

Provincial Development and Physical Framework Plan 2017-2025

PROVINCE OF LA UNION



FOREWORD

The Province of La Union embarks on a new transformative agenda of having **La Union as the Heart of Agri-Tourism in Northern Luzon by 2025**. In preparation to this transformation, a trailblazing roadmap was prepared to guide the development of the province towards the agenda **to sell the “treasures” of La Union**.

To ready the province into these Governance initiatives, **the Administration of Governor Francisco Emmanuel “Pacoy” R. Ortega III** had made the Provincial Government of La Union **undergo the Performance Governance System (PGS) and have the Provincial Government of La Union ISO 9001:2015 certified**.

In line with the Transformative Agenda, the Province had aligned its Plans and Programs through the **Amended Annual Investment Program (AIP) 2017** and crafting of an **Executive – Legislative Agenda (ELA) 2017 – 2019**. The Province also is fine tuning the **Provincial Development Physical Framework Plan (PDPFP) 2017 – 2025** to be more responsive and focused towards the newly set Transformative Agenda.

BRIEF HISTORY

A year after Adelantado Miguel Lopez de Legazpi made in Manila the capital of the Philippines on June 24, 1571; the Spaniards started the colonization of Ilokos. In June, 1572, the conquistadores by Juan Salcedo (grandson of Legazpi) landed in Agoo, and then a part of Pangasinan called “El Puerto de Japon” because enterprising Japanese merchants have been trading with the natives through this port.

The Spaniards marched up North without any resistance. They had their first taste of the Ilokanos’ bravery and fighting heart during a historic battle in Puraog (literally, “white” and maybe due to the white sands of the beach) now known as Balaoan. The Spaniards befriended the Ilokanos who reluctantly acceded to be under Spanish Rule.

After Cebu became the first provincial in 1565, new provinces have been created by the Spaniards. Three main functions were considered so: Political – Civil Administration, Ecclesiastical Governance and Geographical Considerations.

For more than two and one – half centuries, the original Ilokos Province remained intact until 1818 when it split into Ilokos Norte and Ilokos Sur. In 1846, Abra was created by Governor General Narciso Zaldua Claveria.

Governor General Narciso Zaldua Claveria was a visionary administrator. He believed that combining three contiguous areas that are far from their respective provincial capitals was a viable solution to the demands of Political – Civil Administration. He also saw the territory’s agricultural and commercial growth potentials. And the kicker was the extension of Hispanic Civilization and Christianity to the area.

Bangar, Namacpacan and Balaoan in the Southern portion of Ilokos Sur were quite the distance from the Cabezera of Vigan and in almost like manner, Sto. Tomas, Agoo, Aringay, Caba, Bauang, Naguilian, San Fernando, San Juan and Bacnotan were that far from Pangasinan’s Capital Lingayen. The 40-50 rancherias in the depths of Central Cordillera of the Benguet district bordered by the three Ilokos Sur towns and the nine of Pangasinan have even worse problems.

Thus on October 29, 1849, Governor General Claveria signed the proposal (Promovido) to unite the Pangasinan – Ilokos – Cordillera areas into a new province called La Union (the official name designated by Claveria Himself).

For 124 days, high and important Spanish Colonial Officers studied and deliberated on the proposition to create La Union or not. On March 2, 1850, Governor General Antonio Maria Blanco signed the Superior Decreto that founded La Union – the 34th Province since the founding of Cebu in 1565. It was classified as a political – military government (Gobierno Politico – Militar). Blanco appointed on March 4, 1850 Captain Toribio Ruiz de la Escalera (Claveria’s former trusted aide de camp) as the first Gobernador Military y Politico. La Union is the union of lands, people, cultures and resources. On April 18, 1854, Queen Isabella II of Spain issued the royal decree (real orden) from Madrid confirming Blanco’s Superior Decreto.

By 1860, there was a democratic progress in commerce and agriculture in the province primarily because of Tobacco. Spanish authorities banked on the prized lead for further economic development. The industry was so lucrative that a Tobacco Monopoly was established. All Tobacco leaves were strictly monitored and bought exclusively by the government at a fixed price.

By 1896, the people of La Union had enough of the Spanish atrocities. The torture of the native priest, Padre Adriano Garces of Balaoan, Mariano Gaerlan of San Fernando and Marioano Dacanay of Bacnotan; the execution of Balaoan’s Siete Martines, the persecution of Masons

whose membership included the elite natives; and others have all the more agitated the people to unite and fight their masters for three centuries. On May 22, 1898, a shot from a revolver killed the much – hated Friar Mariano Garcia of Santo Tomas, it was a shot heard in the whole province which eventually ignited the revolution in what the Spaniards used to call, “Una Provinci Modelo.”

Led by Manuel Bondoc Tinio, a boy general under the command of General Emilio Aguinaldo, the Spaniards were finally defeated in La Union, some of whom escaped and sought refuge in Vigan. With the help of the Americans, the Filipinos were finally freed from Spain only to find out later that they will be subjected to a new colonial rule.

A Revolutionary Government was established with Aguinaldo as President. Tinio acted as “De Facto Governor” of La Union but was later on replaced by Dr. Lucino Almeida as Presidente Provincial. During the American occupation, Dr. Almeida was reappointed as Provincial Chief, only to be convicted and exiled after his revolutionary connections were discovered. In defense of their hard – fought freedom, the people of La Union resisted American power and maintained their allegiance to Aguinaldo. Due however, to the superior American Military Firepower, the whole province and the whole archipelago, were finally subdued and pacified.

The Americans prioritized education during the rule. Schools were massively constructed and public education attracted the Filipinos. Democracy, which was given equal importance, facilitated the election of La Union’s first Civil Governor in 1901 in the person of Don Joaquin Ortega, Grandfather of Governor Victor F. Ortega. Nine other equally able governors followed Don Joaquin before the outbreak of World War II:

Joaquin Luna	1904 – 1907	Sixto Zandueta	1908 – 1919
Pio Ancheta	1919 – 1922,	Thomas De Guzman	1922 – 1923
	1931		1928 – 1931
Juan Lucero	1923 – 1929	Mauro Ortiz	1931 – 1934
Juan Rivera	1934 – 1937	Francisco Nisce	1937 – 1940
Bernardo Gapuz	1940		

Just as when the Filipinos were awaiting independence as promised by the Americans under the Tydings – Mcduffle Law, World War II exploded. The Filipinos gallantly fought side by side with the Americans. Amidst all the chaos and anarchy, three Provincial chieftains rose to the occasion to lead the people of La Union, Gov. Bernardo Gapuz (1940), Gov. Jorge Camacho (1941 – 1942) and Gov. Bonifacio Tadiar (1942 – 1944).

On January 4, 1945, the tides of war changed in La Union as Filipino – American soldiers captured Baroro Bridge in Bacnotan, a strategic bridge that connects the rest of Northern Luzon to San Fernando. The victory ensured the liberation of La Union. It was followed by the Historic Battle of San Fernando and Bacsil Ridge. Defeated, the Japanese Imperial Army retreated to Baguio City where they joined their comrades and made their last stand.

Form the ashes of war; La Union underwent massive reconstruction and rehabilitation. Patient and hardworking, the people of La Union marched on to progress and development led by a new breed of innovative, highly competent and down to earth governors.

Agaton Yaranon	1946 – 1947	Doroteo Aguila	1948 – 1951
Juan Carbonell	1952 – 1955	Bernardo Gapuz	1956 – 1959
Eulogio De Guzman	1960 – 1967	Juernal Guerrero	1968 – 1977
Tomas Asprer	1977 – 1986	Robert Dulay	1986 – 1987
Joaquin Ortega	1988 – 1992	Justo O. Orros	1992 – 2001
Victor F. Ortega	2001 – 2007	Manuel C. Ortega	2007 - 2016
Francisco Emmanuel “Pacoy” R. Ortega III 2016- Present			

THE PROVINCIAL DEVELOPMENT AND PHYSICAL FRAMEWORK PLAN (PDPFP), CY 2017-2025 AN EXECUTIVE SUMMARY

I. INTRODUCTION

The Provincial Development and Physical Framework Plan (PDPFP) serves as the link between national/regional and the city and municipal land use plans. Within this set-up, policies enunciated at the top levels of government are effectively translated into a lower level provincial plan to be more responsive to local conditions and aspirations. Conversely, policies at the municipal stratum are integrated into the provincial plan.

The PDPFP takes the form of an integrated settlements, land use/land resources management and infrastructure plan. The PDPFP shall serve as the Comprehensive Provincial Land Use Plan (CPLUP) for the province as required under the 1991 Local Government Code. Spatial inter-relationships are highlighted, but take into account the socio-economic and land resource characteristics of the province.

II. THE PLANNING ENVIRONMENT – A SITUATIONER

Population and Geographical Characteristics

- The total population of the province is 786, 653 persons as of CY 2015 actual population census with a growth rate of 1.12% from 2010-2015. The province shared 16 percent of the total regional population of 5,026,128. The City of San Fernando is the major settlement/growth area in the province which is also the economic and educational hub, Agoo and Rosario for the Southern part as minor growth area and Bangar, Balaoan and Luna as minor growth center in the Northern part.
- As to its location and physical characteristics, La Union is located in the Southwestern part of the Ilocos Region, with a land area of 149,309 hectares, 11.6% of the region's total area. Under its jurisdiction are one city and 19 municipalities which is equivalent to 16.39 percent of the region, and 576 barangays accounting 17.76 percent of the region's total.
- The province has potential surface and groundwater resources that could be used for agriculture and domestic purposes. A total of 45, 790.5 hectares municipal waters available for marine fishery production with a coast of 114, 702 linear meter lies on the coastline from Rosario to Bangar. There are five (5) major basins in the province; the Amburayan River basin as one of the largest in the region and stretches along boundaries of La Union and Ilocos Sur; other major ones are Aringay, Baroro, Naguilian and Bued Rivers.
- The land use potential is classified in two (2) major land classifications: the alienable and disposable and the public forestlands. The average land holding is not more than half hectares that production is not maximized. Conversion of land use is also evident, that is, from agriculture to housing, mangrove to fishpens, etc.

Mainstream Disaster Risk Management

- In relation to hazards and disasters, vulnerability basically links people with their environment to institutions and economic sectors that concerns them. Moreover, the

impact of hazards on a certain community through a vulnerability assessment defines the extent of prioritization to be provided at a given period of time.

- The Western side of La Union is bounded by the Lingayen Gulf and the West Philippine Sea and is prone to tidal surge due largely to storms. Eastward are the flatlands and the agricultural areas which are susceptible to floods due to the overflowing of rivers.
- The eastern half of La Union is prone to land erosion owing to its slope (mountainous) and is on the active fault zone. Highly vulnerable in the towns of Rosario, Tubao, Pugo, Burgos, Bagulin, Santol and Sudipen.
- With the Philippines is located along the Typhoon Belt makes it prone for a large number of tropical cyclones. An average of three (3) typhoons affects the province annually. Of the eleven (11) typhoons that hit the province, four (4) affected more than ten (10) municipalities or half of the province.
- Flooding occurs in most municipalities of the province. This is usually from the overflowing of river systems like Amburayan affecting Bangar and Sudipen; Borobor River flooding Rimos, Luna to Bangar; Baroro River affecting San Juan and Bacnotan; Aringay River affecting eastern areas with Alaska, Samara, Poblacion, Sta. Lucia and Dulao; Naguilian River affecting Naguilian and Bauang; and Bued River affecting Rosario.
- The Province of La Union is susceptible to ground shaking. This can be seen in what had happened during the July 16, 1990 earthquake that really devastated the province. The whole province is susceptible to ground shaking from 6.0 to 7.0 magnitudes.
- Liquefaction Susceptibilit is the condition when the ground losses strength due to intense ground shaking and structures built on top of it may sink and tilt. At risk are places with high water content such as old river channels, swamps, river banks, abandoned rivers, coastline and flood plains. Sixteen municipalities and the City of San Fernando are susceptible to liquefaction using the epicenter of the July 16, 1990 earthquake.
- Tsunami. Philippine archipelago is surrounded by active trenches which brought a constant threat of tsunami practically in all the coasts of our country. For the province of La Union it is bounded in the west with the West Philippine Sea and is facing the Manila Trench that made our province susceptible to tsunami when an earthquake takes place.

III. SECTORAL SITUATIONS

The Economy of La Union

- Development in the province has been geared more towards Agri-tourism industries because the province is well endowed to capitalize on its natural resources. The province has 8,476 commercial establishments operating in the province as of 2014 and has 19 manufacturing establishments. The main business center is the City of San Fernando with the highest share of 32% of the provincial total.

- Major development projects have been established like the Poro Point Special Economic and Freeport Zone and the on-going negotiation of the Regional Industrial Center and various infrastructure projects. All of these are expected to generate investment not only in the province but also in the entire region. Investment's inflow in the province experienced a slight decline pattern generating a total of P1.216 Billion in CY 2012 to 1.1164 Billion in CY 2015. Exports earnings seen to grow in 2012 accounted at \$18.429 Million versus \$ 23.288 Million in 2015. In terms of job generation continued to view the labor market is weak.

Agriculture

- Palay remains to be the major cash crop of the province displaying total area planted with palay of 38,693 hectares resulting to a production for the year 2015 of 187,148 MT of which 86,061 MT were consumed giving the province an average sufficiency level of 124%.
- In terms of fruit trees production, the province is 166% sufficient. Mango dominated all the fruit trees with a total production of 32,250 Metric Tons.
- Fruits, Root crops, Leafy and fruit vegetables are in the level of more than 200% sufficiency level manifestation that these commodities are more than enough for the consumption of the province.
- In 2015, the total fish production was 18,087.53 Metric Tons while the consumption requirement of the province was 17,306.35 Metric Tons; hence, the sufficiency level of La Union is 105%. The total additional employment generated out of fish production was 13,365 and the total income computed was P1,683,655.90.

Tourism Performance in the Province

- The stretch of white and gray sand beaches along the towns of La Union is the main attraction to tourists. In the province tourist belts are located along the shores of San Juan, San Fernando City, Bauang and Agoo. Its calm crystal water is ideal for water skiing, snorkeling, swimming, scuba diving, wind surfing and boating. Its gifted multitude scenic landscapes is a tourism haven as well, and eco-tourism development. Surfing is now a tourism booster in the province owing to its long waves best for long board surfing.

Transportation, Access, and Linkages

- There are four (4) main roads that linked the different municipalities of the province. From south to north is the Ilocos Highway; from east to west are the Naguilian Road, Aspiras Highway and the Kennon Road, which traverse peripherally the town of Rosario at its southern part.
- The province has a road network measuring 1,735.596 kilometers. Barangay Roads (61.02% of the total or 1,059.003 kilometers). Provincial Road (15.22% or 264.093 kilometers), and City/Municipal Roads (9.48% or 164.616 kilometers).
- La Union has one airport located in Canaoay, City of San Fernando. It is classified as a secondary or alternate airport for general aviation with concrete strip dimension of 1,200

meters by 36 meters and an elevation of 3.96 meters. The Airport functions as alternate to Baguio City's Loakan Airport accommodating chartered turbo-prop aircrafts.

- Water Access. One of the best harbors can be found in the City of San Fernando. The government, cognizant of its potentials has delegated the responsibility of developing the port to the Philippine Ports Authority (PPA) and Poro Point Industrial Corporation – BCDA. In addition, there are 5 international ports under the administration of Poro Point Industrial Corporation-BCDA, the conveyor pier of Philex, Pier No. 1 and 2, LCT Ramp, UCC Private Pier while 4 are commercial privately owned piers – the Holcim Inc. Plant (former Bacnotan Cement Industries), Shell LPG Depot/Gasoline and 1590 Energy Corporation.

Service Access

- A total of 24 hospitals are located in La Union including lying-ins and clinics, of which 17 are privately owned and the other (7) are managed by the government. These hospitals have a total bed capacity of 789, four hundred eighty nine (789) in public hospitals and 369 in private hospitals.
- The Provincial Government of La Union operates the La Union Medical Center and five district hospitals-Bacnotan, Naguilian and Rosario District Hospitals, Caba Medicare and Community Hospital and Northern La Union Maternity and Children's Hospital in Balaoan.
- A total of 237 health facilities operate in La Union. In each municipality there are twenty (20) Rural Health Units/FP clinics and 217 Barangay Health Stations (BHS). Burgos an upland area had the least with five (5) Barangay Health Stations. Average population served by 1 BHS is 3,591. Around 38 percent of the total barangays have BHS. Presence of private clinics and diagnostic centers are located in urban municipalities that cater health services to middle upper income class population.
- In terms of education physical facilities, a total number of 590 public and private schools were recorded and distributed as follows: elementary schools accounted 428 or 73 percent; secondary schools 139 or 24 percent and tertiary schools 25 or 4 percent.
- The province had adequate classrooms for both elementary and secondary level that evinced by a classroom to pupil ratio of 1:25 and classroom to student ratio at 1:41 showing lower than the planning standard of 1:45.

Utility and Infrastructure Services

- As of 2015, about 159,806 households or 95.05 percent has access to potable water supply in the province. Level I recorded a 72.71 percent or 116,188 households served, Level II at 15,605 households or 9.76 percent and Level III at 28,013 households or 17.53 percent. The municipality of Pugo of the 2nd district shows an excellent performance in the provision of potable water supply to every household with 100 percentage points while in the 1st district, the municipality of San Juan also posted a 100 percent accomplishment in the provision of potable water supply.
- Irrigation systems of the Province had a total service area of 15,090 hectares. National Irrigation System in the province had a total service area of 3,702 hectares while the

Communal Irrigation System has 3,789 hectares. The Amburayan River is the main source of water in irrigating the farms in District I while NIA Masalip in Agoos serves the municipalities in the second district.

- In CY 2015, records revealed that 168,131 households with sanitary type of garbage disposal. About 12 percent practiced the usual manner of burning, dumping in individual pit (5 percent), picked-up by garbage truck (33 percent), burying (32 percent), composting (17 percent) then later used as fertilizer, and other usual manner (1 percent).
- As of 2015, households with satisfactory disposal of solid waste accounted 82.15 percent. District I exceeded the provincial total of 92.71 percent. The municipality of Naguilian of District II had 100 percent households with satisfactory disposal of solid waste followed by the City of San Fernando at 99.92 percent due to the presence of the San Fernando Landfill.
- Sanitation is very important to every household in the province. As per record, 79.20 percent of the households have complete sanitation facilities and 93.97 percent of the households are having sanitary toilets breakdown into: Flush = 12.38 percent, Water Sealed = 75.13 percent and Sanitary Pit Privy = 4.49 percent; pit privy = 1.85 percent. With this result, the Health in Every Home Program still extends thousands of toilet bowls to far-flung barangays to eventually observe sanitary environment.
- La Union is 100% energized by LEUCO and LUELCO.

Poverty

- Based on the official release on poverty statistics by the Philippine Statistics Authority, the poverty incidence among population in La Union was 12.2 percent in 2015 which is lower by 0.90 percent of Region I's data of 13.1 percent. Looking on the trends of the poverty incidence among population since 2006 to 2015, result shows that in 2009 it reaches to a peak of 29.3 percent from that of the 2006 data of 26 percent, this suddenly and significantly declined to 18.5 percent or 6.30 percentage point drop from the 2012 data.
- Subsistence incidence among population in La Union whose income fall below the food threshold was estimated at 5.2 percent in 2015. During the same period in 2006 to 2015, same scenario was noticed.

La Union and Physical Framework

- The projected improvement is necessary to provide the needed impetus to realize the full potentials of agricultural areas as to land use of physical framework. Agricultural areas cover 54,701 hectares or 36.64 percent of the total area. The huge expanse of grassland in this category is predominantly covered with cogon and different species of shrubs within the area of 22,834 hectares or 15.59 percent of the total land area. The forest/wooded area occupies 46,598 or 31.21 percent of the total land area. This area is covered with different forest species at the highest portion of mountain ranges near the boundary of Ilocos Sur and Benguet province. Hence, the other areas are purposely for beach sand, river wash prominent rivers and for aqua-culture either brackish/fresh water and cover an area of 9,621 hectares or 6.44 percent of the total area.

IV. LA UNION DEVELOPMENT DIRECTION

A. Vision Statement

Taking full advantage of the growing tourist arrival brought about by agriculture, tourism and the agri-tourism sites; potential market for visitors due to its strategic location; peace and order; organized private sector who can drive business; political harmony and the clear alignment with the regional and national development programs, the Province envisions to be:

“The Heart of Agri-Tourism in Northern Luzon by 2025”

B. Mission Statement

La Union is the catalyst for sustainable and inclusive development. Catalyst as defined is a person or an event which causes change. This highlights the Province becoming an agent of change and an advocate for the development which is sustainable and inclusive.

To be the catalyst for sustainable and inclusive development that improves the quality of life of the people.

C. Core Values:

God Loving

- We put God first in our actions. All that we do is for his greater glory

People Oriented

- We deliver public services that will empower our citizens to contribute for a greater La Union

Accountable

- We take responsibility for our actions and commitments

Committed

- We are a dedicated and loyal team willing to exert full efforts for the success of the Province.

D. Citizen Impact:

Leverage on Agri-Tourism to improve competitiveness and quality of life by increasing household income, LGU avenues and reduction of IRA dependency.

E. Strategic Focus:

Position La Union as the preferred Agri-Tourism destination in Northern Luzon.

