related organizations

3

## Objective

For successful implementation of the SDP, the Study provides **what kind of human resource development and enterprise development are required** through analysis on policies and current status of enterprise development and industrial human resource development.

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## Expected Outcomes

1. The actual status and problems of industrial enhancement and human resource development in Timor-Leste is clarified.
2. The study results are utilized by RDTL for more effective formulation and implementation of public investment and human resource development plan.

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## Study Method

- Period : February 2014 – May 2014
- Method: Interview with government and non- government organizations, enterprises, education institutions, training centers, farmers groups, producers, NGOs etc.  
Group discussion, Document research and Workshop
- Input : JICA study team  
Mr. Hiroshi Watanabe, Team Leader /Industry Development  
Mr. Yuichi Baba, Sub Team Leader/Logistics  
Mr. Takuya Okada, Industrial human resource development  
Mr. Kuniaki Kato, SME promotion  
Ms. Izumi Ogawa, Training (Evaluation)  
Ms. Michiko Tsurumine, Training (Planning)

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## Focus of the Study

- This study focuses on the development of key industry specified in SDP, Agriculture, Tourism, Petroleum and in addition to key industry, Construction industry to build infrastructures to support key industry.
- Industrial development requires keys elements such as Finance, Human Resources and Technology. This study focuses on Human Resources Development Issue in particular based on the previous studies such as “Study on Business Opportunities development of Timor-Leste 2013”, “Study on Cooperation for Timor-Leste’s accession to ASEAN 2013” and “Pragmatic Framework Study of Labor Force Planning 2014”.

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## Industrial Development in Timor-Leste

- Timor-Leste will become the upper middle income country in 2030 having modern diversified economy with high quality infrastructure including roads, power, ports, airports, and telecommunications. The key industries are agriculture, tourism and petroleum industries.

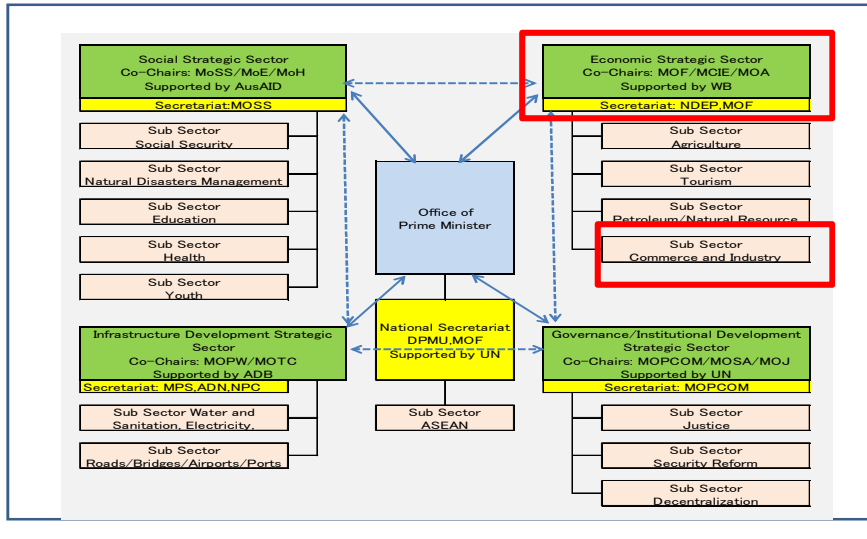
- Strategic Development Plan 2030



**Industrial Development is the key to become the upper middle income country**

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# SDP Implementation Structure and position of MCIE



## MCIE's role in Industrial Development

- MCIE is the central organization of the government, responsible for **the conception, execution, coordination and the evaluation of the policies** for the areas of commerce, economic activities, industries and the cooperative sector as well as the environment
- The purpose of MICE is the development of the social well-being, the environment and the economy of the nation, promoted via productive areas of commerce and industry. .

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## MICE's Industrial Policy (1)

- Promotion and support for small industries
  - Identification of potential industries
  - Providing machines and equipment
  - Diversify varieties of products
  - Quality management for metallurgical industry
- **Production of goods imports substitutes**
  - Develop production of agro-Industry
  - Public subsidies support for industrial group

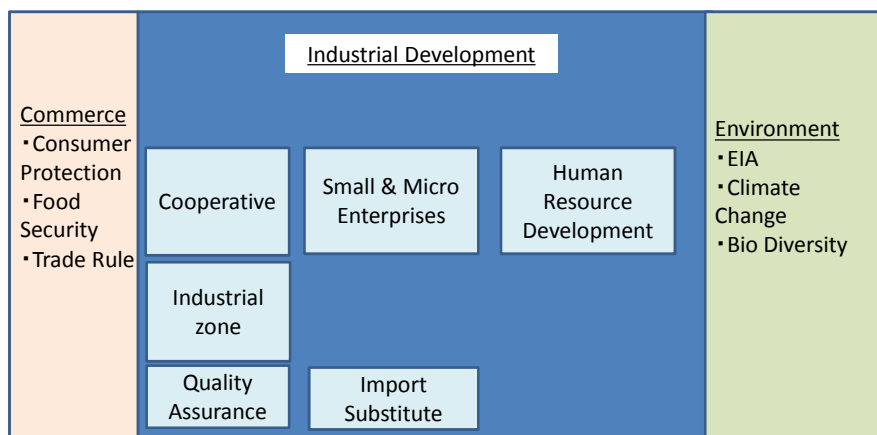
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## MICE's Industrial Policy (2)

- **Industrial Zone Creation**
- Strengthening institutional capacity
  - Human Resource Training of Officials
  - Management training of industrial groups
  - Development of human resources Cooperative, Micro and Small Business
- Market expansion
  - Identifying potential **export products**
  - Promotion of **Foreign Investment**

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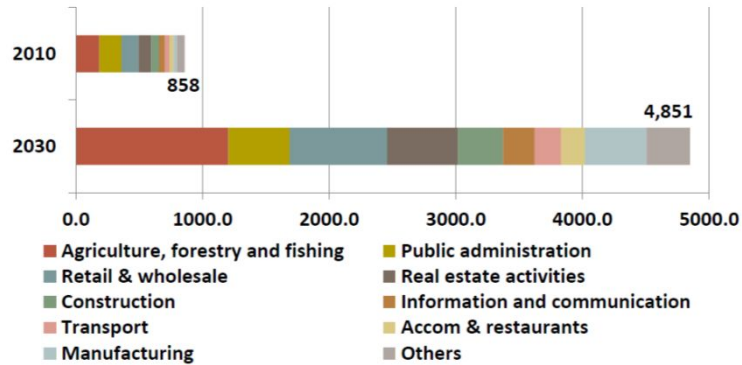
## Current scope of MCIE



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## Future of Industry (GDP in 2030)

- According to the SDP, GDP will grow 5.7 Times within 20 years. Manufacturing industry grows significantly.