F. Core

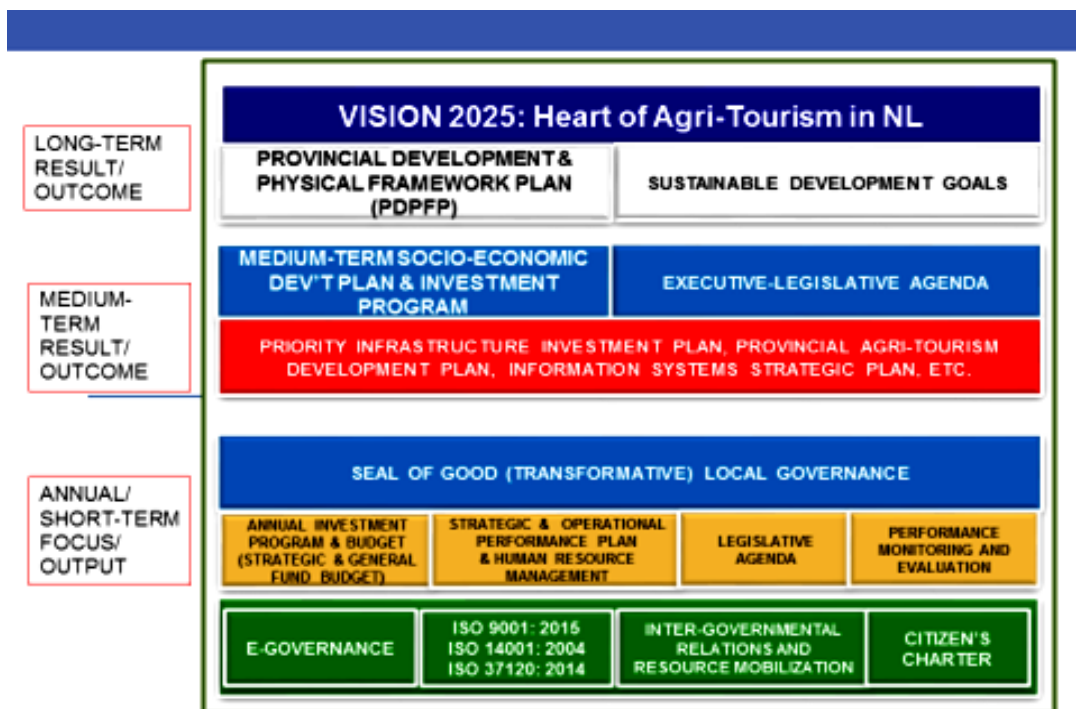
- a. Develop nationally competitive tourism circuits around community based agri-tourism sites;

- b. Promote investment opportunities in the tourism circuits to the private sector;
- c. Brand and market La Union as an agri-tourism destination;
- d. Capacitate agripreneurs and other MSMEs to be direct and sustainable inputs to tourism;
- e. Address workforce requirements and harmonize service standards of the tourism industry

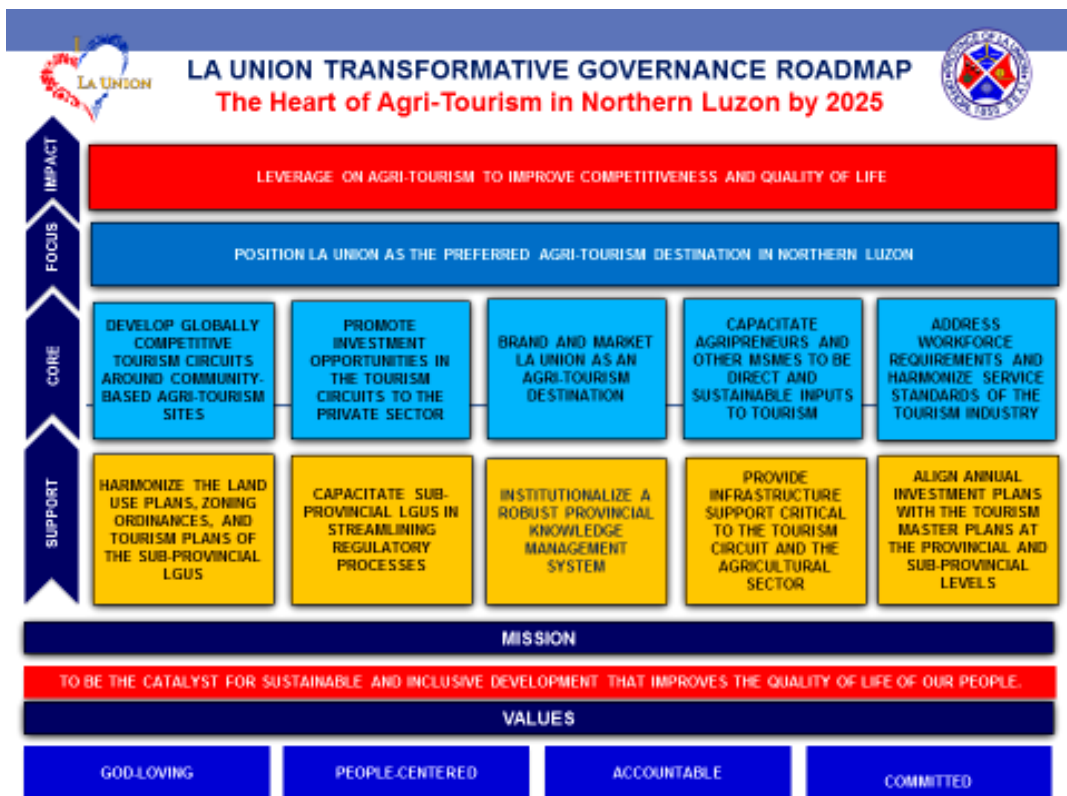
G. Support

- a. Harmonize the land use plans, zoning ordinances, and tourism plans of the component LGUs;
- b. Capacitate component LGUs in streamlining business permits and licensing processes;
- c. Institutionalize a robust provincial knowledge management system;
- d. Provide infrastructure support critical to the tourism circuit and the agricultural sector;
- e. Align Annual Investment Plan (AIP) with the tourism master plans at the provincial and component levels.

THE LA UNION GOVERNANCE FRAMEWORK



THE LA UNION TRANSFORMATIVE GOVERNANCE ROADMAP



STRATEGIC DEVELOPMENT THRUST

- A. Financial Administration or Good Financial Housekeeping**
 - a. Intensifying good governance through public-private engagement, forging alliance and institutionalizing transparency and accountability;
 - b. Leveraging on Agri-Tourism to improve competitiveness and quality of life.

- B. Disaster Preparedness**
 - a. Harmonize the Land Use Plan, Zoning Ordinance and tourism plans of LGUs towards the Agri-Tourism Road Map;
 - b. Achieving resiliency amidst Climate Change and Disaster Risk Reduction and Management.

- C. Social protection**
 - a. Intensifying preventive, promotive as well as curative and rehabilitative health programs, focused on risk brought about by human influx and corresponding pressure gravitating towards the Agri-tourism Circuits;
 - b. Ensuring accessible, comprehensive and quality basic social services to the poor and marginalized groups;
 - c. Broadening mainstreaming effort for the social and economic empowerment of vulnerable and disadvantage groups
 - d. Establish district hospital as centers for HOPE;
 - e. Develop an efficiently enforce pro-action policies and plan.

D. Peace and Order

- a. Sustaining the Peace Initiative to ensure continuing economic and social prosperity;
- b. Neutralize illegal drug demand and illegal drug supply;
- c. Intensify anti-illegal drug awareness and education
- d. Increase awareness and treatment, rehabilitation and aftercare services.

E. Business Friendliness and Competitiveness

- a. Capacitate the PGLU for greater productivity innovation and peak performance thru transformative governance;
- b. Accredite (national) community based Agri-tourism sites identified in the tourism circuit
- c. Capacitate LGUs in streamlining Regulatory Processes
- d. Develop globally competitive tourism circuits around community based Agri-Tourism sites;
- e. Promote investment opportunities in tourism circuits to the private sector;
- f. Brand and market La Union as an Agri-Tourism destination;
- g. Capacitate Agriprenuers and other MSMEs to be direct and sustainable inputs to tourism;
- h. Address workforce requirements and harmonize Service Standards of the Tourism Industry;
- i. Accelerating sustainable agri-fishery and livestock modernization and enterprise development;
- j. Maximize Public-Private Partnership in Agri-Tourism, Infra Development and Environmental Management.
- k. Align AIP with tourism circuit plan at provincial and municipal level to provide infrastructure support critical to the Tourism Circuit and Agricultural Sector.

F. Environmental Management

- a. Managing ecological zone: community-based and multi-stakeholder resource management;
- b. Addressing boldly unwanted by-products of development: solid and liquid waste management and pollution control and management;

G. Transformative Governance

- a. Institutionalize a robust provincial knowledge management system.

Development Issues/Problems, Goals, Objectives and Target

ISSUES AND CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
1.Exposure of the Population /Households to natural hazards	<ul style="list-style-type: none"> • Intensifying advocacy or awareness on public health issues relative to flood events • Strict Implementation of zoning ordinances relative to identified settlement areas in their CLUP • Strengthening of Disaster Response among the populace 	<ul style="list-style-type: none"> ➤ Information Education Campaign ➤ Building Permits ➤ DRR/CCA Enhanced Municipal CLUPs and Zoning ➤ PDRRMO Capacity Enhancement Program
2. Ricelands are basically located at low-lying areas which are susceptible to severe flooding	<ul style="list-style-type: none"> • Enforcement of local ordinances on hazard proof designs of building • Capacitate farmers in Pest Management and Climate Change Resistant Varieties 	<ul style="list-style-type: none"> ➤ Integrated Pest Management and Climate Change Resistant Varieties
3.Vulnerable Tourism Infrastructures	<ul style="list-style-type: none"> • Retrofitting of Building • Prioritization of Tourism Centers in Rescue 	<ul style="list-style-type: none"> ➤ Building Permits ➤ Hazard/Response Priority Maps
4. Identification of High Risk Investment Zones	<ul style="list-style-type: none"> • Mapping Economic Zones and Investment Areas 	<ul style="list-style-type: none"> ➤ Mitigation Measures: River Bank Flood Control and Elevation of Vulnerable Buildings
5. Back Up Communication during emergencies and IEC in Dialect	<ul style="list-style-type: none"> • Provide Back-up Systems for Communication • Charging Station for Cellular Phones • Warning Bulletin in Iloko 	<ul style="list-style-type: none"> ➤ Provision of Emergency Communication System with Stand Alone Charging Stations ➤ Text Blast ➤ Radio Bulletin in Iloko
6. Disruption of transportation and communication services	<ul style="list-style-type: none"> • Identification of alternate for road network (CELUMEPA Circumferential Road) 	<ul style="list-style-type: none"> ➤ Weathering Access or Escapes Routes
7. Most vulnerable sector in the society (elderly, young population, PWD,etc)	<ul style="list-style-type: none"> • Evacuation centers should be ready to cater to this specialized sector 	<ul style="list-style-type: none"> ➤ Weathering Access or Escapes Routes ➤ Evacuation Centers/ Zones
8. Need for more housing and settlements	<ul style="list-style-type: none"> • Identification of settlement outside hazard prone areas 	<ul style="list-style-type: none"> ➤ Weatherproof Design <ul style="list-style-type: none"> - Elevation - Strength (at least 350 kph wind load)

9. Most educational institution has no evacuation plan	<ul style="list-style-type: none"> • An evacuation plan should be in place. Responders to prioritize these areas 	<ul style="list-style-type: none"> ➤ Evacuation Centers/ Zones ➤ Drills
10. Health services is lack of provisions for disaster relief and response	<ul style="list-style-type: none"> • Intensifying preventive, promotive as well as curative and rehabilitative health programs, focused on risk brought about by flood events and corresponding pressure gravitating towards the Agri-tourism Circuits 	<ul style="list-style-type: none"> ➤ DRA/CCA Enhanced Sector Plan on Health
11. Disruption or ultimate destruction of public works and utilities	<ul style="list-style-type: none"> • Design should be revisited to include hazard proofing • Strict implementation of building codes • Retrofitting of Critical Infrastructure 	<ul style="list-style-type: none"> ➤ Permits ➤ Zoning ➤ Retrofitting

THE PHYSICAL FRAMEWORK

This framework (PDPFP 2017-2025) aligned to the new transformative governance identified by the new administration of Governor Francisco Emmanuel “Pacoy” R. Ortega III and in sync to the new transformation roadmap of being the Heart of Agri-Tourism in Northern Luzon by 2025.

This plan ignites alignment to the new transformative through:

- a. Identified areas of development using the 3 Tourism Circuits and its respectful role
- b. Identified areas of convergence for the different sectors or inter-sectoral collaboration through the well defined development thrust and identified programs, projects and activities.
- c. Identified DRR-CCA enhancement of the identified vulnerable areas.

This document serves as a practical and rational guide for all stakeholders in making decisions and formulating policies, particularly in the identification of the kind and location of PPAs that respond to the real needs of our communities to ensure that they are safe, resilient and are able to achieve sustainable development.



Republic of the Philippines
OFFICE OF THE PRESIDENT
Housing and Land Use Regulatory Board
Botanical Garden, Leonard Wood Road, Baguio City

CERTIFICATION

This is to certify that the Disaster Risk Reduction-Climate Change Adaptation Enhanced Provincial Physical Framework Plan of the Province of La Union, 2017-2025, has been submitted to the HLURB-NLR office on May 30, 2017.

Issued this 25th day of April 2019 at Baguio City upon the written request of the Provincial Governor, Francisco Emmanuel "Pacoy" T. Ortega, for Department of Interior and Local Government (DILG)-Seal of Good Local Governance evaluation purposes.


ATTY. PHER GEDDO B. DE VERA
Officer-In-Charge

For: **ATTY. JANN ROBY R. OTERO**
Regional Officer

Decision No. :NLR-1-OCERT-042519-018
Reference No. : NI.R-1-Cert-042519-025
Amount Paid: **Fee Exempt.**

I. VISION

A. Vision Statement

Taking full advantage of the growing tourist arrival brought about by agriculture, tourism and the agri-tourism sites; potential market for visitors due to its strategic location; peace and order; organized private sector who can drive business; political harmony and the clear alignment with the regional and national development programs, the Province envisions to be:

“The Heart of Agri-Tourism in Northern Luzon by 2025”

B. Mission Statement

La Union is the catalyst for sustainable and inclusive development. Catalyst as defined is a person or an event which causes change. This highlights the Province becoming an agent of change and an advocate for the development which is sustainable and inclusive.

To be the catalyst for sustainable and inclusive development that improves the quality of life of the people.

C. Core Values:

God Loving

- We put God first in our actions. All that we do is for his greater glory

People Oriented

- We deliver public services that will empower our citizens to contribute for a greater La Union

Accountable

- We take responsibility for our actions and commitments

Committed

- We are a dedicated and loyal team willing to exert full efforts for the success of the Province.

D. Citizen Impact:

Leverage on Agri-Tourism to improve competitiveness and quality of life by increasing household income, LGU avenues and reduction of IRA dependency.

E. Strategic Focus:

Position La Union as the preferred Agri-Tourism destination in Northern Luzon.

F. Core

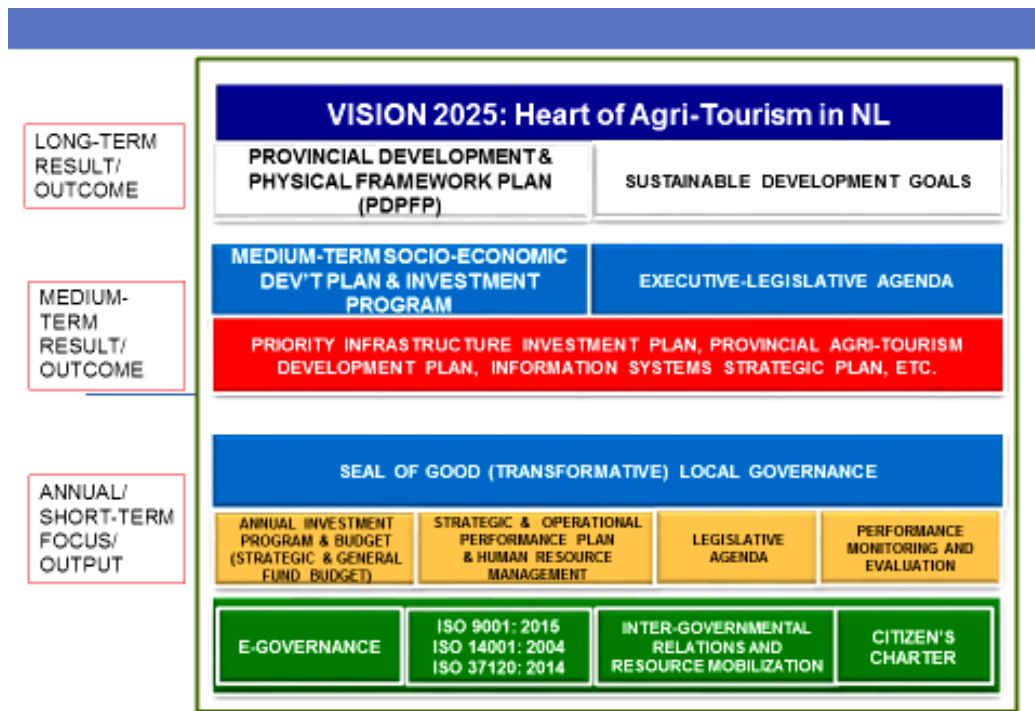
- a. Develop nationally competitive tourism circuits around community based agri-tourism sites;
- b. Promote investment opportunities in the tourism circuits to the private sector;

- c. Brand and market La Union as an agri-tourism destination;
- d. Capacitate agripreneuers and other MSMEs to be direct and sustainable inputs to tourism;
- e. Address workforce requirements and harmonize service standards of the tourism industry.

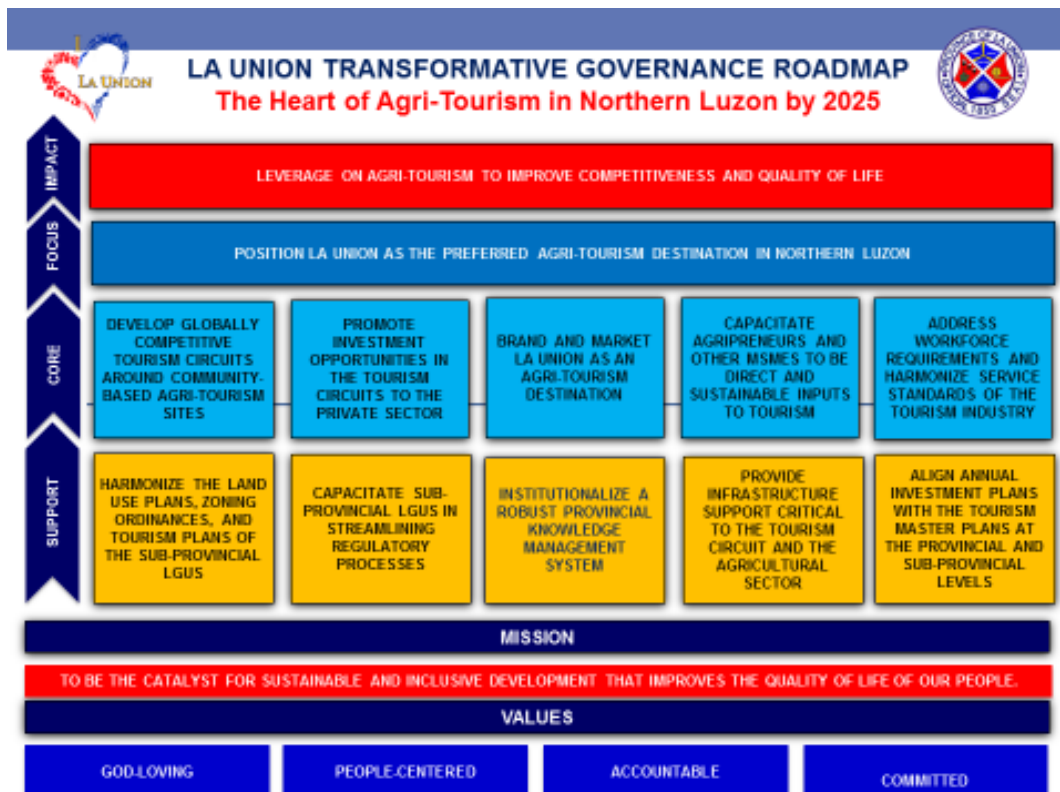
G. Support

- a. Harmonize the land use plans, zoning ordinances, and tourism plans of the component LGUs;
- b. Capacitate component LGUs in streamlining business permits and licensing processes;
- c. Institutionalize a robust provincial knowledge management system;
- d. Provide infrastructure support critical to the tourism circuit and the agricultural sector;
- e. Align Annual Investment Plan (AIP) with the tourism master plans at the provincial and component levels.

THE LA UNION GOVERNANCE FRAMEWORK



THE LA UNION TRANSFORMATIVE GOVERNANCE ROADMAP



2. THE PLANNING ENVIRONMENT

2.1 Location, Land Area and Political Subdivision

La Union is located in the southwestern part of the Ilocos Region bounded on the north and northeast by Ilocos Sur; on the south by Pangasinan; on the east by Benguet; and on the west by the Lingayen Gulf and South China Sea.

Among the Ilocos provinces, La Union is the smallest in terms of land area with 149,309 hectares or equivalent to 11.60 percent of the region's 1,284,019 hectares (about 0.5 percent of the total land area of the country).

District I's land area of 70,069 hectares was 46.93 percent of the province's area and 5.46 percent of the region's area. The municipality of San Gabriel has the biggest land area with a share of 10.38 percent or 15,500 hectares followed by San Fernando City (10,688 hectares) while Luna has the smallest area with only about 3.01 percent.

District II's land area of 79,240 hectares was 53.07 percent of the province's area and 6.17 percent of the region's area. Bagulin has the widest area (14,762 hectares), followed by Aringay (12,207 hectares) while Sto. Tomas had the least (3,242 hectares).

The province accounts second least of the number of municipalities and barangays in the region, respectively. Under its jurisdiction are one city and 19 municipalities which is equivalent to 16.39 percent of the region, and 576 barangays accounting 17.76 percent of the region's total. See Map No.2. La Union (1 City and 19 Municipalities).

2.2 Population and Settlement

2.2.1 Size, Distribution, Growth Rate and Density

In year 2015, the Census of Population showed that La Union has a total population of 786,653 persons. Compared with the Regional Population of 5,026,128, the province rank number 3 in terms of population or 16 percent of the total regional population.

The First District's population is 46 percent of the total population while District II has a bigger share of 54 percent because it covers a greater number of municipalities. Upland/rural municipalities of both districts have the least percentage share. (Refer to Table 1 and Figure 2).

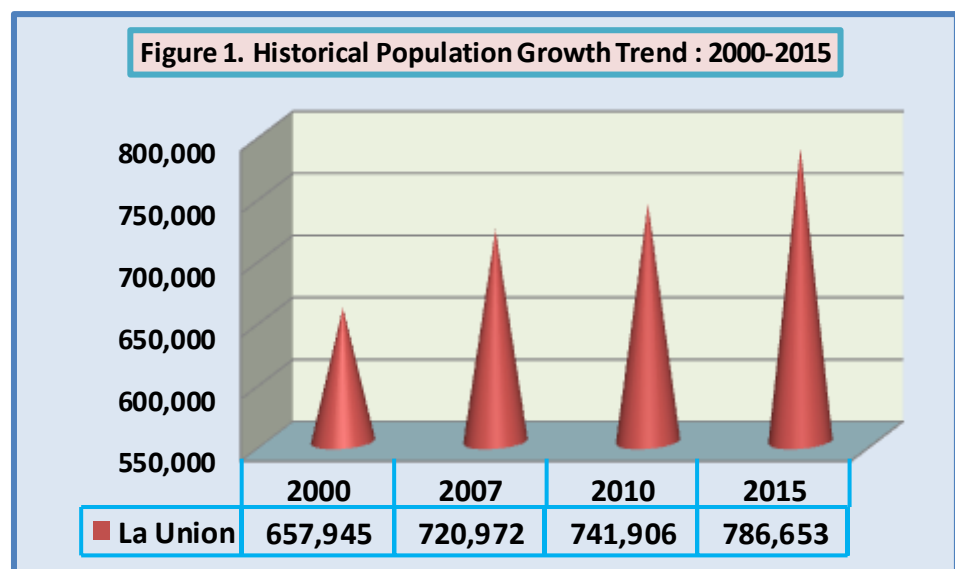
The annual population growth rate from 2010- 2015 is 1.12 percent, a figure higher by 0.07 percent from that of the 2007-2010 figure which is 1.05 percent and lower by 0.22 from that of the 2000-2007 figure which is 1.27 percent (See Figure 3). According to the 2015 actual population census of the Philippine Statistics Authority (PSA), the province's population is seen to double in a span of 62 years, or by year 2077. The annual population growth rate is higher than the region's 1.09 but relatively lower compared with the national APGR of 1.72.

The First District has a relatively longer breathing space (77 years) to prepare for the doubling of its population due to a lower population growth rate

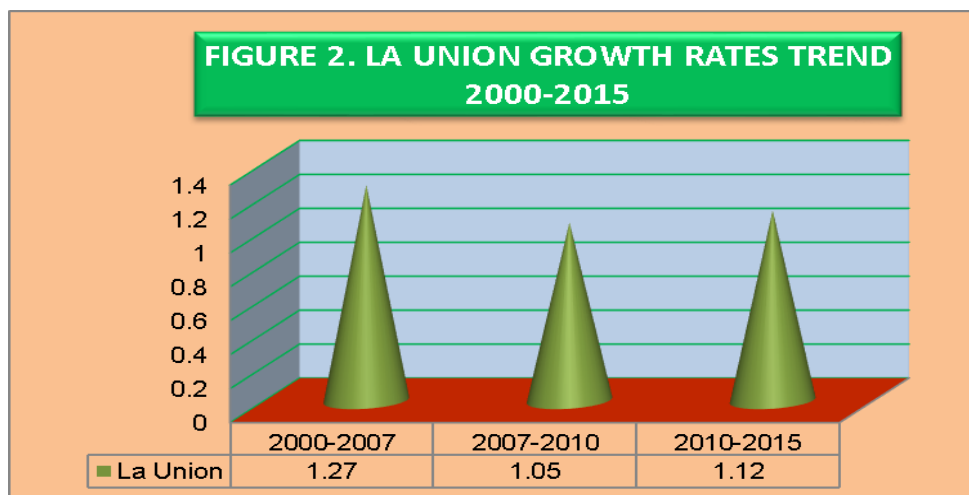
of 0.89 percent. This is 25 years more than the doubling time of the population in the Second District.