Source: Ministry of Finance

Million USD

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## Future of Industry (Labor force in 2030)

- Agriculture, Wholesale & retail trade, Construction industries remain as the major employer.
- Manufacturing may generate large employees toward 2030, requiring their competitiveness.

INDUSTRY	2010	2030
AGRICULTURE, FORESTRY, FISHING	127,000	137,000
MINING & QUARRYING	1,000	1,000
MANUFACTURING	8,000	67,000
CONSTRUCTION	13,000	36,000
WHOLESALE & RETAIL TRADE	44,000	58,000
TRANSPORTATION & STORAGE	8,000	14,000
ACCOMODATION & FOOD	8,000	16,000
PUBLIC ADMINISTRATION	5,000	8,000
OTHERS	34,000	155,000
<b>TOTAL</b>	<b>248,000</b>	<b>492,000</b>

Source : Data ollection survey on pragmatic framework study of labor force plan

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## Current Situation of Labor Force

- Private enterprises claims they are short of quality manager and technician, as certain portion has been occupied by expatriates.

OCCUPATION	EMPLOYED
MANAGER	7,000
PROFESSIONAL	22,000
TECHNICIAN	19,000
CLERICAL	2,000
SERVICE & SALES	19,000
SKILLED AGR. WORKER	39,000
CRAFT & RELATED TRADE	14,000
MACHINE OPERATOR	8,000
ELEMENTARY OCCUPATION	118,000
TOTAL	248,000

Source : Labor Force Survey 2010

Percentage of Expatriates in Laborforce created by Infrastructure fund 2014

Occupation	Expatriates
Manager/Engineer	78%
Skilled Worker	58%
Un-Skilled Worker	12%

Source : Data collection survey on pragmatic framework study of labor force plan

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## Enterprise Registered

- Construction and Wholesale & Retail Trade are the largest group. Accommodation & Food, Transportation & Storage follow. The number of Manufacturing enterprise is 508. The number should be more than 4,000 in 2030.

Industry	Q'ty
Agriculture, Fishing, Forestry	32
Mining & Quarrying	60
Manufacturing	508
Construction	7,367
Wholesale & Retail Trade	6,672
Transportation & Storage	139
Accomodation & Food	641
Others	916
<b>Total</b>	<b>16,335</b>

Source: MCIE

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## List of Enterprises interviewed

Sector	Enterprises
Agriculture	Cooperative Café Timor, PARCIC, ASZ, Mada Heliq, Saiseiko
Tourism	Timor Plaza, AETTL, Guidepost, Hotel Timor, Compass, ATNAS, Air Timor
Petroleum	Timor Gap, Timor Gas, ETO
Construction	PTPP, Ensul, Carya Timor, EDS
Trade and Retail	Kmanek, Pateo, KONNEKT, Toyota, Tiger Fuel, Kor Timor
Manufacturing	Be Mor, Gota, Timor Block Industry, Bee Haus, Moris Foun
Finance and Insurance	BNU, BNCTL, NITL
Telecommunication	Telemor, Timor Telekom
Others	Maubere Security, Grafica Nacional, SDV, Halsion

39 Enterprises

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## The situation of the enterprises

Size	The number of the employees are from 10 to 3,000.
Growth	Generally, the enterprises are growing.
Diversification	Several companies are diversified from their original businesses.
Problems	The enterprises are feeling problems both in the outside environments (politics, economy, society and technology) and the enterprises' resources (materials, human and monetary). Among the problems, the problem of human resources are mentioned by 100% of the enterprises.

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## Current Situation of Industry (1)

- Large projects are in progress
  - Supply Base, Baucau Cement, Tibar Port, Roads
  - ⇒ Increase demand for Construction and Hotel & Restaurant (Tourism)



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## Current Situation of Industry (2)

- Diversification of industry has started
  - Import substitution ; ex. Mineral Water, Canned Food
  - ⇒ Food and Beverages (including agro-industry)



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## Current Situation of Industry (3)

- Going to face tough international competition
  - ASEAN Membership
  - ⇒ It is a good opportunity to grow as well.



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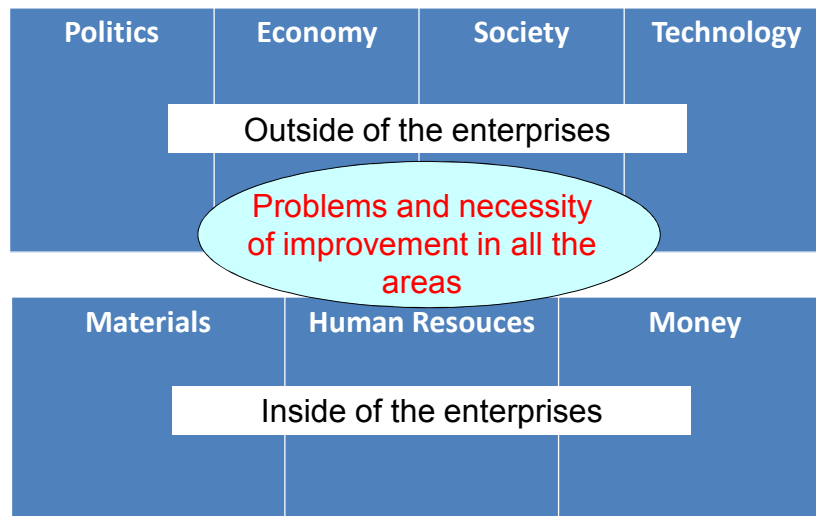
## Current Situation of Industry (4)

Transportation Industry has prospective future of transship business because it has the advantage because of the location of Timor-Leste at the center of sea lane



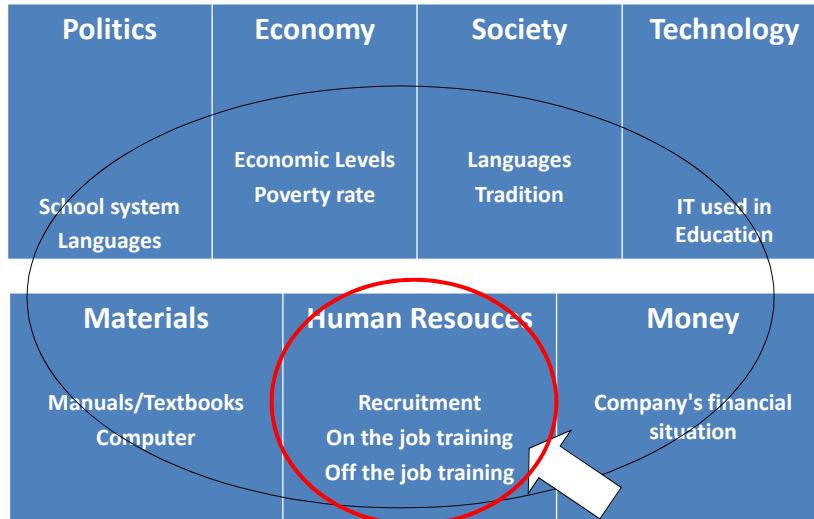
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## The environment around the enterprises in Timor-Leste



36

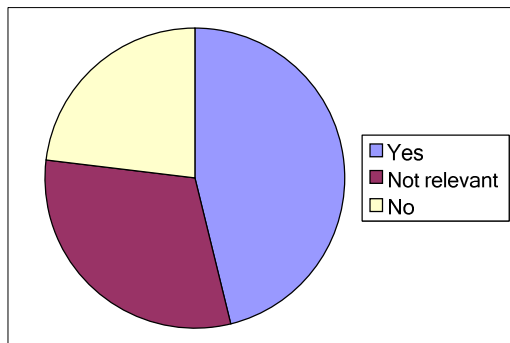
## The human resource problems



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## Result of the interview (1)

Do the Timorese employees need more basic education?



### Yes

- Even college graduate cannot calculate well. (Finance)
- Factory workers cannot count numbers. (Manufacturing)

### Not relevant

- Our company does not need so educated people. (Tourism)

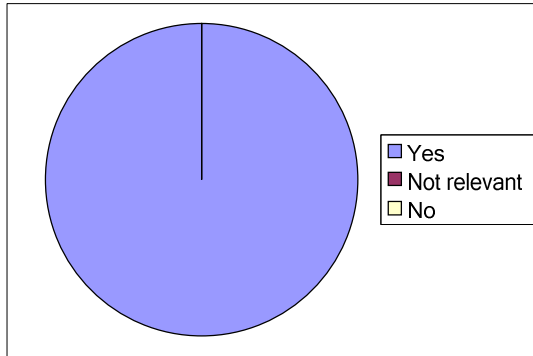
### No

- Our staffs are well educated. (Petroleum)
- Our company educates necessary knowledges. (Trade and Retail)

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## Result of the interview (2)

Do the Timorese middle managers need more management skills?



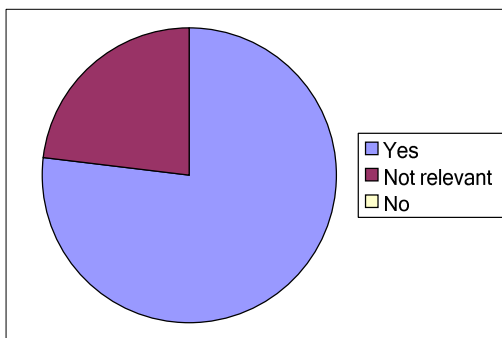
### Yes

- Problem solving skills are necessary. Also, the spirit of independence is necessary. (Trade & Retail)
- To inspire Timorese employees, middle managers need more human skills. (Tourism)
- Very few middle managers have accounting/bookkeeping knowledge. It is ridiculous that the top management need to count the wages twice a month. (Manufacturing)

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## Result of the interview (3)

Does your company want to replace expatriate staffs to Timorese?



### Yes

- The difference of cost is big. (Trade & Retail)
- Contribution to the employment is our mission. (Trade & Retail)
- Foreign managers cannot communicate with the Timorese staffs. (Tourism)

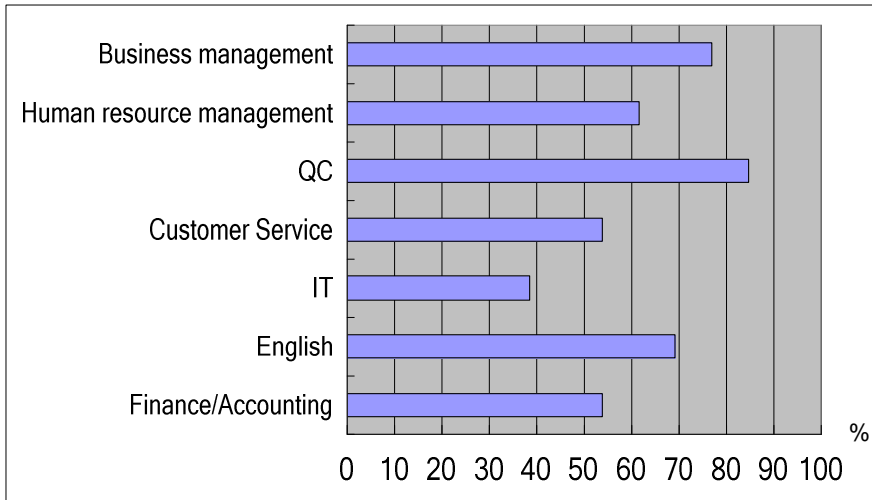
### Not relevant

- We do not have foreign employees. (Trade & Retail)

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## Result of the interview (4)

Which skills/knowledges are essential to middle managers?