Six municipalities and one city of the province posted a high population growth. For District I, San Gabriel had the highest population growth rate of 1.71 percent and its population is expected to double in 40 years or by the year 2055 while Luna has the least at 0.23 percent and population is forecasted to double in 305 years (2320).

In District II, the municipalities of Pugo at 3.40 percent, Naguilian at 2.18 percent and Sto.Tomas at 1.58 percent have the highest population growth rates. Their population is expected to double in 20 - 44 years or by year 2035 to year 2059. The municipality of Burgos, identified as an upland area, has the least growth rate of 0.52 percent and its population is seen to double in 133 years (2148).

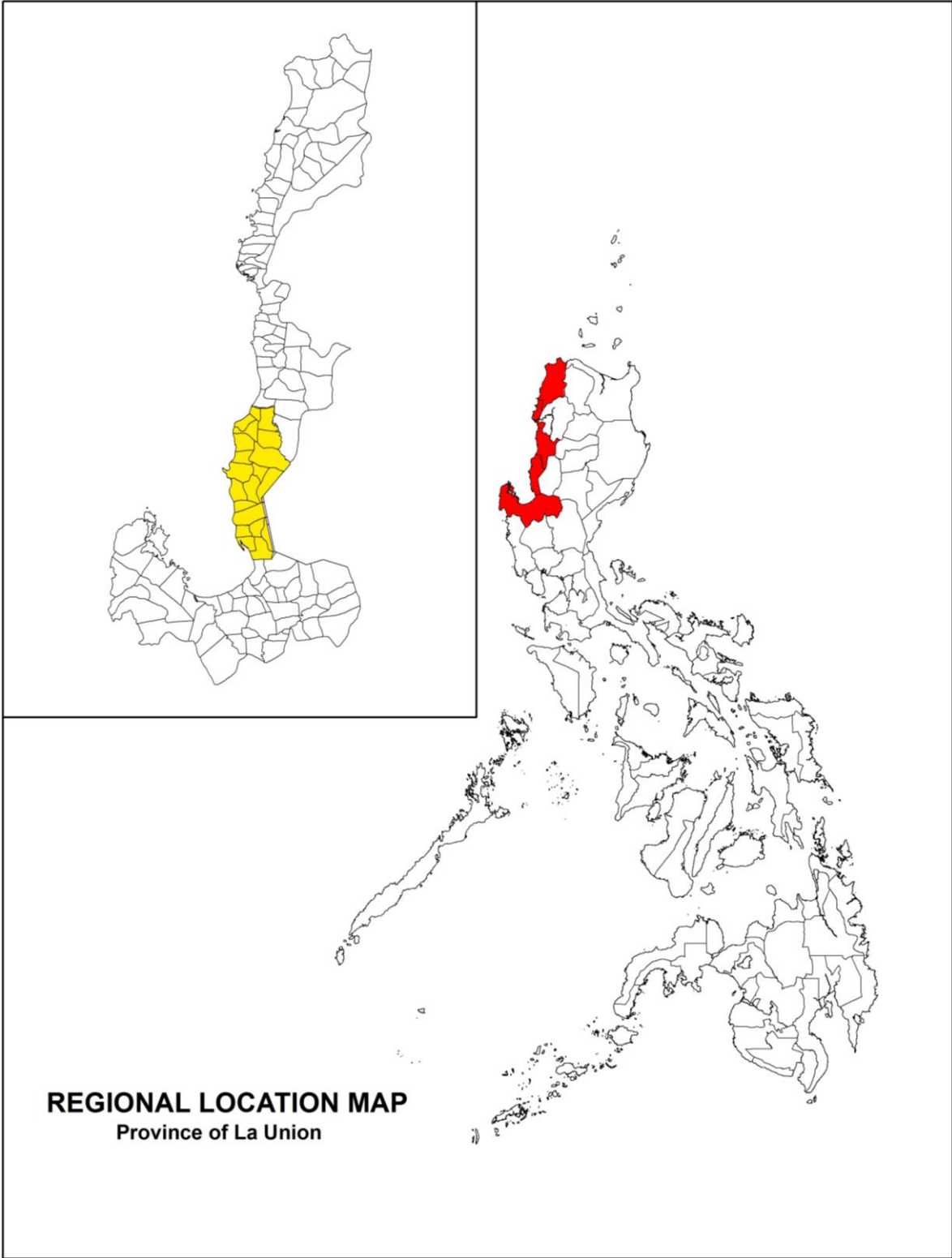


Source of Data: Philippine Statistics Authority

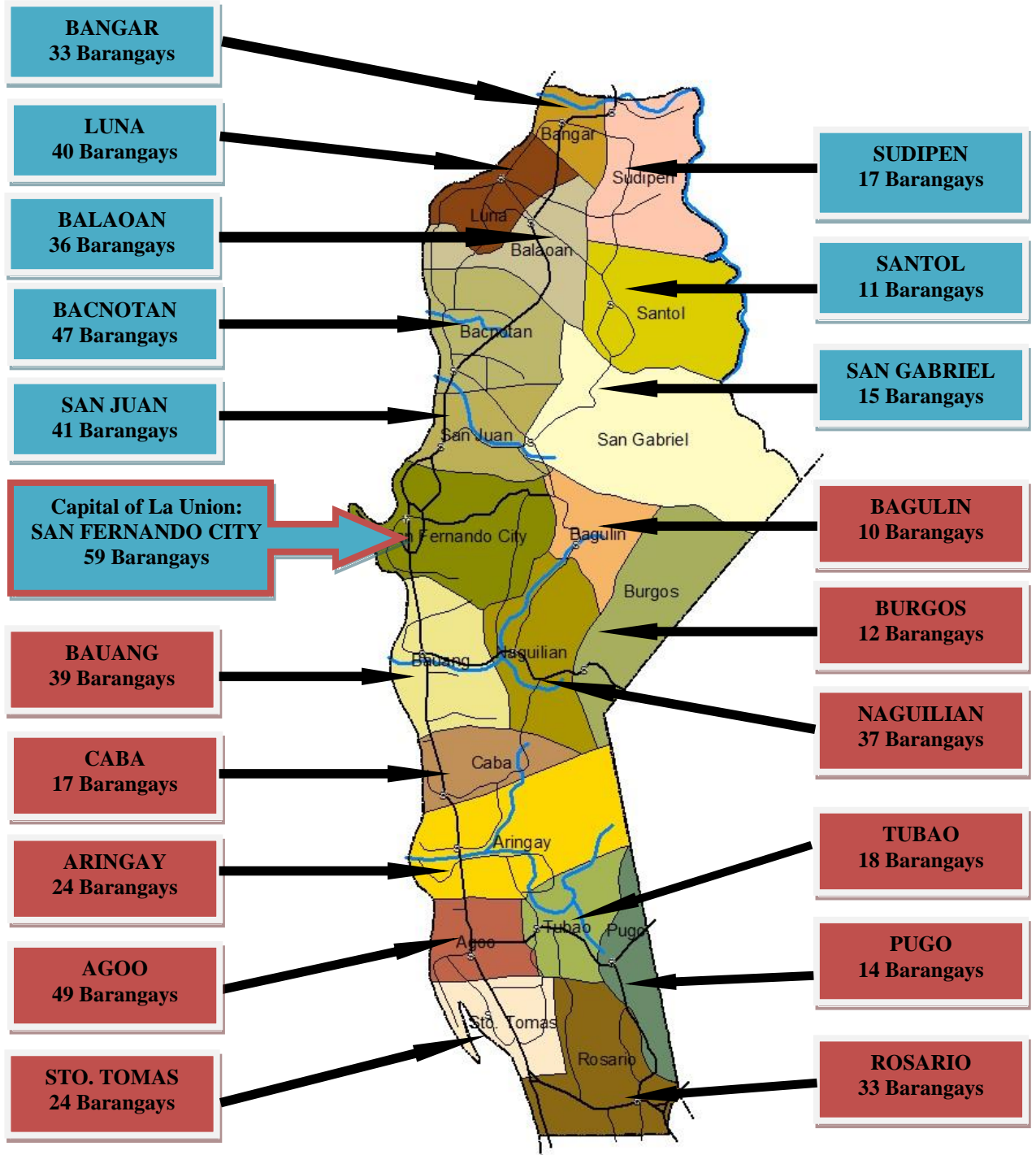


Source of Data: Philippine Statistics Authority

MAP NO 1. REGIONAL LOCATION MAP

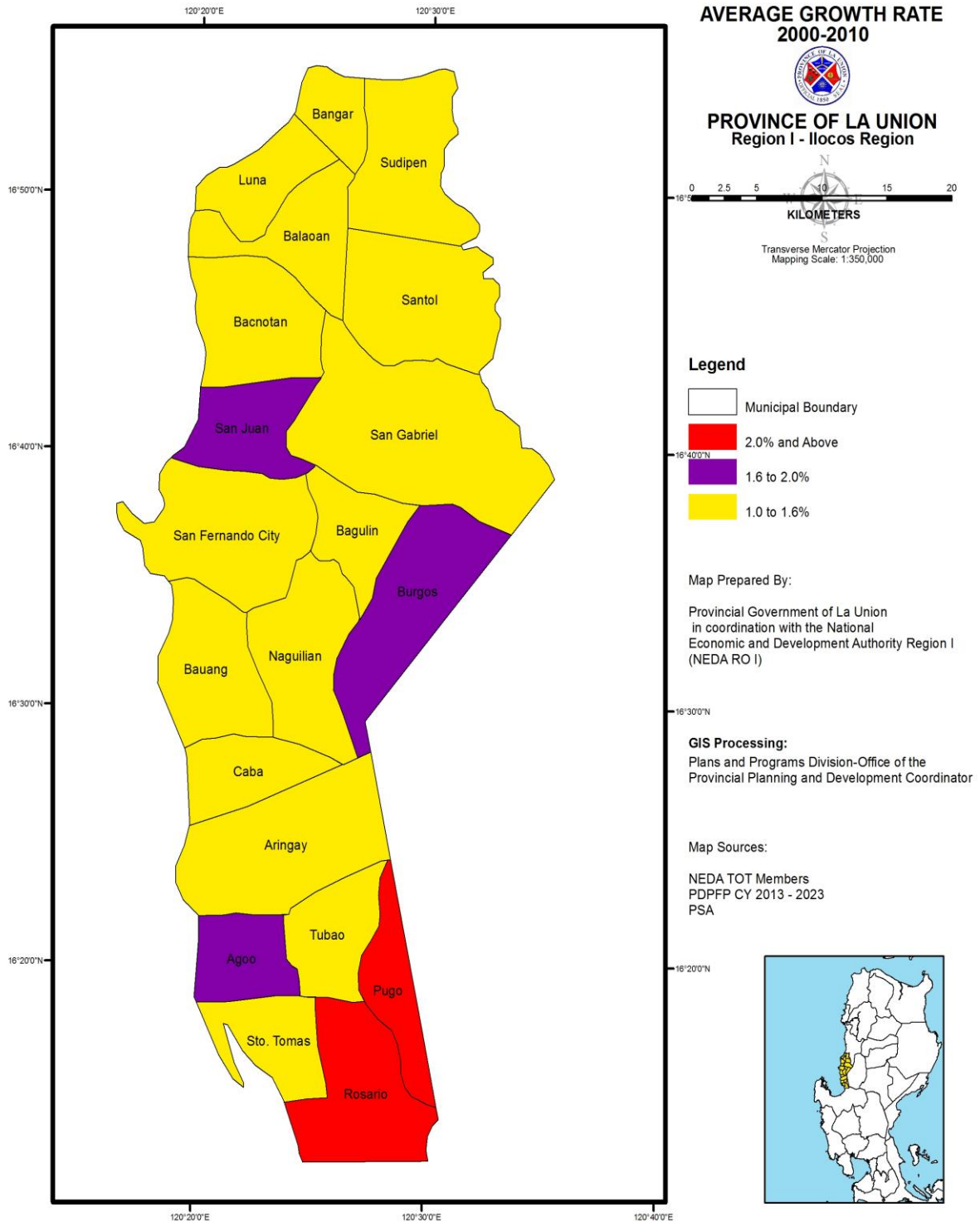


MAP NO. 2: LA UNION



Source of Data: Provincial Planning and Development Office

MAP NO. 3: AVERAGE GROWTH RATE 2000-2010



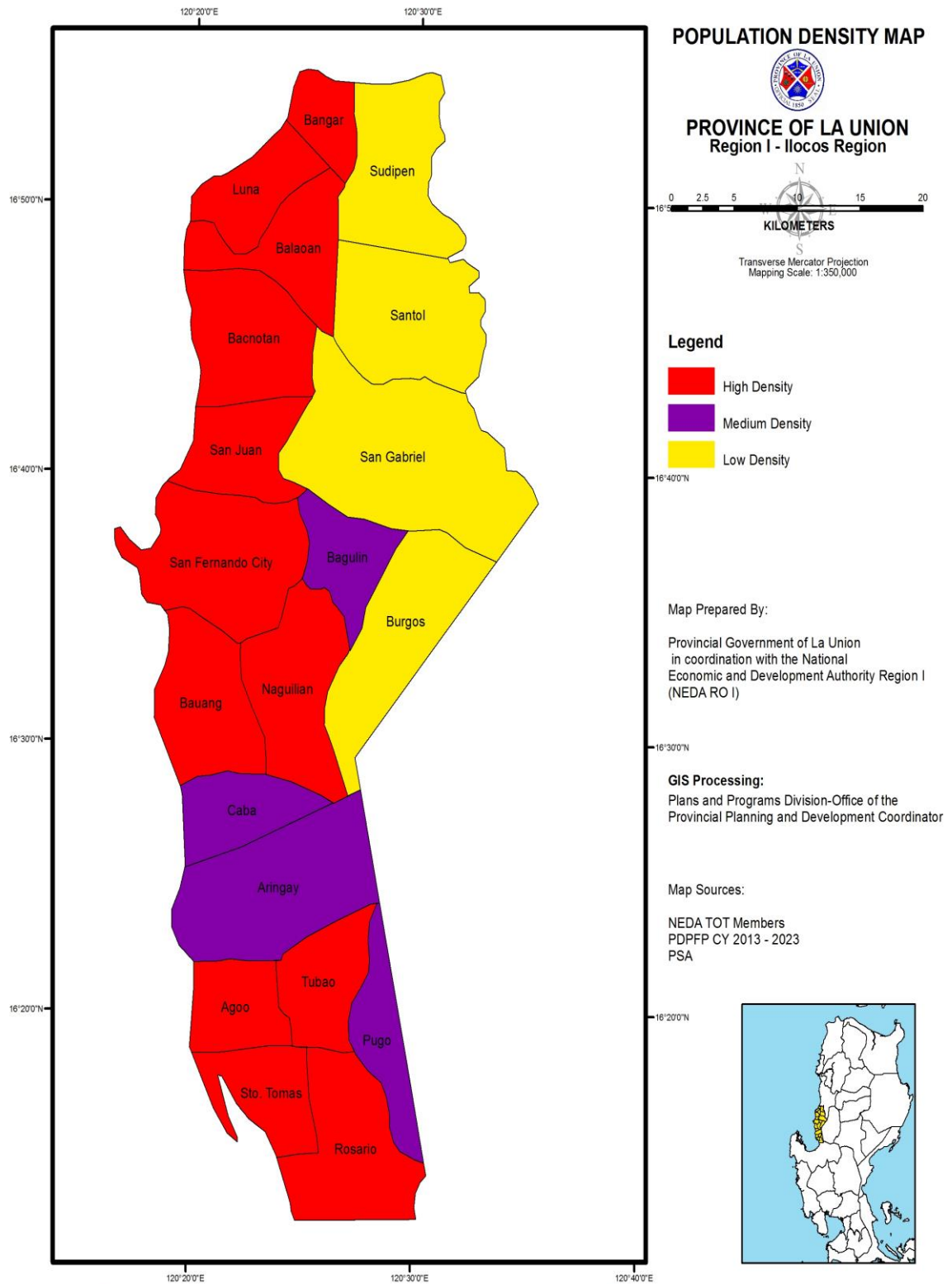
The province's population density increased from 497 in CY 2010 to 527 in CY 2015 which means that in CY 2015, 30 persons more were added to the occupants of a square kilometer.

Agoo, a first class municipality from the 2nd District has the highest population density of 1,240 (CY 2015) persons per square kilometer, followed by the Municipality of Sto. Tomas with population density of 1,206 (CY 2015) persons per square kilometer, while Bagulin, an upland municipality has the least with only 91 persons per square kilometer, San Gabriel of District I also considered an upland/rural municipality has the least population density of 117 persons per square kilometer. See Table 1.

TABLE 1. LAND AREA, POPULATION, POPULATION DENSITY AND DOUBLING TIME, BY MUNICIPALITY/CITY: 2010 - 2015							
DISTRICT/ MUNICIPALITY/ CITY	LAND AREA (hectares)	POPULATION		GROWTH RATE (%)	POPULATION DENSITY (person/sq.km.)		DOUBLING TIME (Years)
		2010	2015		2010	2015	
DISTRICT I	70,069	343,346	359,719	0.89	490	513	77
BACNOTAN	6,507	40,307	42,078	0.82	619	647	84
BALAOAN	6,870	37,910	39,188	0.63	552	570	109
BANGAR	3,604	34,522	35,947	0.77	958	997	89
LUNA	4,489	35,380	35,802	0.23	788	798	305
SN. FDO. CITY	10,688	114,963	121,812	1.11	1,076	1,140	62
SAN GABRIEL	15,500	16,628	18,172	1.71	107	117	40
SAN JUAN	5,186	35,098	37,188	1.11	677	717	62
SANTOL	8,237	12,007	12,476	0.73	146	151	94
SUDIPEN	8,988	16,531	17,056	0.60	184	190	116
DISTRICT II	79,240	398,560	426,934	1.32	503	539	52
AGOO	5,135	60,596	63,692	0.95	1,180	1,240	72
ARINGAY	12,207	44,949	47,458	1.04	368	389	66
BAGULIN	14,762	12,590	13,456	1.28	85	91	54
BAUANG	7,160	70,735	75,032	1.13	988	1,048	61
BURGOS	4,516	7,850	8,067	0.52	174	179	133
CABA	4,862	21,244	22,039	0.70	437	453	98
NAGUILIAN	8,740	48,407	54,221	2.18	554	620	32
PUGO	5,585	16,518	19,690	3.40	296	353	20
ROSARIO	7,000	52,679	55,458	0.98	753	792	70
STO. TOMAS	3,242	35,999	39,092	1.58	1,110	1,206	44
TUBAO	6,031	26,993	28,729	1.19	448	476	58
LA UNION	149,309	741,906	786,653	1.12	497	527	62

Source of Data: Philippine Statistics Authority
DENR-Land Evaluation Party

MAP NO 4. POPULATION DENSITY: 2015

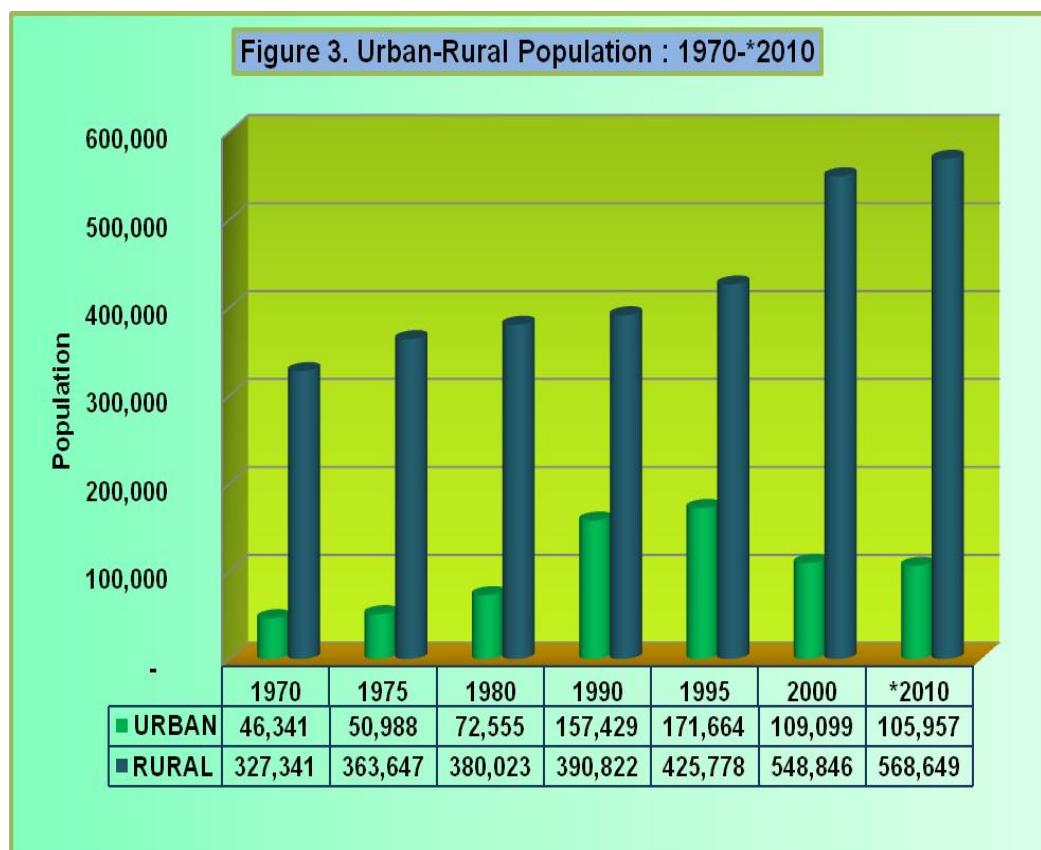


2.3 Bench Mark – Urban-Rural Distribution

2.3.1 Level of Urbanization

According to the 2010 census, of the total population of 741,906, it was projected that fourteen point forty two percent (14.42%) resides in the urban areas while 73.84 percent are in the rural areas. This means that for every 100 residents 14 lives in the urban areas and 74 in the rural areas. In San Fernando City, there are 34 urban residents for every 100 residents while 57 percent are in the rural areas. The municipality of Bauang has 14 percent who lives in the urban areas and 77 percent in the rural areas while in Agog 13 percent are in the urban and 70 percent are in the rural areas. Figure 3 shows the actual number of urban versus rural population from 1970 to 2000 and 2010 projection.