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## Case 1 --company with 40 staffs

Our enterprise employs about 40 staffs.  
My father and I are expatriates and all others are Timorese.  
We have been lived here more than ten years, so we can communicate with staffs.

Our business is diversified, and so there are "managers" in each section.



By the theory of span of control, there are seven managers and each manager "manages" staffs.

Actually, the "managers" do not have management skills. They do not know how to order to staffs, how to solve problems, and how to manage the daily works. So, I need to decide everything, and after all, I have no time to teach managers how to manage.

## Case 2--company with 120 staffs(1)

My company has been in the retail business in Timor-Leste for more than 10 years.

The most important thing in business management is the mutual trust between management and employees.

I often hear that the Timorese people do not have basic knowledge and work ethics. However, I have different opinion.

I think that Timorese people have the most important thing for business.

Those are honesty and humbleness.



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## Case 2--company with 120 staffs(2)

In 2006, we continued to operate our shop in the tough situation. The economy in Dili was paralyzed, and so the people did not have money on hand.

After the peace comes, all the money was paid. Since then, I have trusted in the honesty of Timorese.

People asked us to "sell" the food and other products. So we "sold" to many people, asking them to write down their names.

To train staffs, patience is the most important. Actually, we need to teach again and again.

If the employees trust the management, they are eager to learn. The long experienced staffs of my company now have very good knowledge and skills.





## Group Interview

- The Study Team implemented a Group Interview with 21 students of UNTL engineering faculty

Sex	Qty
Male	19
Female	2
Total	21

Dept	Qty
Civil	5
Electrical	7
Geology	5
Information	1
Mechanics	3
Total	21

District	Qty
Ainaro	2
Baucau	5
Bobonaro	1
Dili	3
Lautim	1
Liqusha	1
Manatuto	1
Maufehe	1
Oecussi	1
Viqueque	5
Total	21

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## What kind of occupation UNTL student want to be?

- As per the result of group interview, most of the student want to be an engineer or specialist of his/hers specialty.

Job	Number of student
Engineer, Specialist	18
Entrepreneur	2
Others (Police Officer)	1
Total	21

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## The reason to select the occupation

- The largest group answered their reason of selection of their occupation is to contribute to the country, community, economy.

Reason of wannabe	Personnel
To contribute the country, community, economy development	8
To construct infrastructure	5
To extract natural resources	5
Because it is my study field	2
To produce machine	1
Total	21

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## What is their concern?

- It is difficult to find the job especially at the foreign companies because those companies prefer to employ overseas graduates. The reason could be the overseas graduates have more quality than UNTL graduates. It is the concern for the UNTL future graduates that there will be more expatriates than Timorese especially in the area of Engineering.
- 80% of the student interviewed prefer to proceed to the master course in abroad because there is no Engineering master course in Timor-Leste.

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## Current Situation of Human Resource Development

- For the Timorese to get job, Line Ministries, vocational training centers, higher educational institutions, and other organizations are conducting several programs for human resource development for skilled worker, management and entrepreneur.
- This effort may result to replace expatriates in the future.

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## Human Resource Development Scheme

	Agriculture	Tourism	Petroleum	Construction
Skilled worker	productivity and quality [MAF, TVET, USAID]	customer service [MOT, TVET]	PC and English skill [TVET, NGO]	technical skills [TVET, ADB]
Management	supply chain management [MAF, higher educational institution]	business management [higher educational institution]	International business [MPRM, in-house training at leading companies]	management skills [higher educational institution, IADE]
Entrepreneur	agro-industry [MCIE, MAF, IADE]	increase of entrepreneur [MCIE, MOT, IADE]	increase of entrepreneur [NGO]	business diversification [CCI-TL, TITL, IADE]

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## Training for Skilled Workers



■ National Centre for Employment and Professional Training (CNEFP)



■ SENAI

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## Training for Management



■ Faculty of Economics and Management, UNTL



■ Dili Institute of Technology (DIT)



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## Training for Entrepreneur



■ Mada Heliq (coconut oil producer)[MCIE] ■ Food processing (cassava)[MCIE]



■ IADE



■ Training Materials (IADE)

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## Training Course for Management

- Middle management and supervisor courses are few.
- Private enterprises mentioned the necessity of training for middle and upper management to improve their competitiveness in global business.

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## Middle Management Training

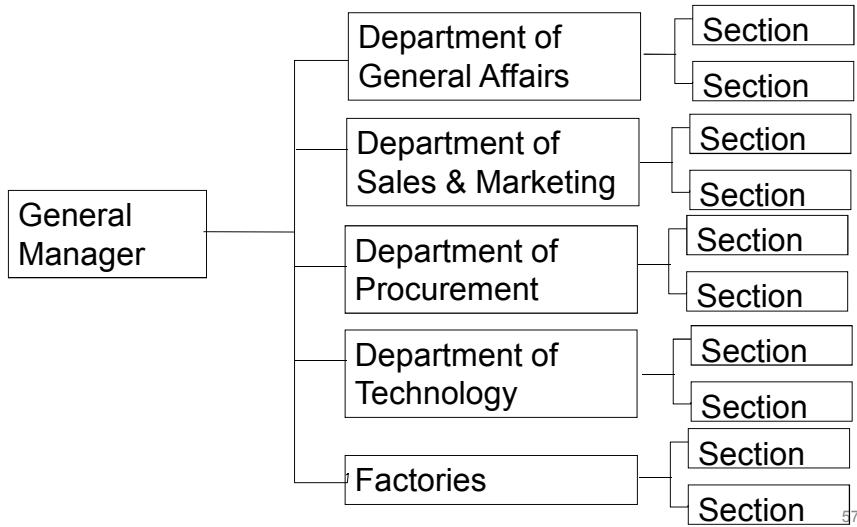
- Training Courses for middle and upper management level is advised.