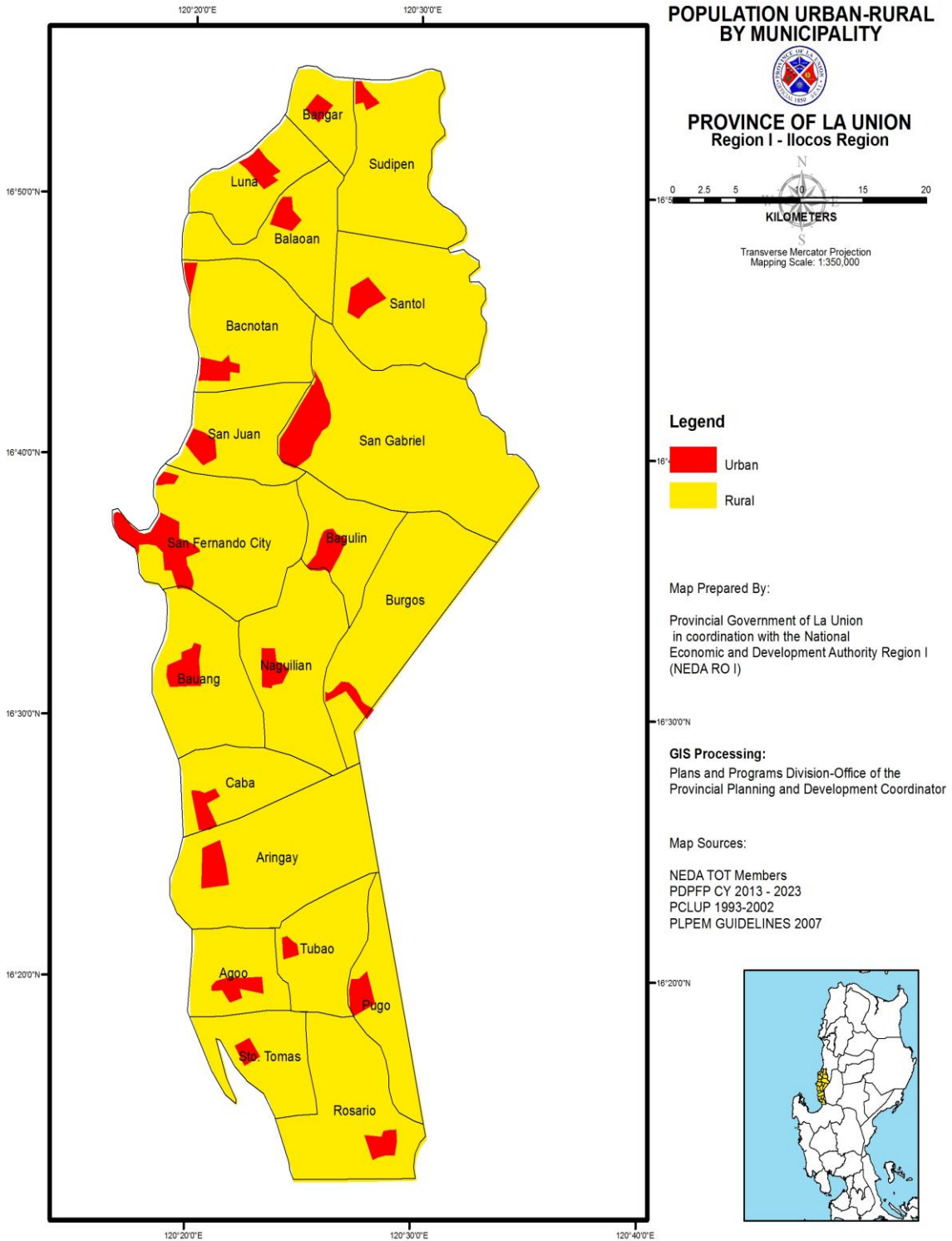
Moreover, data revealed that the province has faster tempo of urbanization (7.77%) relative to the region for the period 1980 to 1990. For the year 2000, there are 20 urban residents per 100 rural residents while in 2010 it was foreseen to decline to 15 urban residents per 100 rural residents.



Legend: (*) -PPDO Projection

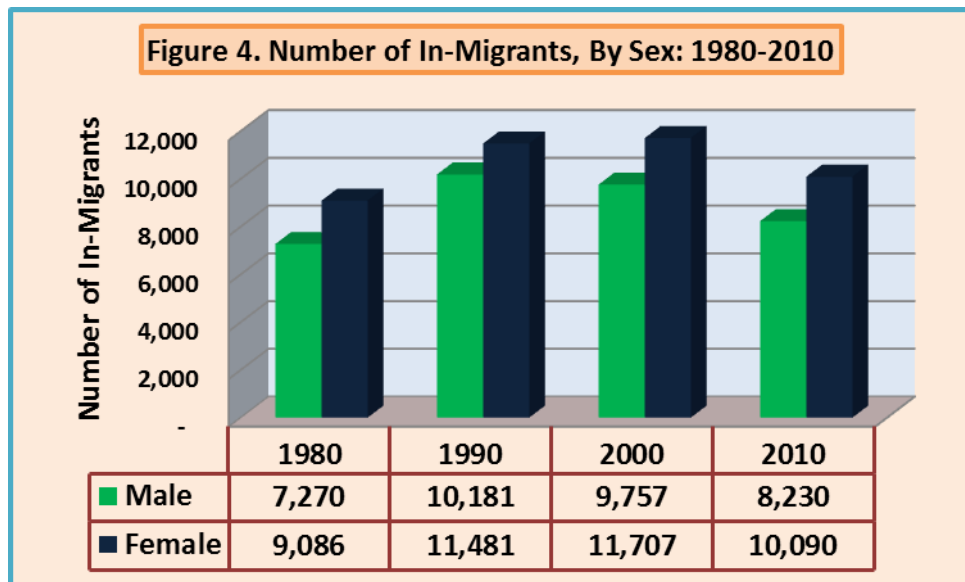
Source of Data: Philippine Statistics Authority

MAP NO. 5: POPULATION RURAL-URBAN BY MUNICIPALITY



2.3.2 Migration Pattern

Majority of the household population five years old and over (97.30 percent) lived in the same city/municipality five years ago and 2.74 percent were migrants from other provinces. There are almost equal proportion of males (48.97%) and females (48.29%) among those who are still residing in the same city/municipality five years ago up to present. In 2010, more females are noted to have transferred from other cities/municipalities of La Union (55.42%), other provinces (54.31%) or from foreign countries (58.17 %). During the same period, women are more likely to migrate into the province than men. Figure 4 show the actual trends of in-migrants in the province from 1980-2010.



Source of Data: Philippine Statistics Authority

2.3.3 Language/Dialects

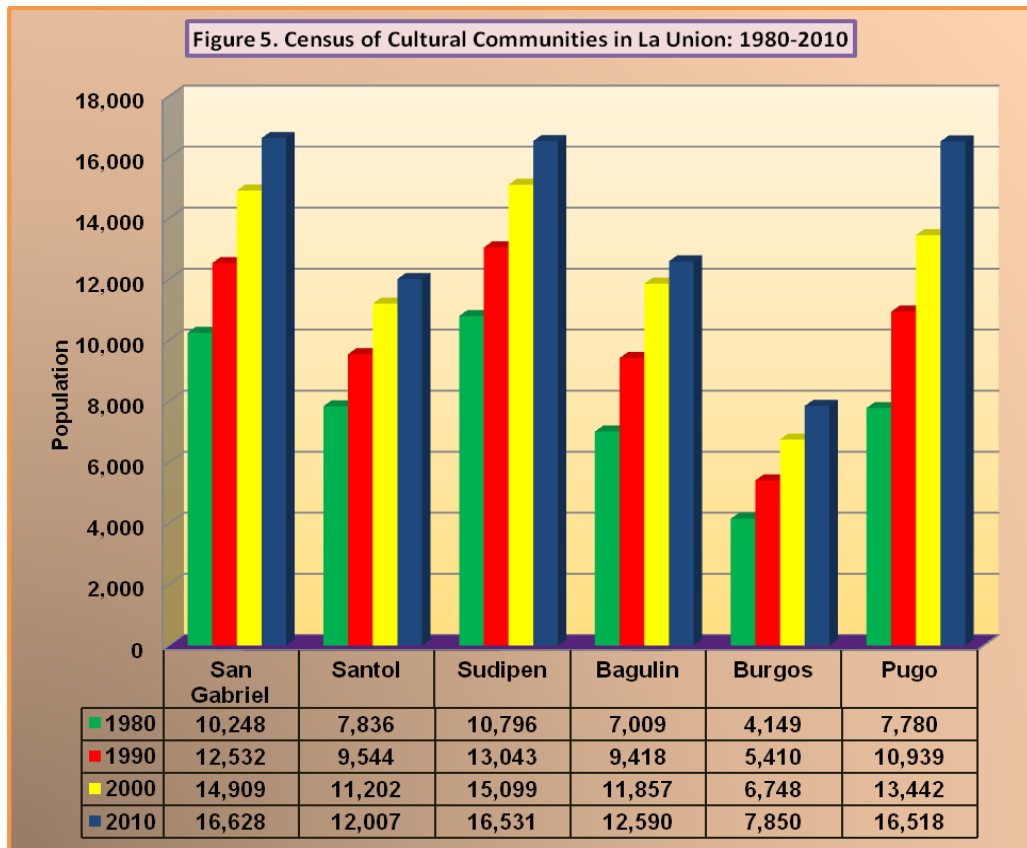
A total of 92 percent of the total population use Iloko as the medium of communication, a decrease to 86% or 6% was observed during CY 2010. The rest use Kankanai/Kankaney/Kankanaey (4 percent), Tagalog (2 percent) Pangasinan/Panggalatok (1 percent), Ibaloi/Inibaloi (1 percent) and the remaining 6 percent belong to other ethnic groups. Residents from the coastal barangays of Sto. Tomas and Rosario also speak Pangasinense while ethnic communities bordering the Cordilleras speak Ibaloi or Kankanaey. Pilipino and English remain to be the basic tool of instructions in schools.

2.3.4 Religious Sects

The inhabitants of La Union as of CY 2010 are predominantly Roman Catholic comprising 86 percent of the total population. About 3 percent are Iglesia Ni Cristo members while the Evangelical Church and the United Church of Christ in the Philippines accounted to 2 percent and 1 percent, respectively.

2.3.5 Ethnic Groups

In 2000 and 2010, total population of the six (6) identified indigenous municipalities is 73,257 and 82,124, respectively. See Figure below.



Source of Data: Philippine Statistics Authority

2.4 Existing Settlement/Growth Pattern

The major settlement/growth area in the province is in the City of San Fernando which is also the economic and educational hub of the province. The major growth center role of the City of San Fernando will influence the growth of its neighboring towns. The town of Bauang, Naguilian, and Bacnotan is a minor growth center that will take a greater role as spillover of the City of San Fernando’s urbanization. The towns of San Juan, Bacnotan, San Gabriel, Naguilian, Bauang and Bagulin will be benefited in San Fernando’s influence. This town comprises the Metro La Union Development Area.

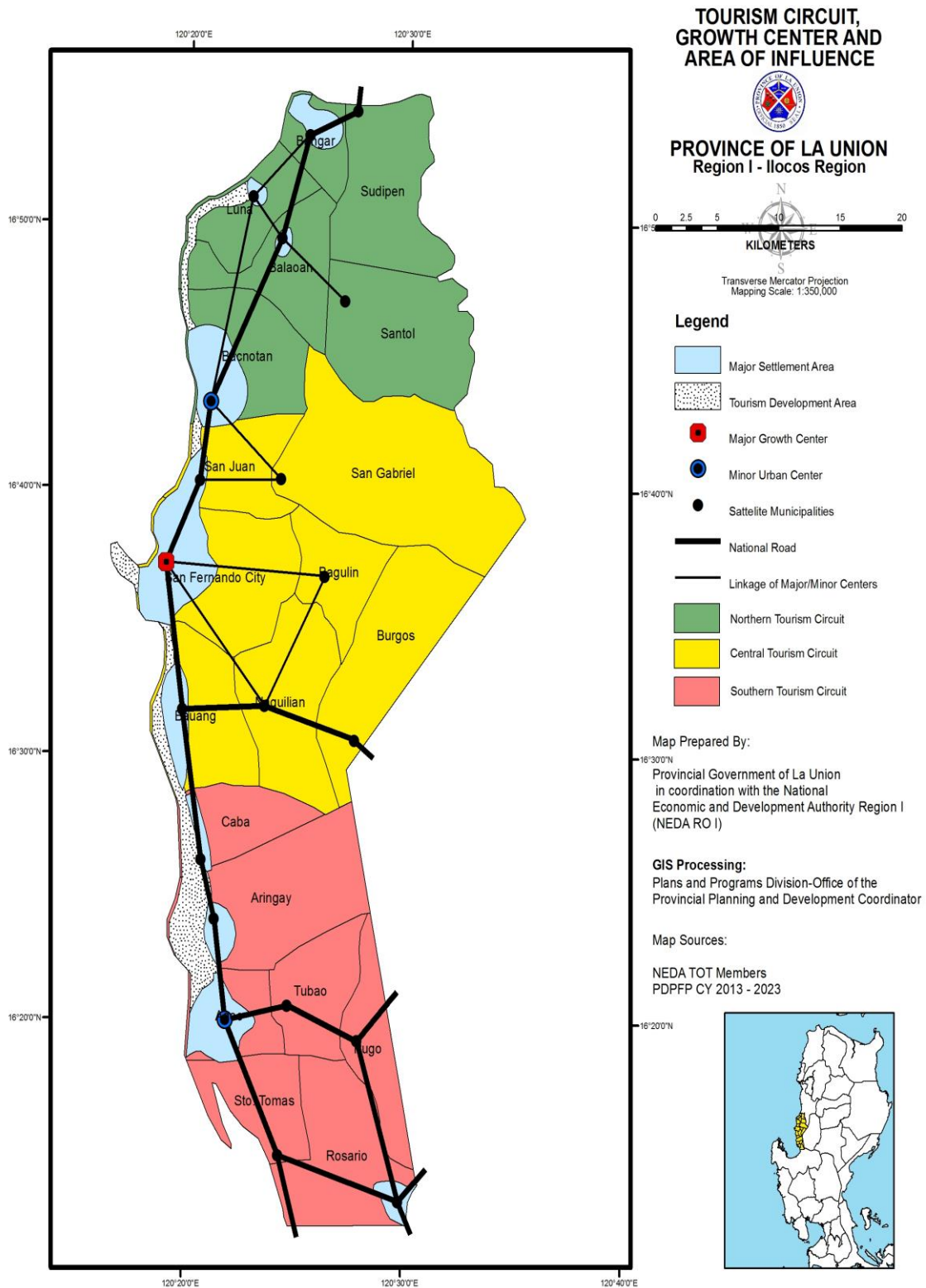
The minor growth center of Agoo and Rosario will radiate to its neighboring towns of Pugo, Tubao, Caba, Aringay and Sto. Tomas. The northern town of Bangar, also a minor growth area that will influence the growth of Luna, Sudipen, Santol and Balaoan. (See Map No. 6 Tourism Circuit, Growth Center and Area of Influence).

The listing pattern, with its respective growth centers are in the transformative alignment as the tourism circuit service centers (major growth centers) and support services (minor growth area).

The three (3) Tourism Circuits area are the following:

1. Northern Tourism Circuit
2. Central Tourism Circuit
3. Southern Tourism Circuit

MAP NO. 6: TOURISM CIRCUIT, GROWTH CENTER AND AREA OF INFLUENCE



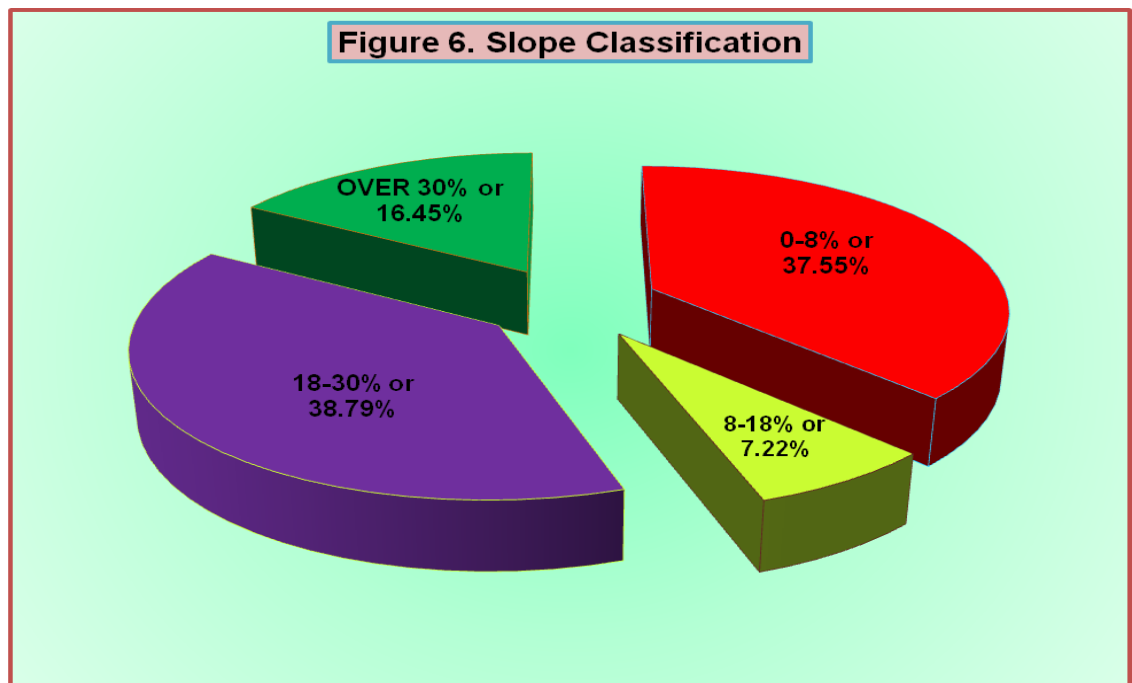
3. PHYSICAL RESOURCES

3.1. Land and Water Characteristics

3.1.1 Topography and Slope

The province has predominantly hilly terrain, which gradually rises eastward from the shore. The western border is a coastal plain of raised coral alluvium (sand/clay) deposited by flowing water and overlaying older sediments. The irregular coastal plain is narrowest in the south of Damortis, Sto. Tomas and widest in the north at Balaoan where it extends almost 15 kilometers inland from the Philippine Sea. The eastern portion is predominantly mountainous but lower in contour than the Cordillera Mountain ranges of Benguet and Mountain Province with a linear north and south arrangement. The highest peak in the province is in the municipality of Bagulin with an elevation of 1,200 feet above sea level. Other areas with an elevation of more than 800 feet are found in San Gabriel and Burgos.

The land area of the province is 149,309 hectares or 11.6 percent of the regional area of 1,284,019 hectares. District II shared more than one-half of the total area (53%). The province's 105,104 hectareage of certified A & D lands shared 12.97 percent of the regional total of 810,062 hectares. The proportion of this total land area (70.39%) was seven (7) percentage points over that of the region of 63.09 percent. Public forestlands contributed less at 44,205 hectares or 29.61 percent of the province's land area.



Source of Data: DENR-RO I

District I is considered to be lowland since it was dominated by the 0-18 percent slope classification, although some of its area were mountainous. Balaoan had the widest lowland area: 5,245 hectares of 0-18 percent slope and only 125 hectares of over 30 percent slope classification. San Gabriel is considered to be the most predominantly upland area (only 689 hectares of 0-18 percent slope) and the widest in terms of the 8 to over 30 percent slope classification. See Table 2.

District 2 is considered to be predominantly upland since 18 to over 30 percent slope classification dominated the area, although some of its area belonged to the 0 to 18 percent slope classification. Bagulin has the widest upland area: 275 hectares of 8 to 18 percent slope, 2,475 hectares of 18 to 30 percent slope and 8,440 hectares of over 30 percent slope classification.

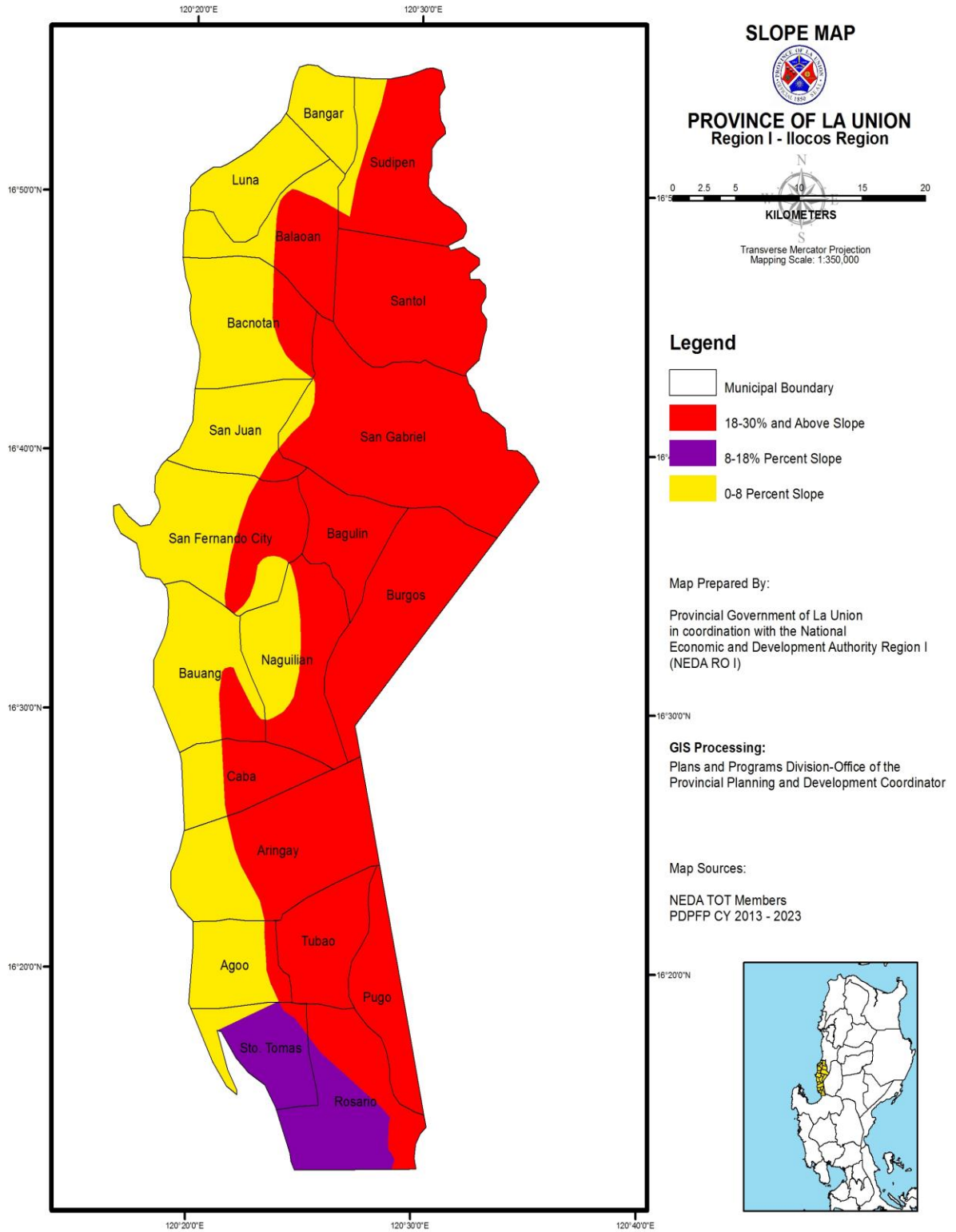
Table 2. SLOPE CATEGORY DISTRIBUTION, BY MUNICIPALITY									
DISTRICT/ MUNICIPALITY/ CITY	LAND AREA (Has.)	AREA BY SLOPE CLASSIFICATION							
		0-8%		8-18%		18-30%		OVER 30%	
		AREA	%DIST.	AREA	%DIST.	AREA	%DIST.	AREA	%DIST.
DISTRICT I	70,069	289.42	51.62	44.49	41.27	266.67	46.05	100.11	40.77
BACNOTAN	6,507	36.82	6.57	1.25	1.16	22.50	3.89	4.50	1.83
BALAOAN	6,870	52.45	9.36	6.00	5.57	9.00	1.55	1.25	0.51
BANGAR	3,604	33.04	5.89			2.25	0.39	0.75	0.31
LUNA	4,489	40.39	7.20	0.25	0.23	4.25	0.73		
SAN FERNANDO CITY	10,688	48.63	8.67	10.50	9.74	37.50	6.48	10.25	4.17
SAN GABRIEL	15,500	6.89	1.23	11.84	10.98	100.70	17.39	35.57	14.48
SAN JUAN	5,186	29.19	5.21	4.07	3.78	17.14	2.96	1.46	0.59
SANTOL	8,237	8.75	1.56	8.78	8.14	40.08	6.92	24.76	10.08
SUDIPEN	8,988	33.26	5.93	1.80	1.67	33.25	5.74	21.57	8.78
DISTRICT II	79,240	271.20	48.38	63.31	58.73	312.43	53.95	145.46	59.23
AGOO	5,135	29.85	5.32	6.75	6.26	12.50	2.16	2.25	0.92
ARINGAY	12,207	48.24	8.60	5.73	5.32	62.71	10.83	5.39	2.19
BAGULIN	14,762	1.71	0.31	2.75	2.55	58.76	10.15	84.40	34.37
BAUANG	7,160	41.98	7.49	2.00	1.86	24.75	4.27	2.87	1.17
BURGOS	4,516	0.25	0.04	2.00	1.86	36.16	6.24	6.75	2.75
CABA	4,862	14.00	2.50	2.67	2.48	31.95	5.52		
NAGUILIAN	8,740	33.98	6.06	4.75	4.41	45.42	7.84	3.25	1.32
PUGO	5,585	7.97	1.42	9.50	8.81	2.70	0.47	35.68	14.53
ROSARIO	7,000	42.64	7.61	9.49	8.80	16.75	2.89	1.12	0.46
STO. TOMAS	3,424	20.42	3.64	2.59	2.40	7.46	1.29	1.95	0.79
TUBAO	6,031	30.16	5.38	15.08	13.99	13.27	2.29	1.80	0.73
LA UNION	149,309	560.62	100.00	107.80	100.00	579.10	100.00	245.57	100.00

Source of Data: DENR-Land Classification Existing LC Maps

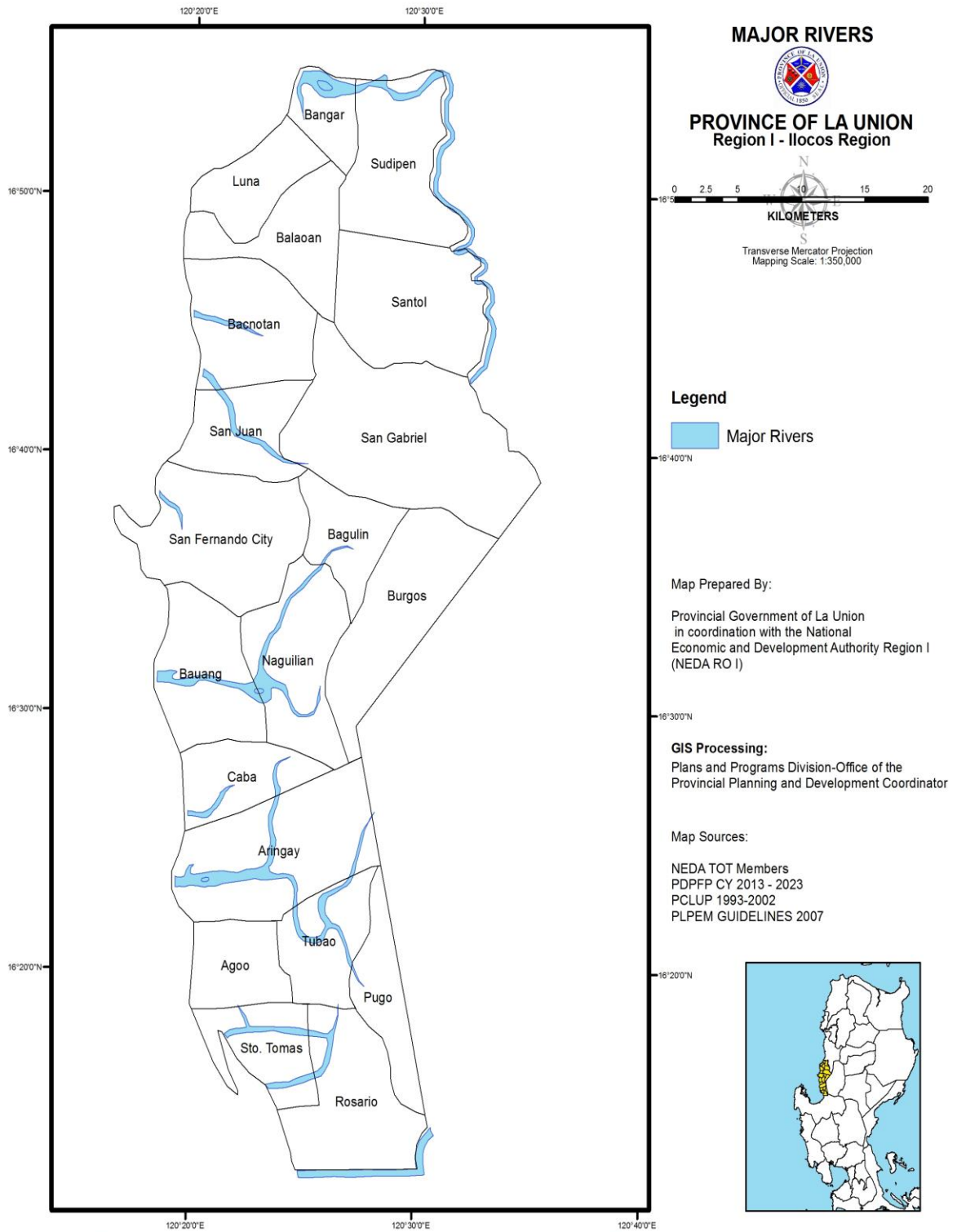
Table 3. MAJOR RIVER BASINS IN LA UNION				
NAME OF RIVER	LENGTH (KM)	DRAINAGE AREA (SQ.KM.)	PROVINCIAL COVERAGE	CLASS
1. Amburayan River	105	1,386	La Union, Ilocos Sur and Benguet	C
2. Baroro River	28	191	La Union	A
3. Naguilian River	55	353	La Union and Benguet	C
4. Aringay River	45	469	La Union and Benguet	B
5. Bued River	70	388	La Union, Pangasinan and Benguet	C

Source of Data: PENRO

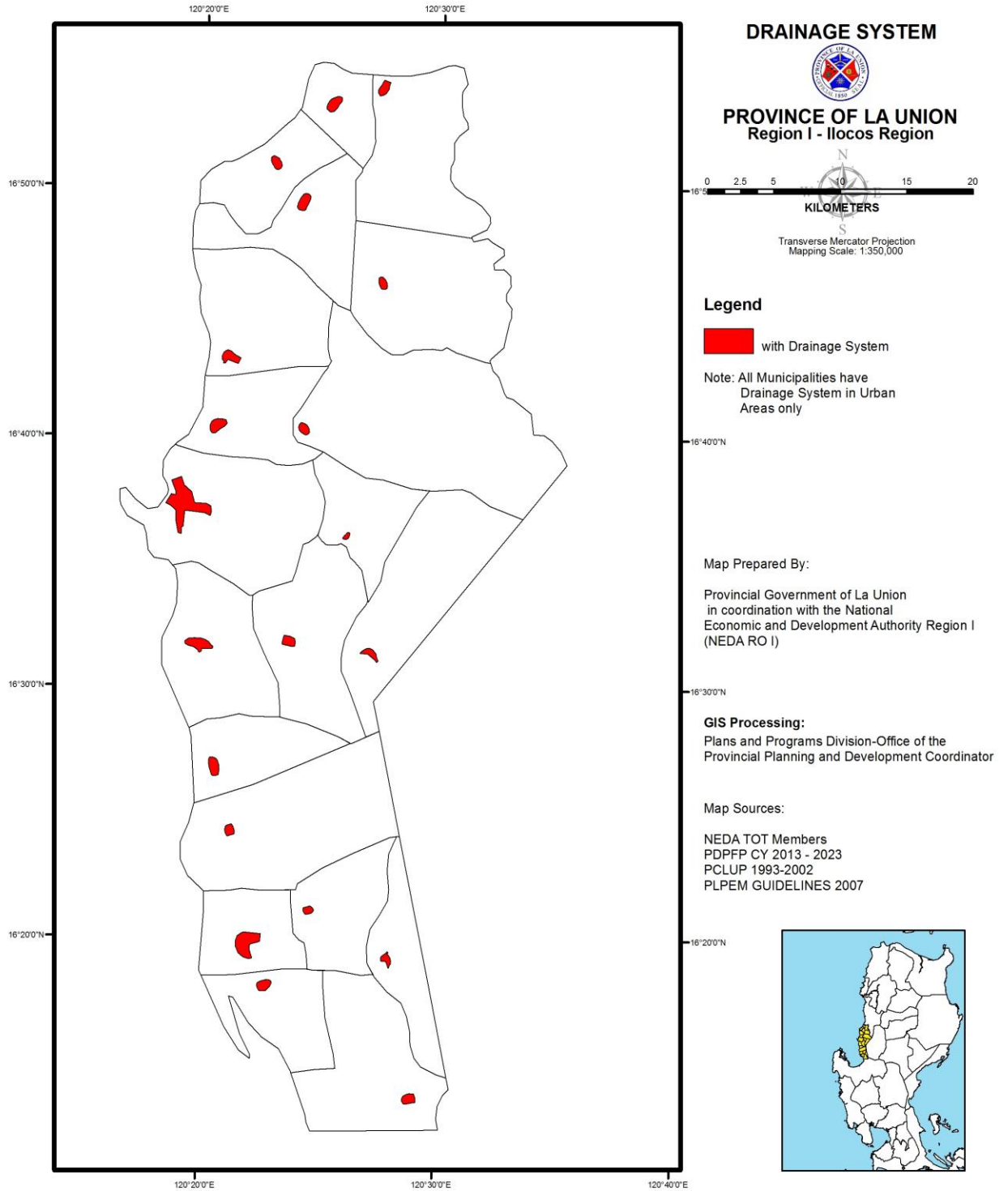
MAP NO. 7: SLOPE MAP



MAP NO. 8: MAJOR RIVERS IN LA UNION



MAP NO. 9: DRAINAGE MAP



DRAINAGE SYSTEM



PROVINCE OF LA UNION
Region I - Ilocos Region



Transverse Mercator Projection
Mapping Scale: 1:350,000

Legend

with Drainage System

Note: All Municipalities have Drainage System in Urban Areas only

Map Prepared By:

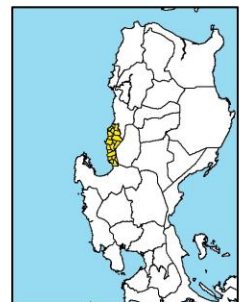
Provincial Government of La Union
in coordination with the National
Economic and Development Authority Region I
(NEDA RO I)

GIS Processing:

Plans and Programs Division-Office of the
Provincial Planning and Development Coordinator

Map Sources:

NEDA TOT Members
PDPFP CY 2013 - 2023
PCLUP 1993-2002
PLPEM GUIDELINES 2007



3.1.2. Land and Water Resources

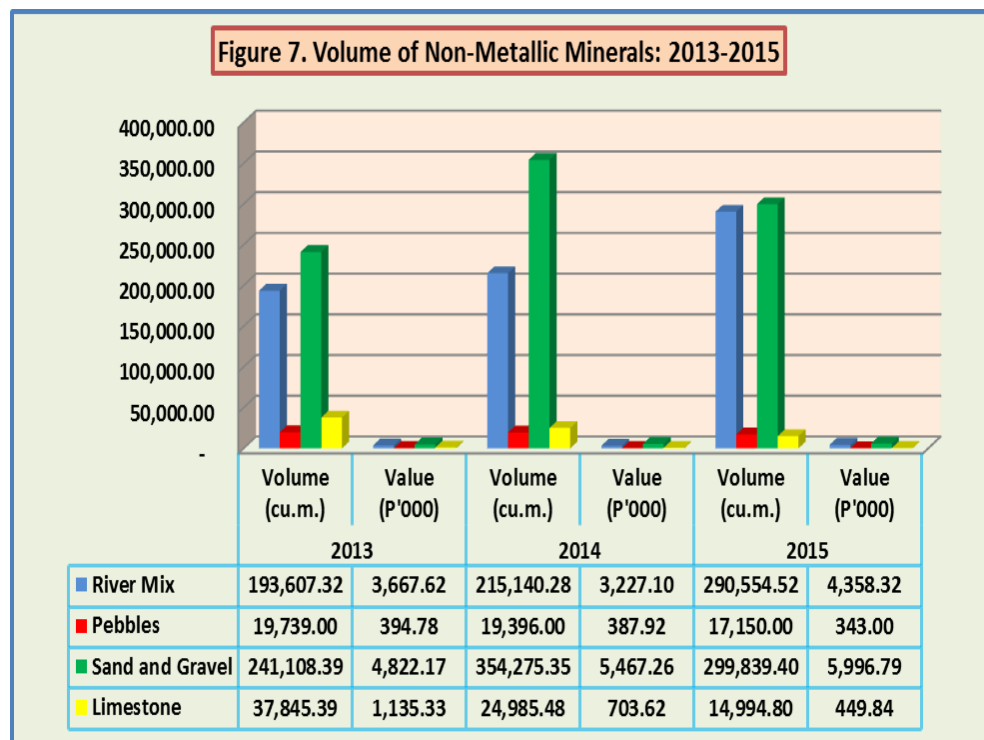
The province has potential surface and groundwater resources that could be used for agriculture and domestic purposes. These resources can sufficiently support the increasing population if fully tapped and explored.

One surface water, out of 29 river systems in Region I, five (5) are found in La Union. The Amburayan River basin is one of the largest in the region, and stretches along the boundaries of La Union and Ilocos Sur. The other major ones are Baroro, Naguilian, Aringay and Bued Rivers. The province is also endowed with creeks, lakes and streams which dissected every municipality in the province. See Table 3.

3.1.3. Main Geological Features/Mineral Resources

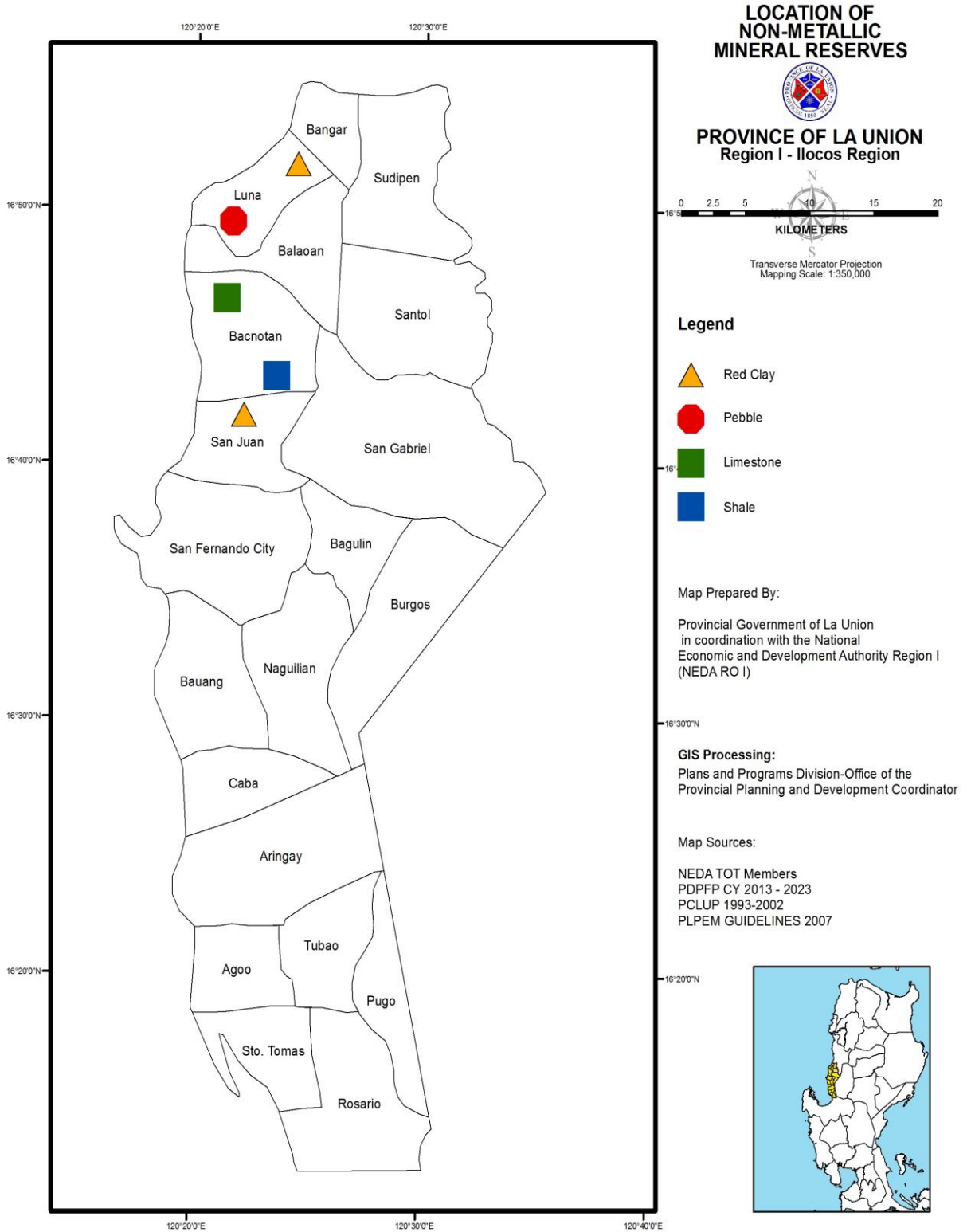
The province’s mineral resources are largely non-metallic types consisting of pebbles found in Luna, river sand and gravel deposits in Bangar, Sudipen, Aringay, Bauang, Naguilian, Burgos, Bagulin, Pugo, Rosario and Tubao.

Figure 7 shows that in CY 2015 among the four (4) mineral resources that the province is producing, river mix/limestone evinced the highest production at 290,554.52 cubic meters and 14,994.80, respectively and valued at P4,358,315.20 and P449,844.04. Pebbles has a production of 17,150 cu.m valued at P343,000.00. The aggregate mineral production is valued at P5,996,788.38 To address and regulate the problem of excessive quarrying an ordinance to this effect was passed and approved.



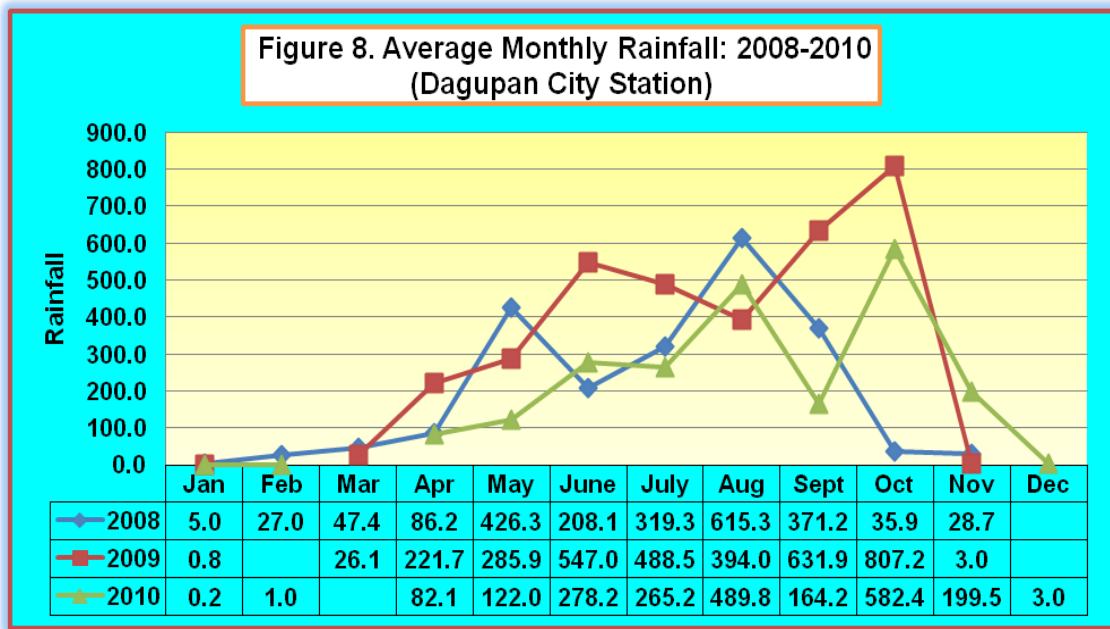
Source of Data: Provincial Treasurer’s Office

MAP NO. 10: NON-METALLIC MINERAL RESERVES

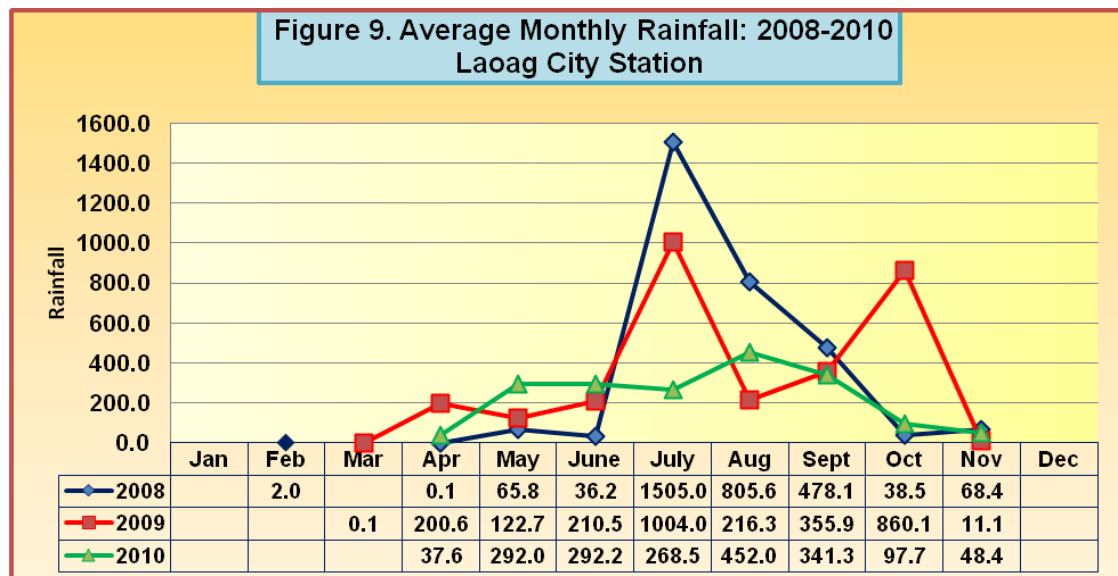


3.1.4. Climate and Weather

The province has two (2) distinct seasons: the wet season which is characterized by abundant rainfall brought about by the southwest monsoon, and the dry season which is characterized by the striking low rainfall due to passing of the northeast monsoon over the Cordillera Mountains.