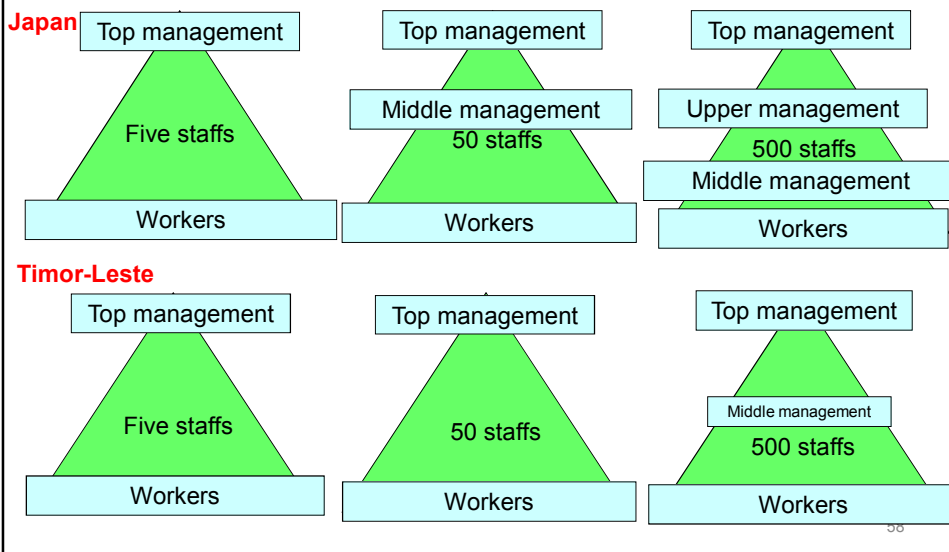
- It is the common needs for business management skill among industries
- Capacity building of public administrator shall be accelerated towards the globalization

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## Sample organization of an enterprise



## The structure of corporations



## The roles of middle managers

Administration of the job and staffs.

-To accomplish the purpose of the organization through the work by the subordinates.

-To transmit and explain the policy and strategy of the organization to the subordinates and to inspire subordinates to accomplish the work.

-To solve the problems that occur in the daily business by thinking themselves within their scope of work.

-To transmit and explain what is happening to the top management.

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## Theory of the span of control

In average, one supervisor can administrate **five to seven** subordinates.

The number can be different depending on the missions of the jobs and the experience of the subordinates.

If a simple and routine job is done by experienced workers, the supervisor can administrate dozens of workers.

If a complicated and new job is done by unexperienced workers, the supervisor can administrate very few workers.

**⇒An enterprise needs one supervisor/manager by around five to seven employees.**

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## The methods to acquire good middle managers

1. Recruit and hire good middle managers from the market (other companies / abroad).
2. Training and capacitating in the company by human resource development program for the managers.
  - On the Job Training (OJT)
  - Off the Job Training (Off-JT)
  - Self development

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## List of Subjects (*tentative*) on Training Courses for Middle Management Level (1)

Category	Subject	Target
<b>General Theme</b> <i>Several months to one year</i>	Business Management	For middle-upper level management
	Quality Assurances	For all industry, cooperative Government officials
	Accounting/ Financial Management	For middle management, Accounting staff
	Information Technology	For all industry, cooperative Government officials
	Business English	For all industry, cooperative , Government officials
<b>Specific Theme</b> <i>Several days to weeks</i>	Project Management	For Construction and IT
	Trade and Logistics	For trade and logistic
	5S/ KAIZEN	For manufacturing industry, Government officials
	Hospitality/ SOP	For service industry
	Business Development/ Marketing Promotion	For middle-upper level management

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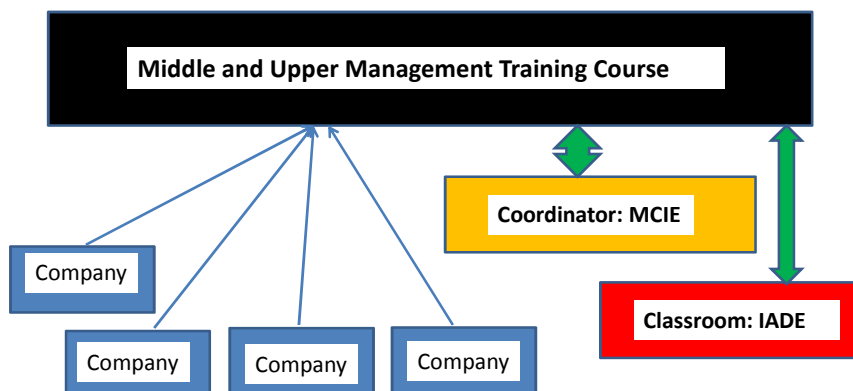
## List of Subjects (*tentative*) on Training Courses for Middle Management Level (2)

Category	Subject	Target
<b>Specific Theme</b> <i>Several days to weeks</i>	Environment Impact Assessment	For All Industry and Cooperatives
	Basic Environment Technology	For All Industry and Cooperatives
	Climate Change	For All Industry and Governmental Official
	Laboratory Analysis Technology	For Food Industry and Governmental Official

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## Relevant Authorities for the Middle Management Training

- The ideal organization to implement Middle Management Training is as follows;



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## For Information; Training in Laos PDR



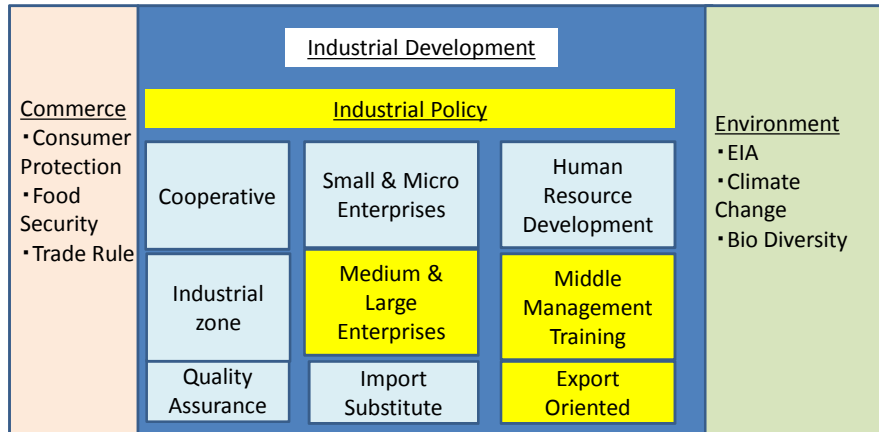
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## Conclusion

- **The role of MCIE in the industrial development ought to be expanded** as per the development of industries from support to the small and micro enterprise to medium and large enterprises in future.
- To achieve the industrial development, creation and updating of **industrial policy is the most important issue.**

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## Expansion of scope of MCIE



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## Thank You!



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## Lesson Learned in Malaysia

### Development Issues and Strategies

Source: 1<sup>st</sup> November 2013 handout of the meeting with International Development Center of Japan by Malaysia Industrial Development Authority

1

## Why Malaysia ?

- Industrial Development of Malaysia was the typical Asian Model
- Strong initiative to develop industry strategically
- The similarity of Malaysia with Timor-Leste
  - Given natural resources; Oil and Gas
  - Island and peninsula country; lacking of flat land adequate to cultivate for big-scale agriculture
  - Small population comparing with neighbors

2

## 1960's (U\$300⇒380) \*

GNI per Capita Source: World Bank

### Development Issues

- Unemployment
- Dependency of export commodities (rubber, tin)
- Narrow economic base

### Strategies

- Promotion of Import Substitution Industries (Food, beverages, building materials, printing and publishing industries, Consumer products)
- Tax Incentive
- Provision of Infrastructure (industrial estates, power and telecommunications facilities)
- Establishment of MIDA (1967)

3

## 1970's (U\$400⇒1,490)

### Development Issues

- Unemployment is still high
- Constrained by small domestic market
- Lack of capital, technologies and managerial expertise

### Strategies

- Manufacturing considered as strategic sector
- Efforts to promote industrial development intensified
- Promotion of labor-intensive industries
- Push for foreign direct investment
  - Attractive tax incentives
  - Establishment of FTZ
  - 100% foreign equity owner allowed for 80% export industry

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## 1980's (U\$1,820⇒2,240)

### Development Issues

- Global recession (1985-1987) ⇒ Increase in unemployment
- Narrow manufacturing base
- Lack of processing local resources (rubber, palm oil, timber)

### Strategies

- Widen and deepen industrial base
  - Export and resource based industries (Petroleum, Gas)
  - Develop selective heavy industries (car, steel, Cement)
- Introduction of Promotion of Investment Act
- Launching of First Industrial Master Plan

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## 1990's(U\$2,370⇒3,350)

### Development Issues

- No longer competitive in labor intensive industries
- Labor shortages, both skilled and unskilled
- Lack of industry linkage

### Strategies

- Promotion of industries
  - High technology , Capital intensive industries, Services based industries, R & D activities
- Accelerate the development of indigenous technology
- Development of supporting industries
- Human resource development
- Development of SMI (Establishment of SME Corp Malaysia)

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2000's (U\$3,420 ⇒ 7,560)\*

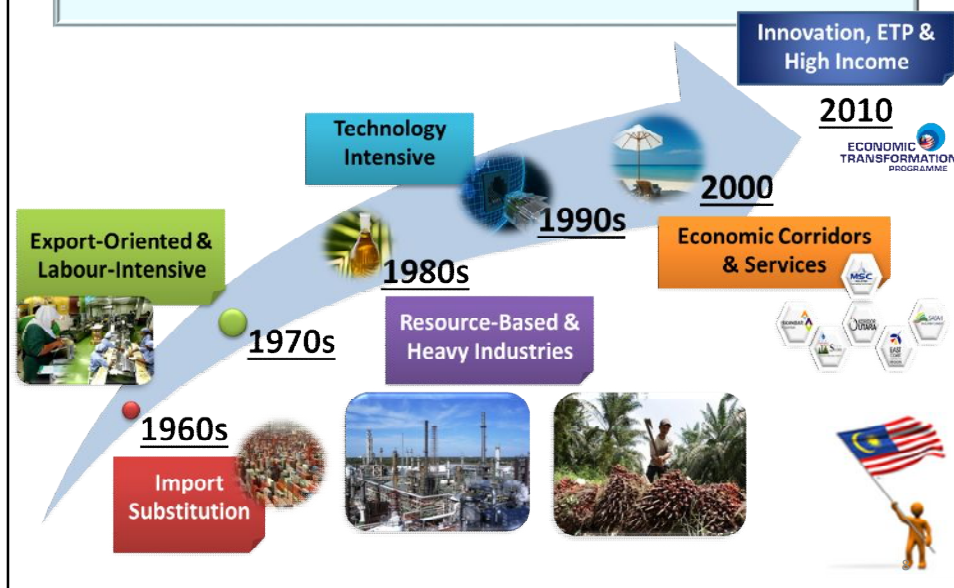
### Strategies

- Promotion of Service Sector
- Economic Corridors
- Economic Transformation Program
- National Key Economic Areas

Note: \* 2010 to 2013; U\$8,090 ⇒ 10,687

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## Malaysia's Economic Development Journey



## GDP by industry origin

Sector	GDP Contribution (%)			
	1970	1990	2000	2010
Agriculture	33.6	19.3	8.8	7.3
Mining	7.2	9.8	6.7	7.0
Construction	3.8	3.4	3.4	3.3
Manufacturing	12.8	26.5	32.6	27.6
Services	42.6	42.1	53.0	57.7

Source : Economic Reports/Bank Negara Annual Report, Malaysia 2012/2013

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## Authorities Related for Industrial Development

Ministries	Departments and Authorities
Ministry of International Trade and Industry	Department of Occupational Safety and Health
Ministry of Finance	Department of Environment
Ministry of Health	Immigration Department
Ministry of Tourism	Labor Department
Ministry of Human Resource	Royal Malaysians Customs
Ministry of Higher Education	Telekom Malaysia Berhad
	Tenaga Nasional Berhad
	Construction Industry Development Board of Malaysia