Source of Data: PAG-ASA, Dagupan City Station

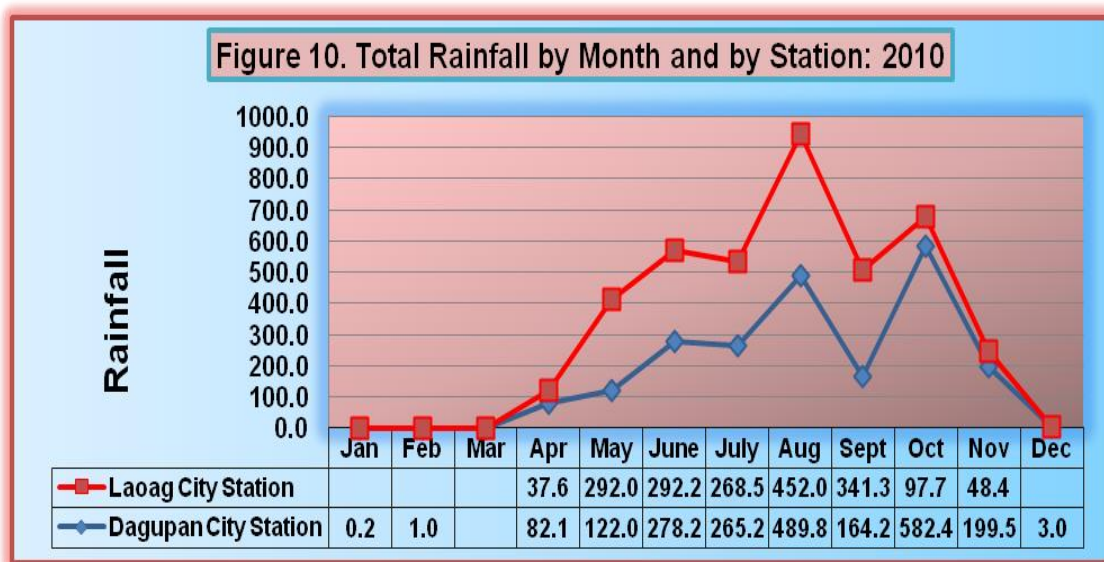


Source of Data: PAG-ASA, Laoag City Station

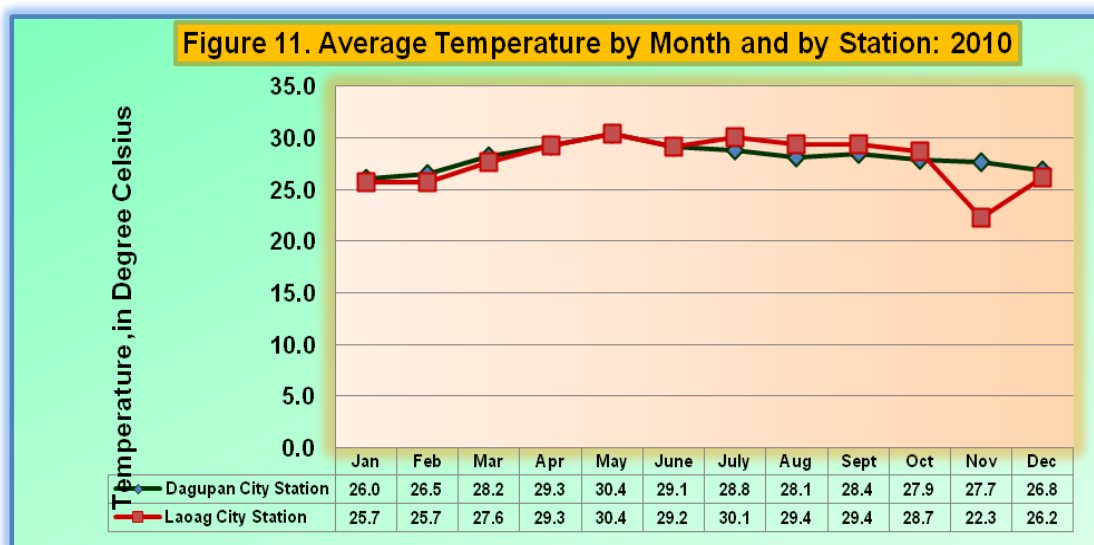
The striking low rainfall during the dry season from December to April is due to the very effective shielding of La Union from the northwest and even from the trade winds by the mountain ranges of Northern Luzon.

As soon as a drift of wind from the southwest quadrant comes in May, there is an immediate increase in rainfall since La Union is unprotected from the west. Due to depressions and typhoons which come very frequently in the region and owing to the presence of the so-called wet southeast monsoon or moist equatorial air in the west Philippine Sea. The months of May to November have abundant rainfall, the maximum occurring in August as shown in Figure 8, 9, 10 & 11.

The average annual rainfall is (198.9 mm. in 2010-Dagupan City Station to 183.0 mm. in 2010-Laoag City Station). The month of August showed a maximum rainfall of (489.8 mm in 2010 –Dagupan City Station vs 452.0 mm. in 2010), respectively. Minimum (tangible) rainfall was seen in January and March.



Source of Data: PAG-ASA, Laoag City & Dagupan City Station



Source of Data: PAG-ASA, Laoag City & Dagupan City Station

Based from PAGASA’s record, 85 tropical cyclones crossed the Province of La Union 50 km from boundaries from 1948 to 2009. Out of 85, 1 is considered super typhoon, 41 typhoons, 19 tropical depressions and 24 tropical storms. These tropical cyclones crossed the province from the month of April to December. It is in the months of July and October that tropical cyclones frequently crossed the province 50 km from the boundary.

Table 4. Tropical Cyclone which Crossed the Province 50 Km from Boundaries (1948-2009)																	
PROVINCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total	TD	TS	TY	STY
LA UNION	0	0	0	1	8	6	17	11	12	16	13	1	85	19	24	41	1

Based on 1971-2000 normal values under high ranged emission scenario, rainfall for the province is expected to increase by 20.5% to a high of 22.9%. It is projected that rainfall will be 17.71 mm in the months of December, January and February to a high of 2,274.62 mm during the rainy months of June, July and August. In the case of a Medium-Range Emission Scenario during the same period (December, January and February) a decrease of 4% is projected and a high of 43.1% during the rainy months. Rainfall is estimated at a low of 14.64 to a high of 2,650.64 mm rainfall. Refer to table below.

Table 5. Projected Rainfall Change (%) Under High Range Emission Scenario in 2050 Based on 1971-2000 Normal Values								
PROVINCE	BASELINE OBSERVED (mm)				HIGH-RANGE EMISSION SCENARIO			
	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON
LA UNION	14.7	395.6	1,852.3	837.8	20.5	22.9	22.8	22.2

It can be seen from the table below that based on observed values from 1951 to 2010 of PAGASA, the threshold of 480 mm of rainfall per day may likely to occur between 30 to 100 years with a likelihood score of 3 which means that the likelihood of hazard events in the province is unlikely or improbable.

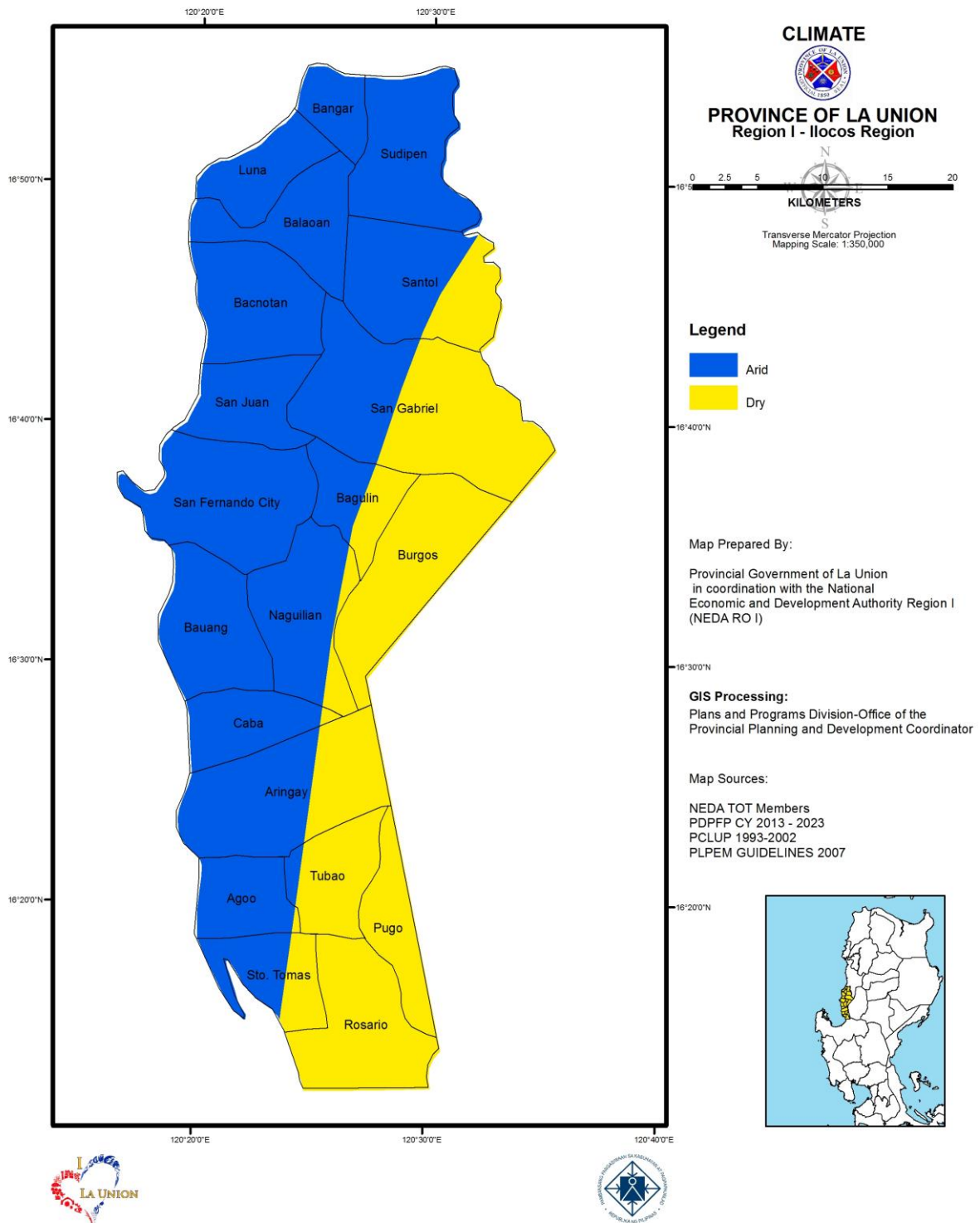
Table 6. Frequency Table for 1-day Rainfall Based on Observed Values (1951 – 2010)										
Province	2	3	5	10	20	30	50	70	80	100
Northern La Union	205.7	243.1	285.5	339.8	393.0	424.1	463.3	489.9	499.8	517.3
Southern La Union	178.4	217.8	264.5	328.0	394.2	435.0	488.5	526.1	540.5	566.1

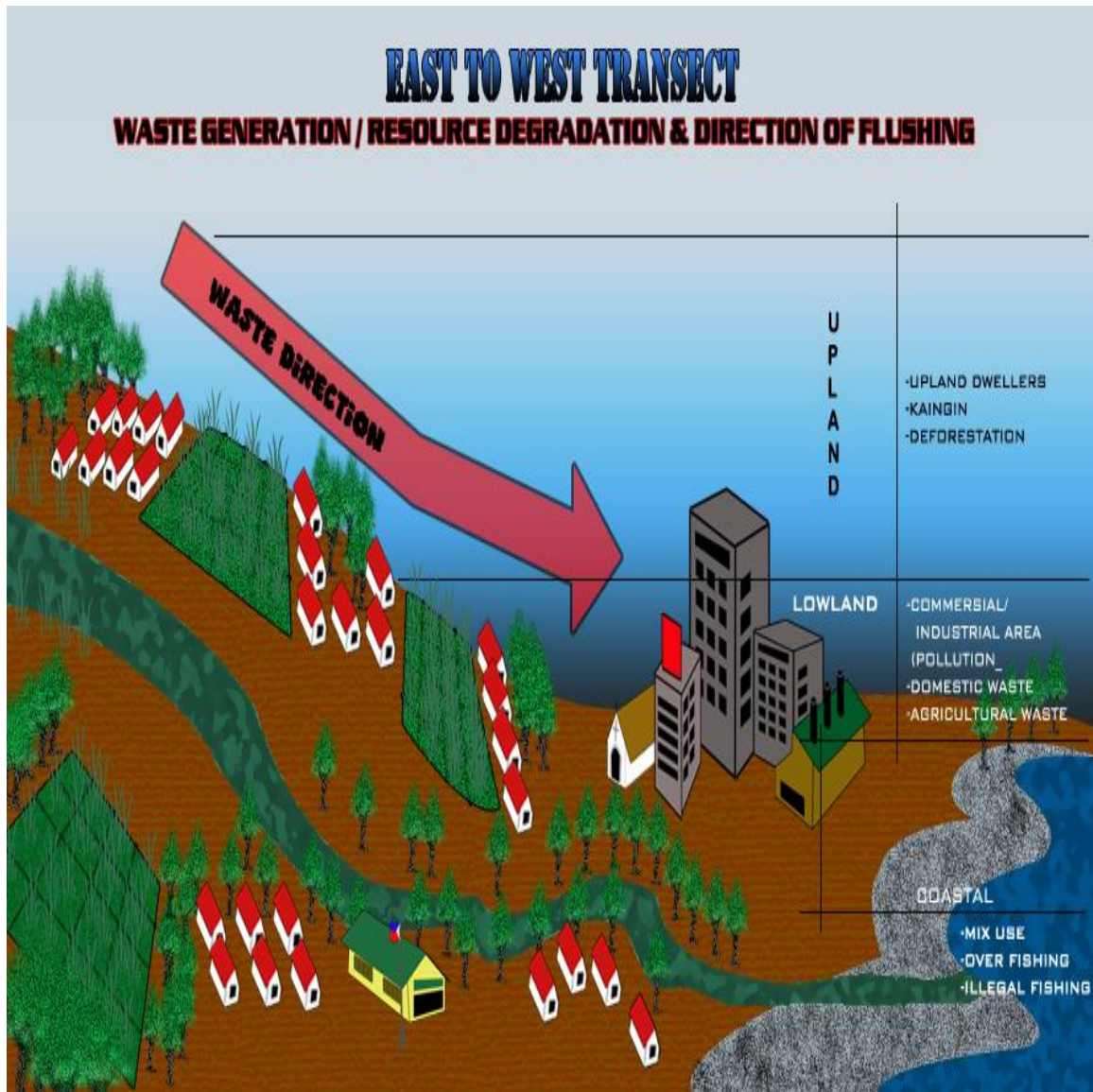
3.1.5. Coastal Resources

A total of 45,790.5 hectares of municipal waters is available for marine fishery production. Simple gear used in the area produces 7,062 MT annually. The great East to West transect line shows that La Union is a narrow strip of low land laid North to South and bounded on the East by

the mountains or upland areas and on the West by the coast (West Philippine Sea / Lingayen Gulf).

MAP NO. 11: CLIMATE MAP





The coastal area is being threatened by the downward flow of pollutant. By mere gravity, transect clearly shows that an uplands pollutant goes down to the lowland and combines with it. Its refuse, finally, drains down to the sea.

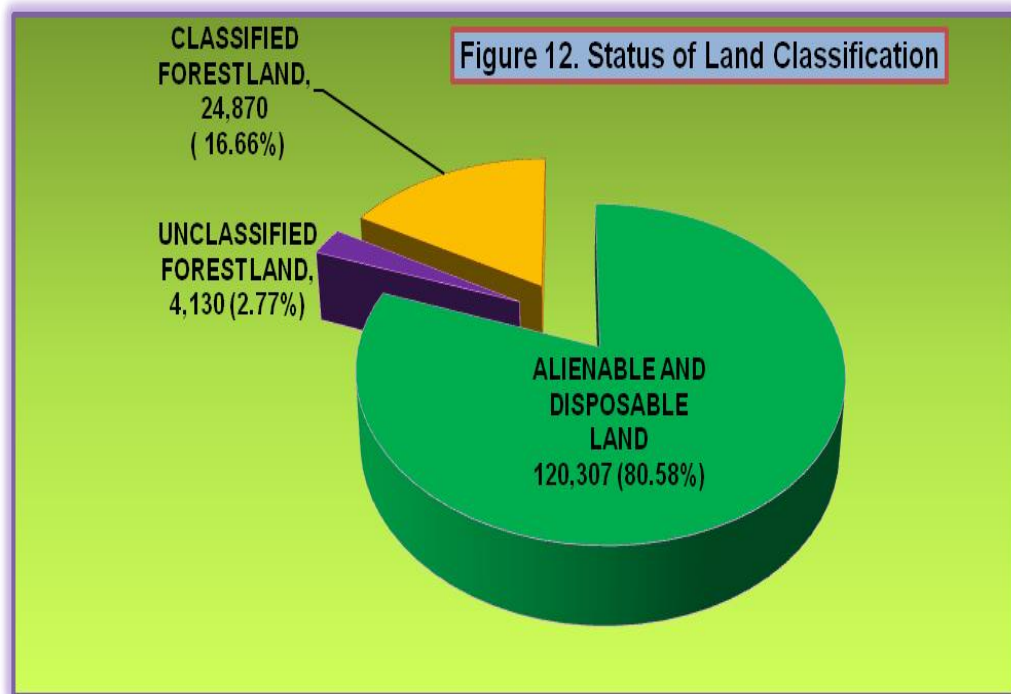
The province is of the few provinces with a Coastal Management Program which ensures the sustainable utilization of the Marine Resources, including riverine areas. See picture (East to West Transect).

3.2. Land Use Potential and Constraints

3.2.1 Land Classification

The province has two (2) major land classifications: the alienable and disposable (A & D lands) and the public forestlands. The province’s 120,307 hectares of certified A & D lands shared 80.58 percent of the total land area. Public forestlands contributed less at 19.43 percent of the province’s total as shown in Figure 12.

Total land areas of Balaoan, Bangar and Luna all classified as A & D. For District I, San Gabriel had the widest A & D land (10,938 hectares). San Juan has the narrowest at 3,788 hectares). As for public forestlands, San Gabriel shared the largest of 43.53 percent among the municipalities in the district. Meanwhile, for District II’s certified alienable and disposable (A & D) land, Naguilian had the widest A & D land (8,116 hectares) while Burgos had the narrowest (only 2,553 hectares). Bagulin had the widest public forestlands of 76.29 percent (11,262 hectares) followed by Aringay (8,288 hectares).



Source of Data: DENR-RO I

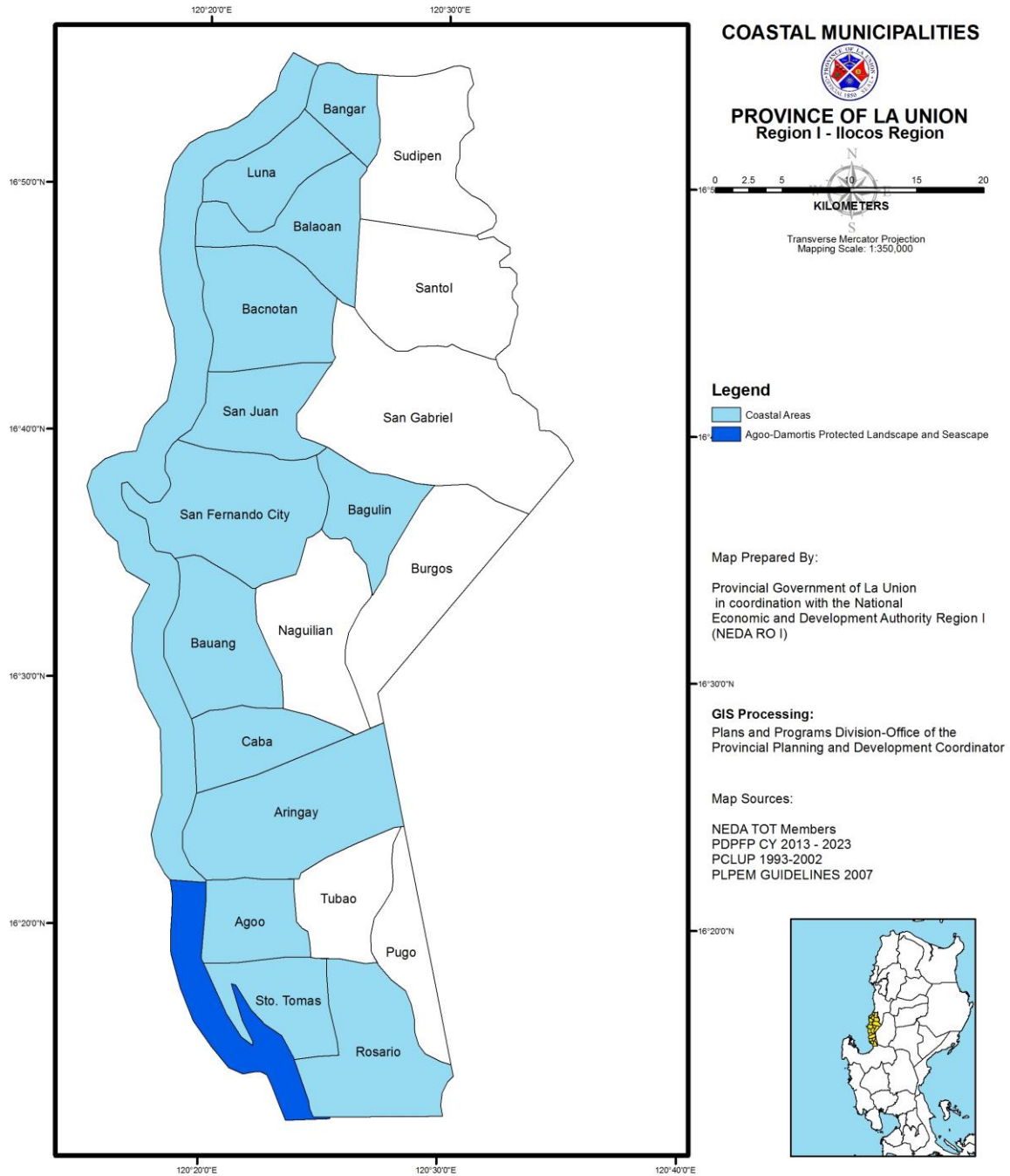
3.2.2 Land Constraint

The average land holding is not more than half hectares that production is not maximized.

The province has a large tract of grassland which can be utilized for production purposes but are underutilized.

Conversion of Land Use is also evident. Agriculture to housing, mangrove to fishpens, etc.