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## MITI's agencies



## Lessons Learned

- It is essential to establish industrial policy
  - Industrial Policies (1960')
  - New Economic Policy (1971-1990)
  - Industrial Master Plan (1986-1995)
- Coordination among Ministries is the key issue. - MIDA (One-Stop Center) was established in 1967.
- Appropriate strategies should be planned up to the development issues time by time.
- There was adequate Financial Support.
- Human Resource was Development

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## Comparison with Timor-Leste

Element	Malaysia	Timor-Leste
Economic Policy	New Economic Policy Vision 2020	SDP
Industrial Policy	Industrial Policy Industrial Master Plan	In pipeline
Coordination /One stop center	Malaysia Invest Development Authority	SERVE, TITL
Finance	Malaysia Industrial Development Finance	BNCTL, Subsidy by Ministries (Development Bank, Investment Company )
Human Resource	UNIMAS Mara Technical Institute JMTI	UNTL DIT, IOB, Don Bosco,

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## Comparison with Timor-Leste

- Import Subsidies Industry            1960'
- Export Oriented:                        1970'
- Oil and Gas:                              1980'
- Liberalization :                         1990'
- GNI per Capita:                        2000'

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## Appendix2 : Schedule of the first site visit

Date	H.Watanabe <i>Team Leader/ Industrial Promotion</i>	Y.Baba <i>Assistant Team Leader/ Logistics</i>	K.Kato <i>SME Promotion</i>	T.Okada <i>Industrial HRD</i>	M.Tsurumine <i>Training (design)</i>	I.Ogawa <i>Training (evaluation)</i>
21 2 Fri	ETD Tokyo					
22 2 Sat	ETA Dili					
23 2 Sun						
24 2 Mon		ETD Tokyo	ETD Nagoya	ETD Tokyo	ETD Tokyo	ETD Jakarta
25 2 Tue		ETA Dili Meeting with MCIE	ETA Dili Meeting with MCIE	ETA Dili Meeting with MCIE	ETA Dili Meeting with MCIE	ETA Dili Meeting with MCIE
26 2 Wed	AM JICA Office PM NGO/SOLS visit	AM JICA Office PM NGO/SOLS visit	AM JICA Office PM NGO/SOLS visit	AM JICA Office PM NGO/SOLS visit	AM JICA Office PM NGO/SOLS visit	AM JICA Office PM NGO/SOLS visit
27 2 Thu	AM LFP Seminar PM MCIE, CCT hearing	AM LFP Seminar PM MCIE, CCT hearing	AM LFP Seminar PM MCIE, CCT hearing	AM LFP Seminar PM MCIE, CCT hearing	AM LFP Seminar PM MCIE, CCT hearing	AM LFP Seminar PM MCIE, CCT hearing
28 2 Fri	AM GOTA hearing PM Meeting with Japanese Embassy	AM GOTA hearing PM Meeting with Japanese Embassy	AM GOTA hearing PM Meeting with Japanese Embassy	AM GOTA hearing PM Meeting with Japanese Embassy, IADE hearing	AM GOTA hearing PM Meeting with Japanese Embassy, IADE hearing	AM GOTA hearing PM Meeting with Japanese Embassy, IADE hearing
1 3 Sat	CCT wet plant in Maubisse	CCT wet plant in Maubisse	CCT wet plant in Maubisse	CCT wet plant in Maubisse	CCT wet plant in Maubisse	CCT wet plant in Maubisse
2 3 Sun						
3 3 Mon	AM Canning factory hearing PM ENSUL, BEMOR hearing	AM CCI hearing PM ENSUL, BEMOR hearing	AM Canning factory hearing PM ENSUL, BEMOR hearing	AM CCI, KOICA hearing PM MCIE hearing	AM KOICA hearing PM MCIE hearing	AM CCI, KOICA hearing PM MCIE hearing
4 3 Tue	AM Timor GAP PM MCIE hearing	AM Timor GAP PM MCIE hearing	AM Timor GAP PM MCIE hearing	AM National Training Center (CNEFP) hearing PM ETDA hearing	AM National Training Center (CNEFP) hearing PM ETDA hearing	AM National Training Center (CNEFP) hearing PM ETDA hearing
5 3 Wed	AM APOTL hearing PM UNTL, One Dollar Beach	AM APOTL hearing PM UNTL, One Dollar Beach	AM APOTL hearing PM UNTL, One Dollar Beach	AM ILO hearing PM UNTL, One Dollar Beach	AM ILO hearing PM UNTL, One Dollar Beach	AM ILO hearing PM UNTL, One Dollar Beach
6 3 Thu	AM ANATL hearing PM Timor Gas, SDV hearing	AM ANATL hearing PM Timor Gas, SDV hearing	AM ANATL hearing PM Timor Gas, SDV hearing	AM ADB, SEPFPOE hearing	AM ADB, SEPFPOE hearing	AM ADB, SEPFPOE hearing
7 3 Fri	AM ETO PM MCIE	AM ETO PM MCIE	AM ETO PM MCIE	AM Ministry of Petroleum PM MICE	AM Ministry of Petroleum PM ETDA Hospitality Center	AM Ministry of Petroleum PM ETDA Hospitality Center
8 3 Sat	PM Saiseiko hearing	PM Saiseiko hearing	PM Saiseiko hearing	Compilation of collected data	Compilation of collected data	Compilation of collected data
9 3 Sun						
10 3 Mon	AM JICA Office PM MCIE Legal Office hearing, JICA meeting	AM JICA Office PM Saiseiko hearing, JICA meeting	AM JICA Office PM Saiseiko hearing, JICA meeting	AM MCIE, MCIE Legal Office PM CCITL, JICA meeting	AM JICA Office PM MCIE Legal Office hearing, JICA meeting	AM MCIE, MCIE Legal Office PM JICA meeting
11 3 Tue	AM NITL PM MoFAgriculture/Fishery, UNAPE hearing	AM NITL PM MoFAgriculture/Fishery, UNAPE hearing	AM NITL PM MoFAgriculture/Fishery, UNAPE hearing	Field trip: Producers groups ever assisted by MCIE in Liquica and Bobonaro	Field trip: Producers groups ever assisted by MCIE in Liquica and Bobonaro	Field trip: Producers groups ever assisted by MCIE in Liquica and Bobonaro
12 3 Wed	AM Meeting with PARCIC PM Ministry of Agriculture, SEAPRI-TITL	AM Meeting with PARCIC PM Ministry of Agriculture, SEAPRI-TITL	AM Meeting with PARCIC PM Ministry of Agriculture, SEAPRI-TITL	AM Ministry of Tourism, Ministry of Agriculture PM CCITL/ BIZ	AM Ministry of Tourism, Ministry of Agriculture PM CCITL/ BIZ	AM Ministry of Tourism, Ministry of Agriculture PM CCITL/ BIZ
13 3 Thu	AM SEPFPOE PM Timor Plaza	AM ATCTL PM Food Department, Ministry of Tourism	AM ATCTL PM ANATUR, TOYOTA	Field trip: Producers group under training in Liquica PM Ministry of Tourism	Field trip: Producers group under training in Liquica PM INDMO	Field trip: Producers group under training in Liquica PM UNTL Admission Office
14 3 Fri	AM BNU PM MICE_DG Industry, JICA	AM BNU PM MICE_DG Industry, JICA	AM ETDL PM MICE_DG Industry, JICA	AM National Training Center (SENAI), Don Bosco(Dili) PM MCIE_DG Industry, JICA	AM National Training Center (SENAI), Don Bosco(Dili) PM DIT	AM National Training Center (SENAI), Don Bosco(Dili) PM DIT
15 3 Sat	Compilation of collected data	ETD Dili	Compilation of collected data	ETD Dili	Compilation of collected data	Compilation of collected data
16 3 Sun	ETA Tokyo	ETA Tokyo	ETA Tokyo	ETA Tokyo	ETA Tokyo	ETA Tokyo
17 3 Mon	AM Compilation of collected data PM BCTL, Timor Building Bank		AM Compilation of collected data PM BCTL, Timor Building Bank		Compilation of collected data	AM Compilation of collected data PM IADE
18 3 Tue	AM MCIE PM MCIE		AM Compilation of collected data PM Tiger Fuel, Hotel Timor		AM MCIE PM ANATUR, INDMO	AM ATNAS, UNTL PM ANATUR, INDMO
19 3 Wed	AM SENAI, Timor TELECOM PM Maubere		AM SENAI, Timor TELECOM PM Maubere		AM Ministry of Education PM AECCOP	AM Ministry of Education PM AECCOP, SEPFPOE
20 3 Thu	AM Compilation of collected data PM BNCTL, JICA Report		AM Compilation of collected data, Kmanek PM Telemole, JICA Report		Compilation of collected data JICA Report	AM Compilation of collected data PM STVJ, JICA Report
21 3 Fri	MCIE Progress Report explanation		MCIE Progress Report explanation		MCIE Progress Report explanation	MCIE Progress Report explanation
22 3 Sat	ETD Dili		ETD Dili		ETD Dili	ETD Dili
23 3 Sun	ETA Tokyo		ETA Nagoya		ETA Tokyo	ETA Tokyo

## Schedule of the second site visit

	Date		Schedule	Meetings		Watanabe	Kato	Okada	Tsurumine	
April	23	Wednesday		ETD Tokyo		ETD Tokyo		ETD Tokyo	ETD Tokyo	
	24	Thursday		14:30 ETA Dili 16:00	JICA Meeting Explanation about the report	ETA Dili 16:00 JICA		ETA Dili 16:00 JICA	ETA Dili 16:00 JICA	
	25	Friday		AM	MCIE Workshop Workshop to discuss about the report	AM Ramelau Hotel		AM Ramelau Hotel	AM Ramelau Hotel	
				PM	UNTL Group interview	UNTL, JICA		UNTL, JICA	UNTL, JICA	
	26	Saturday	Weekdayoff			Summary of Workshop		Summary of Workshop	Review of Japan Center	
	27	Sunday	Weekdayoff			Summary of Group Interview		Summary of Group Interview	Review of Japan Center	
	28	Monday		AM	Hearing		MCIE		UNTL, MCIE	UNTL, MCIE
				PM	Hearing		Carya Timor, Timor Gap		MoT	MoT
	29	Tuesday			Hearing		MCIE IADE PTPP ENSUL CCITL ADN		SEPFPOE, KONNEKTO, MCIE, MPRM	SEPFPOE, KONNEKTO, MCIE, MPRM
	30	Wednesday			Hearing		MCIE Guide Post	ETD Nagoya	IOB, SEPFPOE IADE, MCIE	IOB, SEPFPOE IADE, MCIE
May	1	Thursday	Labor Day		Report writing	Report writing Seminar preparation	ETA Dili	PM ETD Dili	Report writing Seminar preparation	
	2	Friday			Hearing	MCIE AEI MCIE	MCIE AEI MCIE	ETA Tokyo	MCIE, MPRM	
	3	Saturday	Weekdayoff			Report writing Seminar preparation	Compass Report writing, Seminar preparation		Report writing Seminar preparation	
	4	Sunday	Weekdayoff			same as above	Report writing Seminar preparation		same as above	
	5	Monday			Hearing	UNDP, IADE, JICA	EDS, Timor Air Halsion		MCIE, IOB	
	6	Tuesday			Hearing	MCIE, UNTL	Kor Timor, Seminar preparation		MCIE, Seminar preparation	
	7	Wednesday		9:00:00 PM	Seminar JICA Meeting	Seminar to report the findings Wrap up meeting	Seminar Japanese Embassy JICA	Seminar Japanese Embassy JICA	Seminar Japanese Embassy JICA	
	8	Thursday		15:25 ETD Dili			ETD Dili	ETD Dili	ETD Dili	
7	Friday		ETA Tokyo			ETA Tokyo	ETA Nagoya	ETA Tokyo		