MAP NO. 12: COASTAL MUNICIPALITIES



COASTAL MUNICIPALITIES



**PROVINCE OF LA UNION
Region I - Ilocos Region**



Transverse Mercator Projection
Mapping Scale: 1:350,000

Legend

- Coastal Areas
- Agoo-Damortis Protected Landscape and Seascape

Map Prepared By:

Provincial Government of La Union
in coordination with the National
Economic and Development Authority Region I
(NEDA RO I)

GIS Processing:

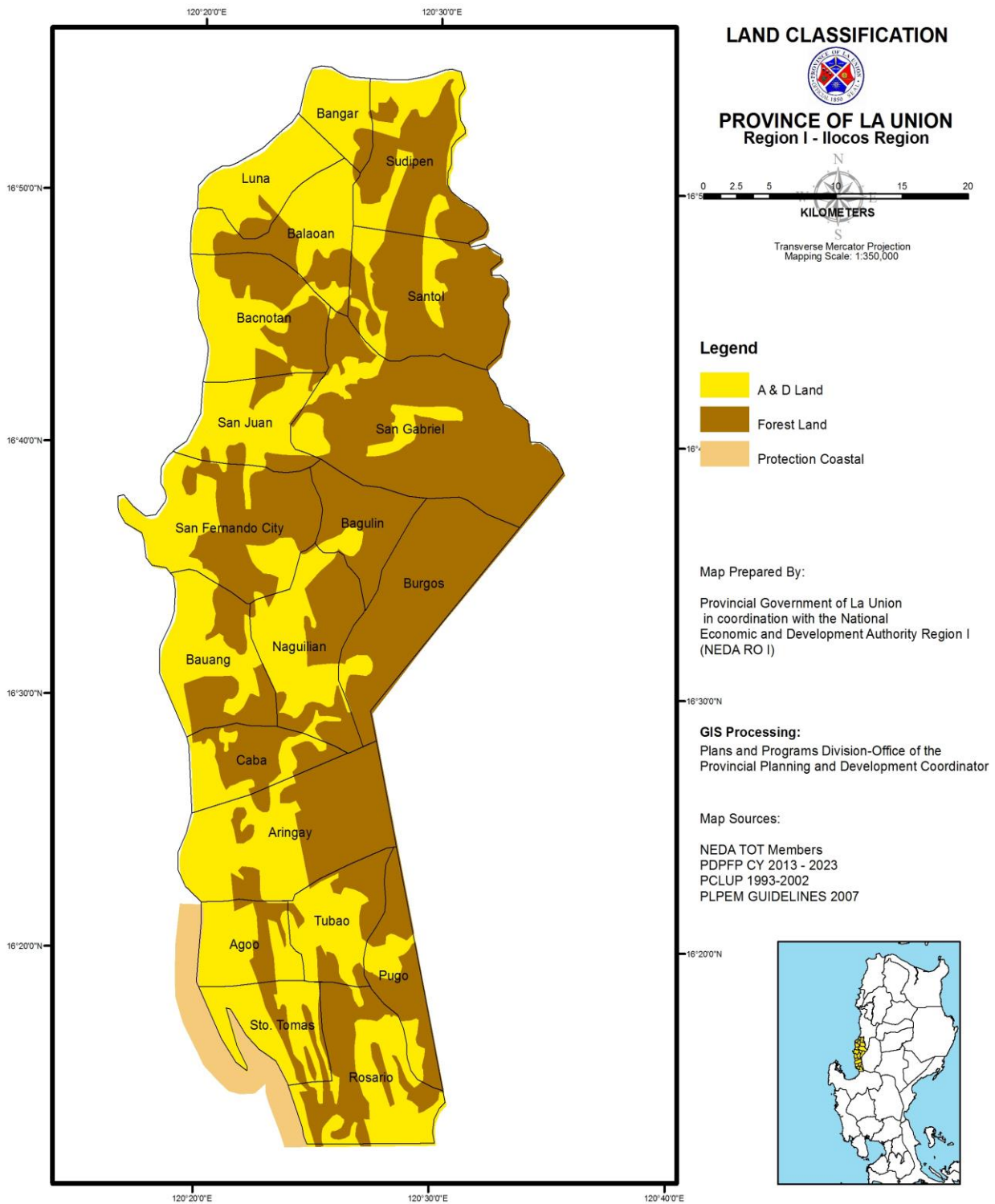
Plans and Programs Division-Office of the
Provincial Planning and Development Coordinator

Map Sources:

- NEDA TOT Members
- PDPFP CY 2013 - 2023
- PCLUP 1993-2002
- PLPEM GUIDELINES 2007



MAP NO. 13: LAND CLASSIFICATION



LAND CLASSIFICATION



**PROVINCE OF LA UNION
Region I - Ilocos Region**



Transverse Mercator Projection
Mapping Scale: 1:350,000

Legend

- A & D Land
- Forest Land
- Protection Coastal

Map Prepared By:

Provincial Government of La Union
in coordination with the National
Economic and Development Authority Region I
(NEDA RO I)

GIS Processing:

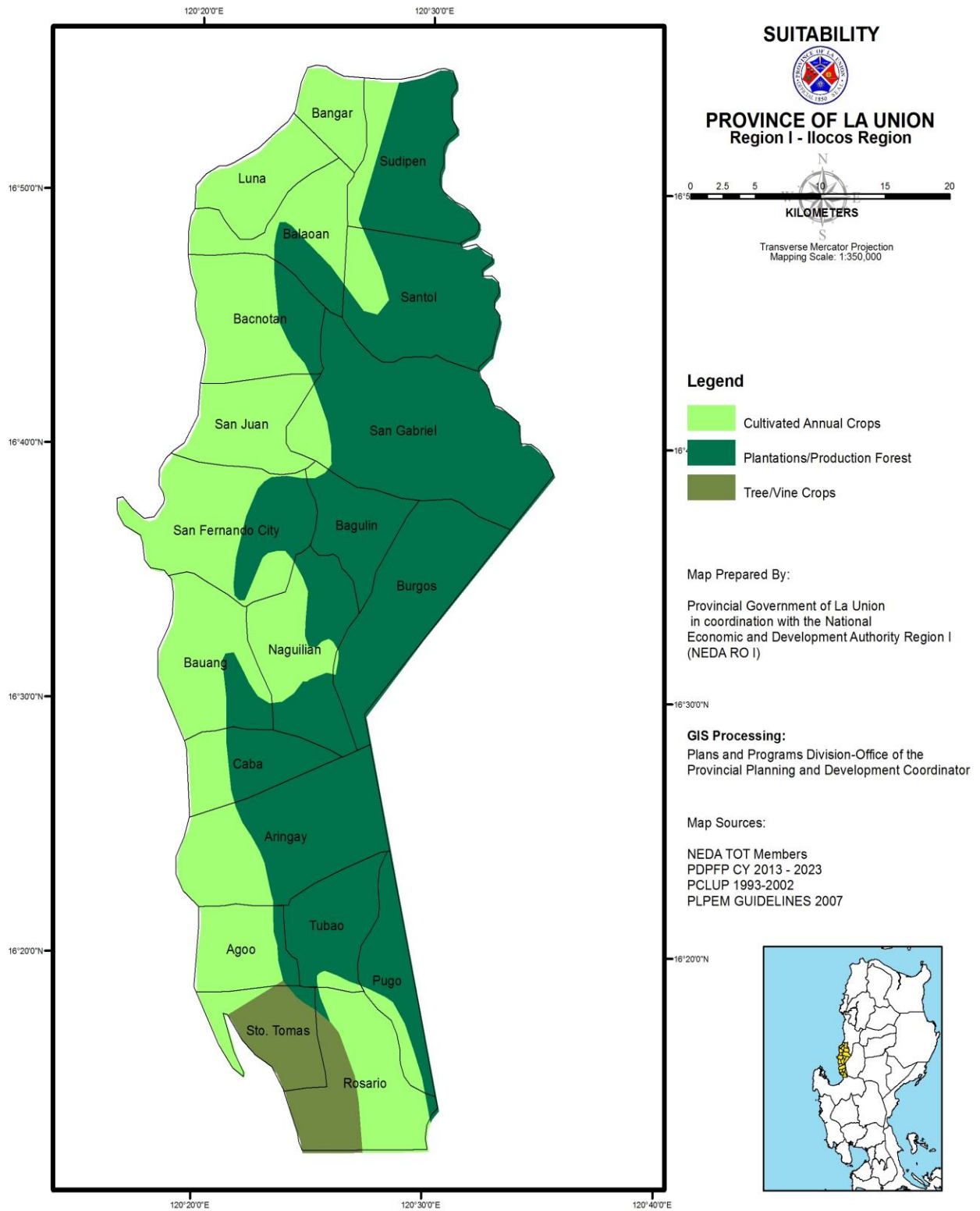
Plans and Programs Division-Office of the
Provincial Planning and Development Coordinator

Map Sources:

- NEDA TOT Members
- PDPFP CY 2013 - 2023
- PCLUP 1993-2002
- PLPEM GUIDELINES 2007



MAP NO. 14: LAND SUITABILITY



3.2.3 Natural Hazards

The Western side of La Union is bounded by the Lingayen Gulf and the West Philippine Sea and is prone to tidal surge due largely to storms. Eastward are the flatlands and the agricultural areas which are susceptible to floods due to the overflowing of rivers. (See Map No. 15: Flooding Map).

Liquefaction areas are in the south-western part of La Union particularly Sto. Tomas, Agoo, Aringay and part of Caba and Bauang.

The eastern half of La Union is prone to land erosion owing to its slope (mountainous) and is on the active fault zone (See Map No. 16: Risk Map). Highly vulnerable in the towns of Rosario, Tubao, Pugo, Burgos, Bagulin, Santol and Sudipen.

3.2.4 Hydrometeorologic Hazards

Philippines is located along the Typhoon Belt which is a pathway for a large number of tropical cyclones. Indeed, an average of 20 storms and typhoons hit the country every year. This explains why our province is considered prone to hydro-meteorological hazards which includes storm surges, rain induced landslides and flooding.

An average of three (3) typhoons affects the province annually. Of the eleven (11) typhoons that hit the province, four (4) affected more than ten (10) municipalities or half of the province. These typhoons cause floods and rain-induced landslides and may result to damage of properties and sometimes loss of life. Typhoon Pepeng having winds of 185-250 km/hr was the most disastrous that affected the province leaving 45 dead and 8 missing.



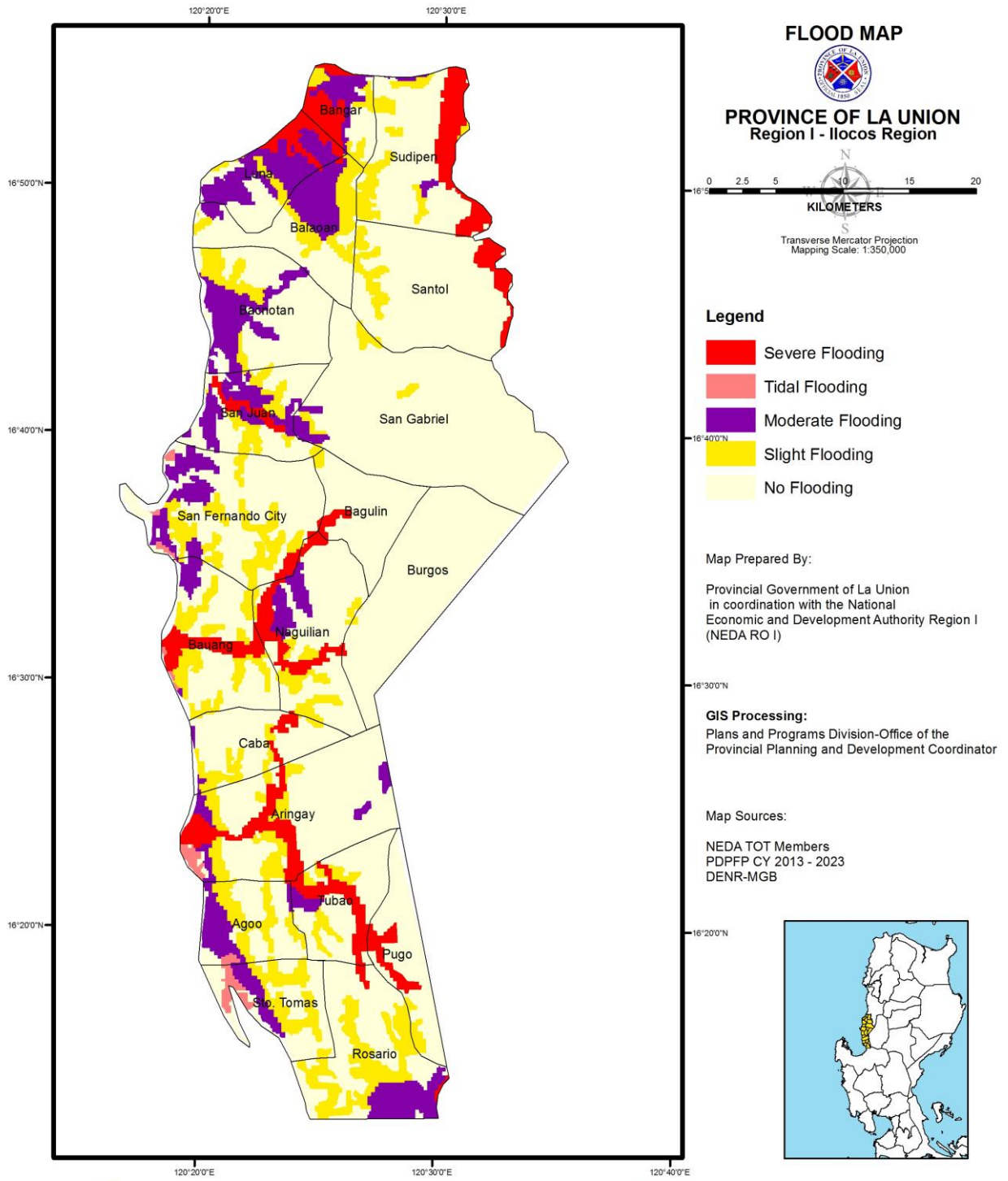
Flooding during Typhoon Pepeng



3.2.4.1 Flood

Flooding is the inundation of land areas which are not normally covered by water. It is usually caused by a temporary rise of the water level of a river, stream or other water course, inundating adjacent lands or flood-plains. This hazard can be brought about by heavy rainfall or sometimes dam or dike failure. The three types of flooding according to location are the river flooding, coastal and urban flooding while there are two types when it comes to duration, the flash flood (upstream floods) and the sheet flooding or what we called downstream flooding. Our province is considered prone to flooding. In fact, during Typhoon Pepeng our province experienced flooding affecting almost the entire area.

MAP NO. 15: FLOODING MAP



Past Flood Events. Flooding occurs in most municipalities of the province. This is usually from the overflowing of river systems like Amburayan affecting Bangar and Sudipen; Borobor River flooding Rimos, Luna to Bangar; Baroro River affecting San Juan and Bacnotan; Aringay River affecting eastern areas with Alaska, Samara, Poblacion, Sta. Lucia and Dulao; Naguilian River affecting Naguilian and Bauang; and Bued River affecting Rosario.



Damages caused by Flooding in Aringay during Typhoon Pepeng

In urban areas, flood is also evident but is caused by clogged/ineffective drainage systems as evidenced by the subsiding of water in an hour after down pour.

Table No. 7: Past Flood Events		
Description	Population/Areas Affected	Impacts
Typhoon Ramil (Signal No. 2) on October 22, 2009	4 Municipalities which includes Aringay, Bangar, Luna and Ago Affecting 10 barangays Affecting 363 families for a total of 1,263 persons	No reported fatalities and damages to properties
Typhoon Pepeng Signal No. 3) on Oct 2, 2009	19 municipalities and 1 city covering all the barangays Affecting 69,657 families for a total of 316,448 persons	Dead=45; Injured=87; Missing=8 No. of Damaged Houses Totally Damaged = 2,042 houses Partially Damaged = 16,693 houses Damaged to Properties Infrastructure = P 95,000,000 Agriculture = P 642,289,578
Typhoon Emong (Signal No.3) on May 6, 2009	15 Municipalities which includes Ago, Aringay, Bacnotan, Bagulin, Bauang, Burgos, Caba, Naguilian, Pugo, Rosario, San Gabriel, San Juan, Sto. Tomas, Tubao and San Fernando City Affecting 308 barangays Affecting 16,014 families for a total of 72,639 persons	Dead=3; Injured=19 No. of Damaged Houses Totally Damaged = 2,203 houses Partially Damaged = 13,695 houses Damaged to Properties Infrastructure = P 18,721,000 Agriculture = P 10,761,387
Typhoon Cosme (Signal No. 2) on May 17, 2008	18 Municipalities Affecting 224 barangays Affecting 18,169 families for a total of 92,381 persons	Dead=5; Injured=14 No. of Damaged Houses Totally Damaged = 1,881 houses Partially Damaged = 14,007 houses Damaged to Properties Infrastructure = P Agriculture = P 60,383,655
Typhoon Karen (Signal No. 2) on August 19, 2008	10 Municipalities which includes Bauang, Sudipen, Luna, Bacnotan, Bangar, San Fernando City, San Juan, Caba, Bagulin and Tubao Affecting 74 barangays Affecting 3,621 families for a total of 14,519 persons	Dead=1; Injured=1 No. of Damaged Houses Totally Damaged = 4 houses Partially Damaged = 5 houses Damaged to Properties Infrastructure = P 16,743,920 Agriculture = P 901,000
Typhoon Helen (Signal No. 2) on July 15, 2008	2 Municipalities covering 15 barangays Affecting 860 families for a total of 4,302 persons	No reported fatalities and damages to properties
Typhoon Dodong on August 8, 2007	8 Municipalities including Bacnotan, Caba, Luna, Bangar, Bauang, Aringay, Ago and Sto. Tomas Affecting 322 families for a total of 1,320 persons	No. of Damaged Houses Totally Damaged = 3 houses No Fatalities reported
Typhoon Frank (Signal No. 3) on June 22, 2008	Affecting Ago which covers 7 barangays Affecting 23 families for a total of 115 persons	No reported fatalities and damages to properties
Typhoon Nina (Signal No. 1) on September 21, 2008	2 Municipalities which includes Bauang and Aringay Affecting 5 barangays Affecting 442 families for a total of 1,623 persons	No. of Damaged Houses Totally Damaged = 20 houses Agriculture = P 101,175
Typhoon Egay (Signal No. 1) on August 17, 2007	3 Municipalities covering 4 barangays Affecting 4 families for a total of 26 persons	No. of Damaged Houses Totally Damaged = 1 house Partially Damaged = 2 houses
Typhoon Isang (Signal No. 1) on July 16, 2009	Municipality of Bangar affecting one barangay which is Mindoro	Missing=1 No reported fatalities and damages to

Affecting 1 family consisting of 5 members	properties
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Flood Susceptibility. Eleven (11) municipalities which includes Sto. Tomas, Santol, Sudipen, Tubao, Bangar, City of San Fernando, Bauang, Pugo, Rosario, Burgos and Luna are highly susceptible to flooding. Caba, San Gabriel, Agoo and Bagulin have moderate to high susceptibility to flooding, while Naguilian and Bacnotan have low, moderate to high susceptibility. Another two municipalities including Balaoan and Aringay have low and high susceptibility and San Juan has low to moderate susceptibility. See Map No. 15.

Table No. 8: Flood Susceptibility

MUNICIPALITY	SUSCEPTIBILITY LEVELS		
	HIGH	MODERATE	LOW
AGOO	Balawarte, San Antonino, San Antonio, San Joaquin Norte, San Joaquin Sur, San Juan, San Julian Central, San Julian East, San Julian Norte, San Julian West, San Pedro, San Roque East, San Roque West, San Vicente Norte, San Vicente Sur and Santa Barbara(Pob)	Ambitacay	
ARINGAY	Alaska, Basca, Pangaoaoan West, Poblacion, Samara, San Antonio, San Juan East, San Juan West, San Simon West, Santa Cecilia, Santa Lucia, Santa Rita West, and Sto. Rosario		Gallano, Macabato, Manga, and San Simon East
BACNOTAN	Bacsil, Ballogo, Baroro, Bitilag, Bulala, Burayoc, Cabugao, Calautit, Guinabang, Lisqueb, Mabanengbeng 1, Mabanengbeng 2, Nagatiran, Nagsaraboan, Nagsimbaanan, Nangalisan, Poblacion, Santa Rita, Sayoan, Tammocalao, and Zaragoza	Galongen, Pandan, and Salincob	Bacqui, Carcarmay, Casiaman, Maragayap, Quirino, Raois, Sapilang, Sipulo, and Ubbog
BAGULIN	Alibangsay, Baay, Suyo(Pob), and Tioangan	Libbo	
BALAOAN	Ararampang, Baracbac Este, BaracbacOeste, Bungol, Nagsabaran, Pagbennecan, Paraoir, Sablut, Sinapangan, Sinapangan Sur		Apatut
BANGAR	Agdeppa, Alzate, Bangaoilan East, Bangaoilan West, Baraca, Caggao, Central East No.1(Pob), Central East No.2(Pob), Consuegra, General Prim West, General Terrero, Ma. Cristina East, Ma. Cristina West, Paratong # 3, Paratong # 4, Paratong Norte, Quintarong, Reyna Regente, Rissing and San Blas		
BAUANG	Acao, Ballay, Bucayab, Calumbaya, Central East(Pob), Central West(Pob), Nagrebcan, Payocpoc Norte Este, Payocpoc Sur, Pilar, Pudoc, and Taberna		
BURGOS	Caoayan, Lower Tumapoc, and Old Poblacion		

CABA	Gana, Las-ud, Poblacion Sur, San Carlos, San Cornelio, Santiago and Wenceslao	San Jose and Santiago Norte	
CITY OF SAN FERNANDO	Barangay I(Pob.), Barangay II(Pob.), Barangay III(Pob.), Barangay IV(Pob.), and Madayegdeg		
LUNA	Cantoria #1, Darigayos, Mamay, Nagrebcan, Oaqui # 1, Rimos #2, Rimos #3, Rimos #4, and Rimos #5		
NAGUILIAN	Al-alinao Norte, Bancagan, Bimnotobot, Daramuangan, Gusing Norte, Natividad(Pob.), Ortiz(Pob.), Suguidan Norte, and Suguidan Sur	Tuddingan	Baraoas Sur, Casilagan, Gusing Sur, Lioac Norte, and Mamat-ing Sur
PUGO	Ambangonan, Duplas, Tavora East, and Tavora Proper		
ROSARIO	Ambangonan, Bangar, Camp One, Concepcion, Inabaan Norte, Nangcamotian, Puzon, Tabtabungao, Tay-ac, and Udiao		
SAN GABRIEL	Bucao	Poblacion	
SAN JUAN		Aludaid, Calincamasan, Dangdangla, Ili Norte(Pob.), Ili Sur(Pob.), Pacpacac, Quidem, Sta. Rosa, and Talogtog	Allangigan, Bacsayan, Guinguinabang, San Felipe, and Sinapangan
STO. TOMAS	Ambitacay, Bail, Balaoc, Balsaan, Cabaruan, Casilagan, Cupang, Malabago, Namboongan, Patac, Poblacion, Pongpong, Raois, Tococ, and Ubagan		
SANTOL	Corro-oy, Lettac Norte, Lettac Sur, Mangaan, Paagan, and Poblacion		
SUDIPEN	Bigbiga, Bulalaan, Castro, Duplas, Ilocano, Ipet, Maliclico, Namaltugan, Old Central, and Poblacion		
TUBAO	Anduyan, Francia Sur, Garcia, Gonzales, Halog East, Halog West, Lloren, Magsaysay, Poblacion, and Santa Teresa		

3.2.4.2 Rainfall-Induced Landslide

Rainfall-induced landslides are most common in tropical region where the climatic condition is governed by the wet and dry seasons. Shrinkage of the soil during dry season lead to the development of tension cracks on the surface of a certain slope. Large amount of water infiltrated through the tension cracks and further seeped into the soil layers during wet season. These may cause rain induced landslide in an area. With our topography, our province is prone to the said hazard. One of which was experienced

when Typhoon Pepeng hit the province. Too much rain caused landslides in some areas in the province where some lives perished.

Past Rainfall-Induced Landslide Events. Severe typhoons cause some landslides that render roads impassable. A case of eight (8) families perished in Bagulin during typhoon “Pepeng”. A mountain barangay in San FernandoCity also experienced moderate slides.

Typhoon Pepeng (Signal No. 3) on Oct 2, 2009	6 Municipalities Bagulin, Burgos, Naguilian, Aringay, Caba and San FernandoCity Affecting 20 families for a total of 100 persons	Dead=20 No. of Damaged Houses Totally Damaged = 2 houses Damaged to Properties Infrastructure = P 291,513,000
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Destroyed house at the center of Naguilian-Baguio Road due to Rainfall-Induced Landslide caused by Typhoon Pepeng on October, 2009.

School Building at Aringay National High School in Aringay, La Union that collapsed due to Rainfall-Induced Landslide caused by Typhoon Pepeng.



Rainfall-Induced Landslide Susceptibility

- High Susceptibility (Bangar, Santol, Sudipen, City of San Fernando and Burgos)
- Moderate to High Susceptibility (Bagulin)
- Low, Moderate to High Susceptibility (San Gabriel, Naguilian, Caba, Bauang, Bacnotan and Aringay)
- Moderate (Balaoan)
- Low to Moderate (San Juan)

MAP NO. 16: RAIN INDUCED LANDSLIDE HAZARD MAP

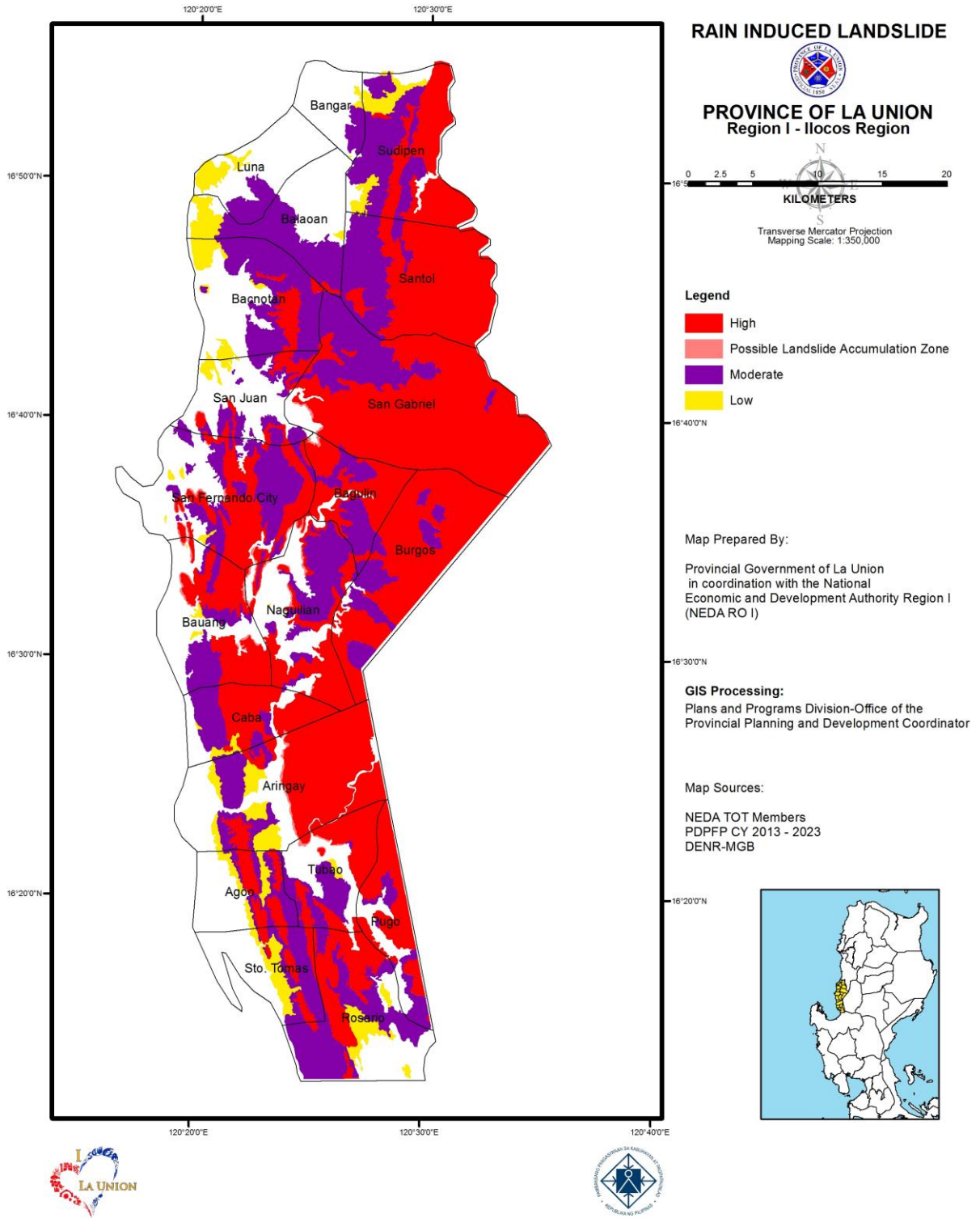


Table No. 10: Rainfall Induced Landslide Susceptibility			
MUNICIPALITY	SUSCEPTIBILITY LEVELS		
	HIGH	MODERATE	LOW
ARINGAY	Basca, Gallano, Macabato, and Manga	Pangaoaoan West, Poblacion, San Benito Norte, and Santa Rita East	Pangaoaoan East, San Benito Sur, San Eugenio, and San Eugenio
BACNOTAN	Arosip, Guinabang, Ortega, and Raois	Bacsil, Ballogo, Baroro, Bitalag, Bussaoit, Carcarmay, Legleg, Mabanengbeng 2, Nagatiran, Oya-oy, Quirino, Sapilang, Sayoan, Tammocalao, and Zaragoza	Agtipal, Bacqui, Bagutot, Calautit, Casiaman, Lisqueb, Nagsaraboan, Nagsimbaanan, Paagan, Salincob, and Ubbog
BAGULIN	Baay, Cambaly, Libbo and Tagudtud	Alibangsay, Cardiz, Dagup, Suyo(Pob.) and Tio-angan	
BALAOAN		Apatut and Ararampang	
BANGAR	Agdeppa, Alzate, Bangaoilan East, Bangaoilan West, Baraca, Caggao, Central East No.1(Pob), Central East No.2(Pob), Consuegra, General Prim West, General Terrero, Ma. Cristina East, Ma. Cristina West, Paratong # 3, Paratong # 4, Paratong Norte, Quintarong, Reyna Regente, Rissing and San Blas		
BAUANG	Upper San Agustin	Bawanta, Bucayab, Cabalayangan, Casilagan, Dili, Disso-or, Quinavite, and Sta. Monica	Cabisilan, Carmay, Lower San Agustin, Palintucang, and Paringao
BURGOS	Delles and Linuan		
CABA	Juan Cartas, Liquicia and San Cornelio	San Fermin, San Jose and Urayong	Bautista and Sobredillo
CITY OF SAN FERNANDO	Abut, Apaleng, Bacsil, Barangay I (Pob.), Baraoas, Bungro, Cabarsican, Masicong, Nagyubuyuban, Pacpaco, Pao Norte, Pao Sur and Siboaan -Otong		
NAGUILIAN	Bancagan, Dallipaoen and Ribsuan	Ambaracao Norte, Bariquir, Bato, Bimmotobot, Cabaritan Norte, Gusing Sur, Mamat-ing Norte and Tuddingan	Al-alinao Norte, Al-alinao Sur, Casilagan, Daramuangan, Guesset, Gusing Norte, Lioac Norte, Nagsidorisan, San Antonio and Suguidan Norte

SAN GABRIEL	Amontoc, Balbalayang, Lipay Este, Lipay Norte and Lipay Sur	Bucao and Lacong	Lipay Proper
SAN JUAN		Bugbugcao, Dinanum, Guinguinabang, Lubing, Pagdildilan and Panicsican	Aludaid, Casilagan, Ili Sur(Pob.), Legleg, Oaqing, Taboc, Talogtog and Urbiztondo
SANTOL	Corro-oy, Lettac Norte, Lettac Sur, Mangaan, Paagan and Poblacion		
SUDIPEN	Bulalaan, Duplas, Ilocano, Maliclico, Namaltugan, Namaltugan, Old Central, Old Central, and Poblacion		

3.2.4.3 Storm Surge

Storm surge occurs when water is pushed toward the shore by the force of the winds swirling around the storm. The Province of La Union has twelve coastal municipalities and even the interior municipalities of San Gabriel, Naguilian and Sudipen will be affected when a storm surge occur.

Past Storm Surge Events. Two occurrence of this phenomenon affected four (4) towns including Sto. Tomas, Aringay, Caba and Bauang and the other affected only the town of Aringay.

Table No. 11: Past Storm Surges/Big Waves Events

Description	Population/Areas Affected	Impacts
LPA	4 Municipalities Sto. Tomas, Agoo, Aringay and Bauang Affecting 148 families for a total of 737 persons	
LPA	Covering 93 families for a total of 471 persons affecting Barangay Alaska in Aringay	

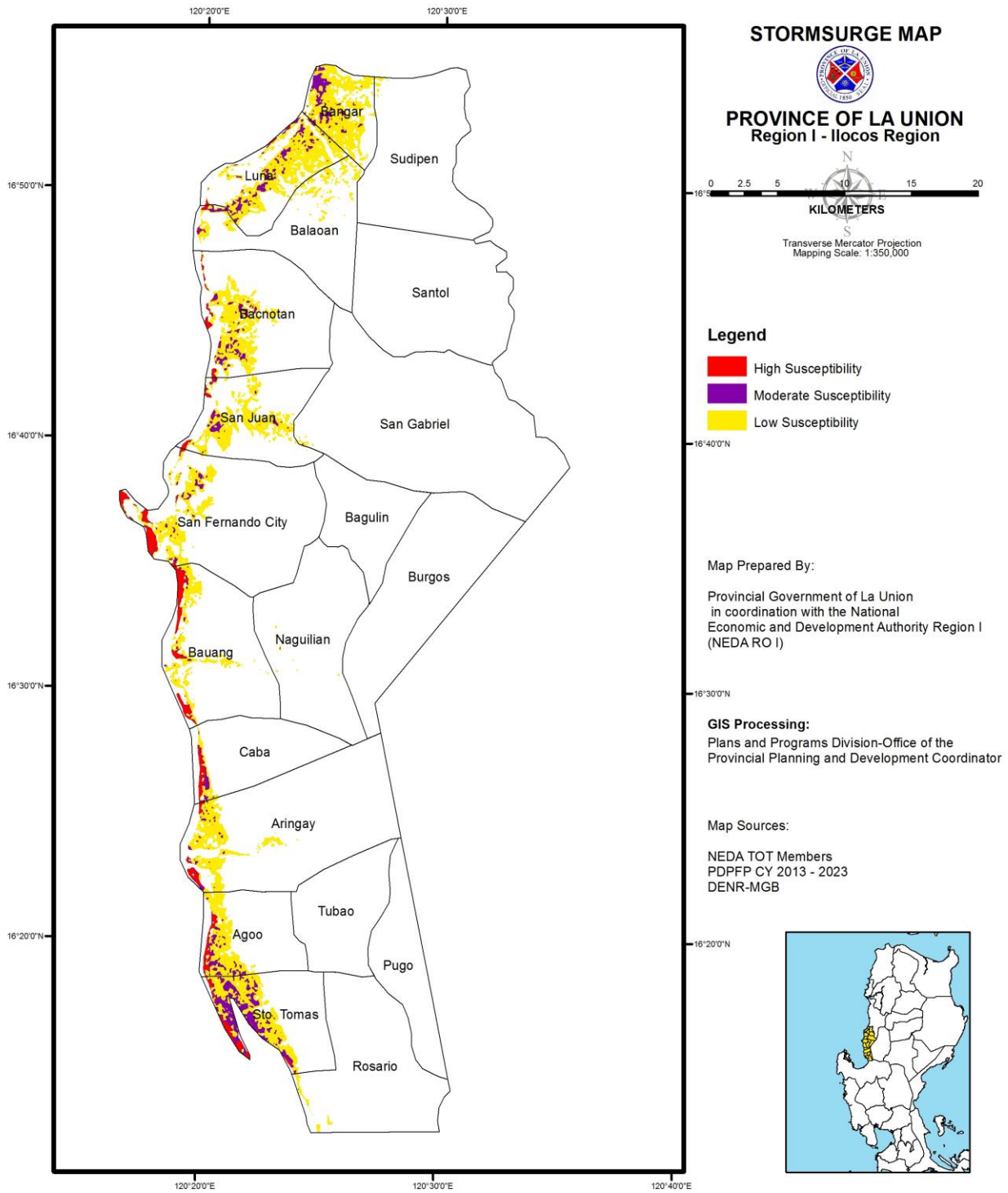
Storm Surge Susceptibility. At 1 meter storm surge nine coastal municipalities (Agoo, Aringay, Bacnotan, Bangar, Bauang, Caba, Luna, San Juan, Sto. Tomas and the City of San Fernando will be affected while at greater than 1 up to 4 meters storms surge, ten coastal municipalities and the lone city will be inundated.

The storm surge at 8 meters will affect the coastal barangay, linear or parallel to its coast. In the towns of Sto. Tomas, Agoo, Aringay, San Juan, Bacnotan, Luna, Bangar and interior barangays will be partly affected.

Table No. 12: Storm Surge Susceptibility

MUNICIPALITY	Storm Surge Inundation		
	≤ 1 m	> 1 to ≤ 4 m	> 4 to ≤ 8 m
Agoo	5%	10%	30%
Aringay	2%	1%	10%
Bacnotan	1%	10%	30%
Balaoan		1%	5%
Bangar	0.10%	10%	70%
Bauang	2%	3%	5%
Caba	3%	3%	10%
Luna	0.10%	10%	50%
Rosario			1%
San Fernando	0.50%	5%	20%
San Juan	1%	5%	40%
Sto. Tomas	1%	15%	30%

MAP NO. 17: STORM SURGE HAZARD MAP



3.2.5 Geologic Hazards

With our geologic setting or proximity to faults and trenches, the province is said to be prone to earthquake related hazards. One of which experiences was the July 16, 1990 earthquake with an epicenter at Digidig Fault. That is why our province was highly affected during that 1990 earthquake.

In this connection, the Rapid Earthquake Damage Assessment System (REDAS) simulations have used four (4) epicenters for us to see the possible effects when an earthquake will occur. Faults nearby that would possibly affect our province were made used in the simulations as an epicenter. The first scenario has an epicenter in Mountain Province with a longitude of 120.5075 and latitude of 16.4915 affecting the Tubao Fault with a magnitude of 7.3 and a depth of 2 kilometers. The second epicenter was located in Nueva Ecija with a longitude of 121.161 and latitude of 15.661 affecting Digidig Fault with a magnitude of 7.9 and a depth of 2 kilometers. This is the epicenter of the 1990 Luzon Earthquake that caused huge damages to the province. For the third scenario, it has an epicenter in San Manuel, Pangasinan with a longitude of 120.69175 and a latitude of 16.07975, magnitude of 7.0 and a depth of 2 kilometers, while the fourth scenario has an epicenter in San Jose Fault (Longitude: 120.8175, Latitude: 16.1015) with a magnitude of 6.9 and a depth of 2 kilometers. (Refer to the table below).

Table No. 13: Earthquake Simulation Scenario

Scenario	Fault Source/Name ¹	Fault Length (km)	REDAS Simulation Parameters					Past Earthquake Events along the fault ²									
			Epicenter		Magnitude	Depth	Fault Azimuth 1	Fault Azimuth 2	Year	Month	Day	Longitude	Latitude	Magnitude (Ms)	Depth		
			Longitude	Latitude													
1	Tubao Fault	83							1927	4	13	120.497454	16.500992	6.2	140		
										1996	11	20	120.526376	16.350597	5.7	33	
																7.3	
			120.5075	16.4915	7.3	2	4.94385816	169.257149									
2	PFZ: Digidig Fault Segment	114							1990	7	16	121.171769	15.679449	7.8	25		
										1645	11	30	121.200105	15.600168	7.9	0	
																7.9	2
			121.161	15.661	7.9	2	340.617935	138.601164									
3	San Manuel Fault	40							1996	5	2	120.599969	16.129876	5	33		
										1990	8	21	120.690084	16.080516	4.8	34	
																7	
			120.69175	16.07975	7	2	315.899752	112.023004									
4	San Jose Fault	34							1990	7	16	120.796957	16.205859	5.2	33		
										1884	12	17	120.949665	15.752362	5.2	50	
																6.9	
			120.8175	16.1015	6.9	2	4.94385816	359.705968									

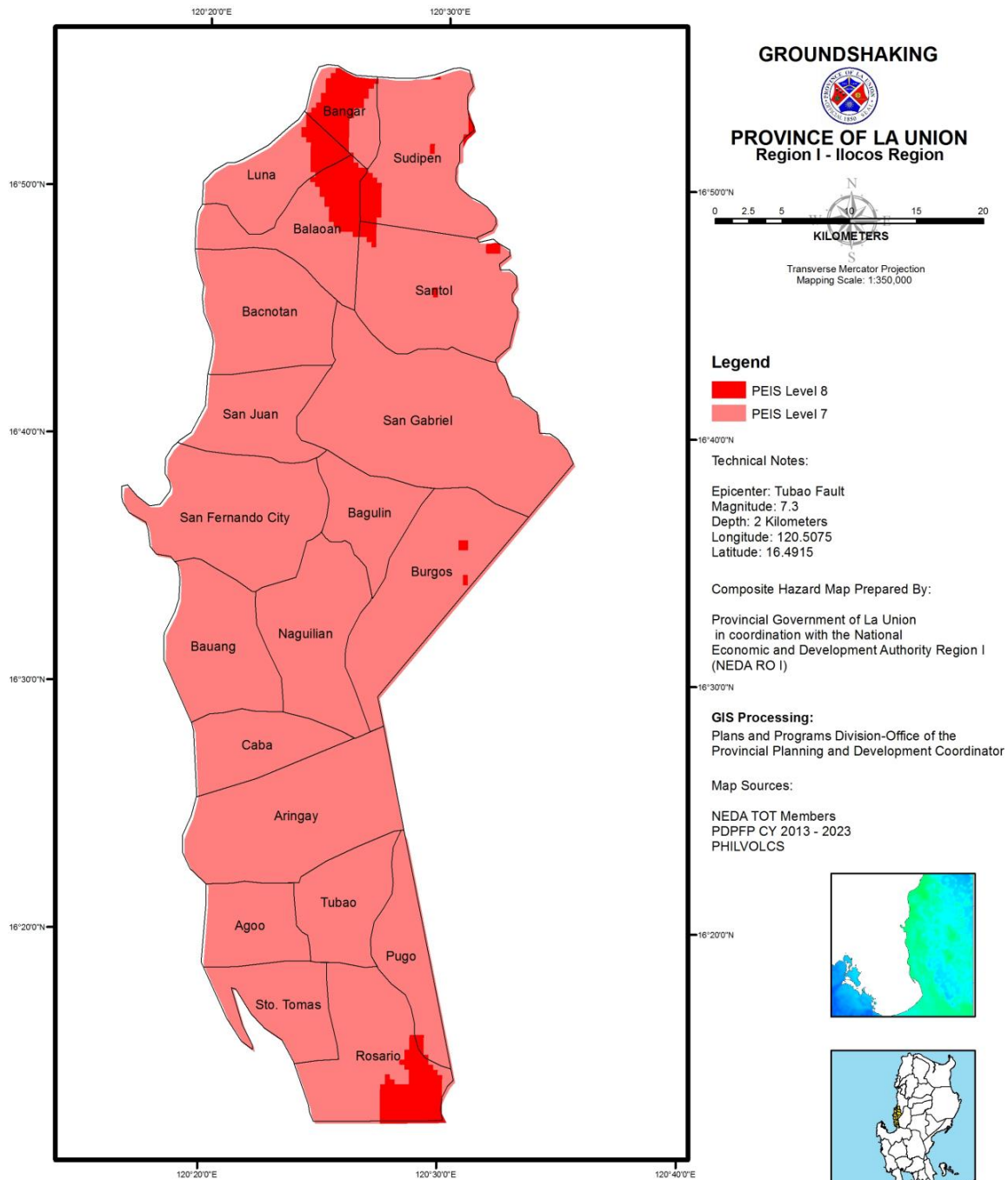
¹Refer to the PHIVOLCS Regional Active Faults Map for the name of the faults and compare with the REDAS indicative faults

²Refer to the REDAS Seismicity Assessment using the SOEPD and NEIC-USGS databases. Only select the three highest observed magnitude events

Past Earthquake Events. An earthquake occurred in this year (2011) but was moderate that it did not cause any damage. However, the province experienced massive damage during the 1990 Luzon Earthquake affecting Agoo which took the most damage. Some parts of Sto. Tomas and Aringay experienced liquefaction.

Ground Shaking. Strong ground shaking had resulted to severe damage to infrastructures in areas near the epicenter and would brought hazard to the people as well. The population will be the primary victim when an infrastructure or a building will collapse due to intense ground shaking. This ground shaking is brought about by the movement of a fault. In the case of La

MAP NO. 18: GROUND SHAKING HAZARD MAP



Union, simulations were made to assess possible effects of intense ground shaking in the province. Those simulations used the same depth of 2 km that can be considered shallow giving maximum effects.

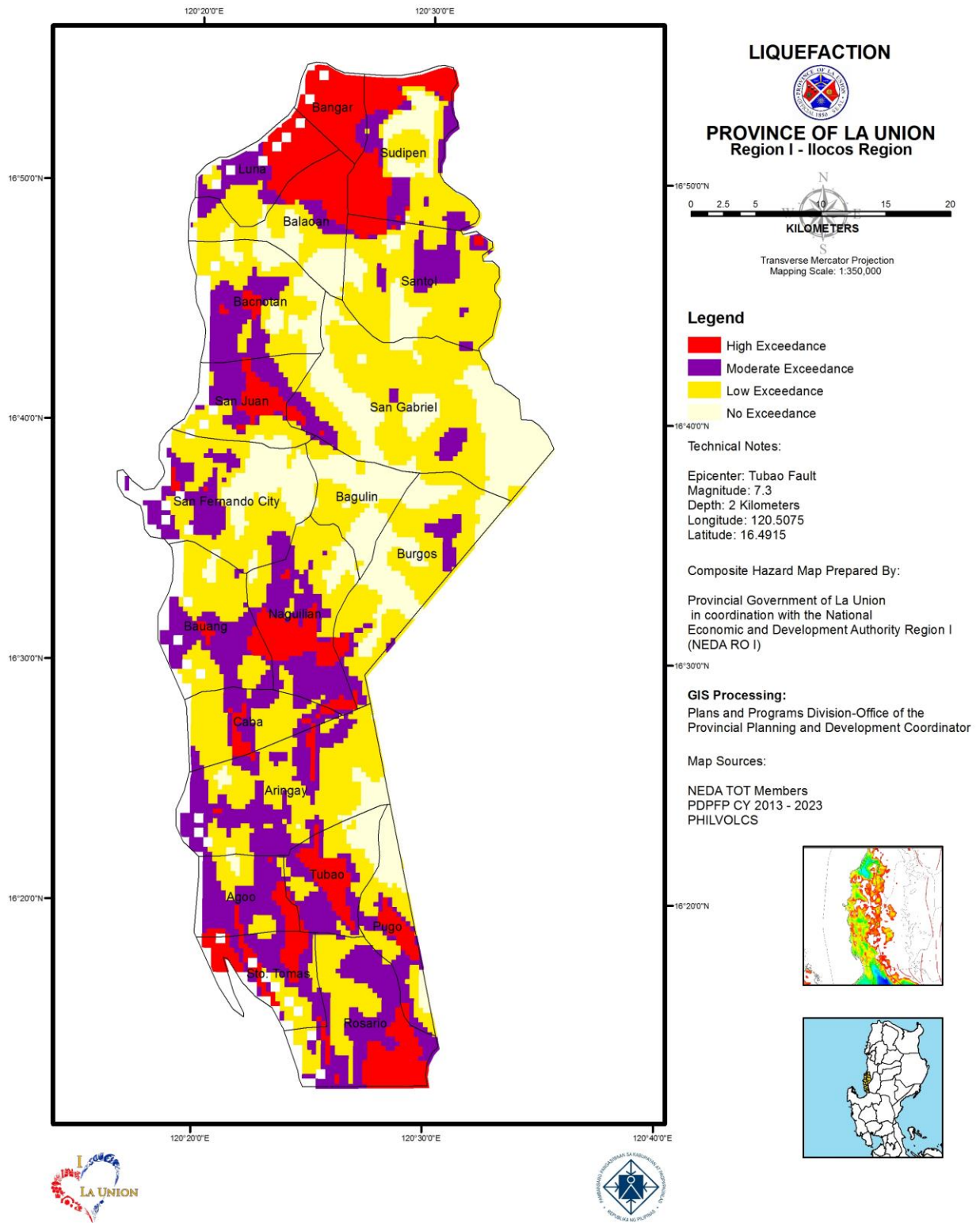
The Province of La Union is susceptible to ground shaking. This can be seen in what had happened during the July 16, 1990 earthquake that really devastated the province. The whole province is susceptible to ground shaking from 6.0 to 7.0 magnitudes. It can be observed from Annex 4 that the farther the epicenter the lesser the magnitude of shaking.

Scenario using the July 16, 1990 Earthquake	
MUNICIPALITY	Magnitude
Agoo	6.0 – 7.0
Aringay	6.0 – 7.0
Bacnotan	6.0 – 7.0
Bagulin	6.0 – 7.0
Balaoan	7
Bangar	7
Bauang	6.0 – 7.0
Burgos	6.0 – 7.0
Caba	6.0 – 7.0
Luna	7
Naguilian	6.0 – 7.0
Pugo	6.0 – 7.0
Rosario	6.0 – 7.0
San Fernando	6.0 – 7.0
San Gabriel	6.0 – 7.0
San Juan	6.0 – 7.0
Santol	6.0 – 7.0
Sto. Tomas	6.0 – 7.0
Sudipen	6.0 – 7.0
Tubao	6.0 – 7.0

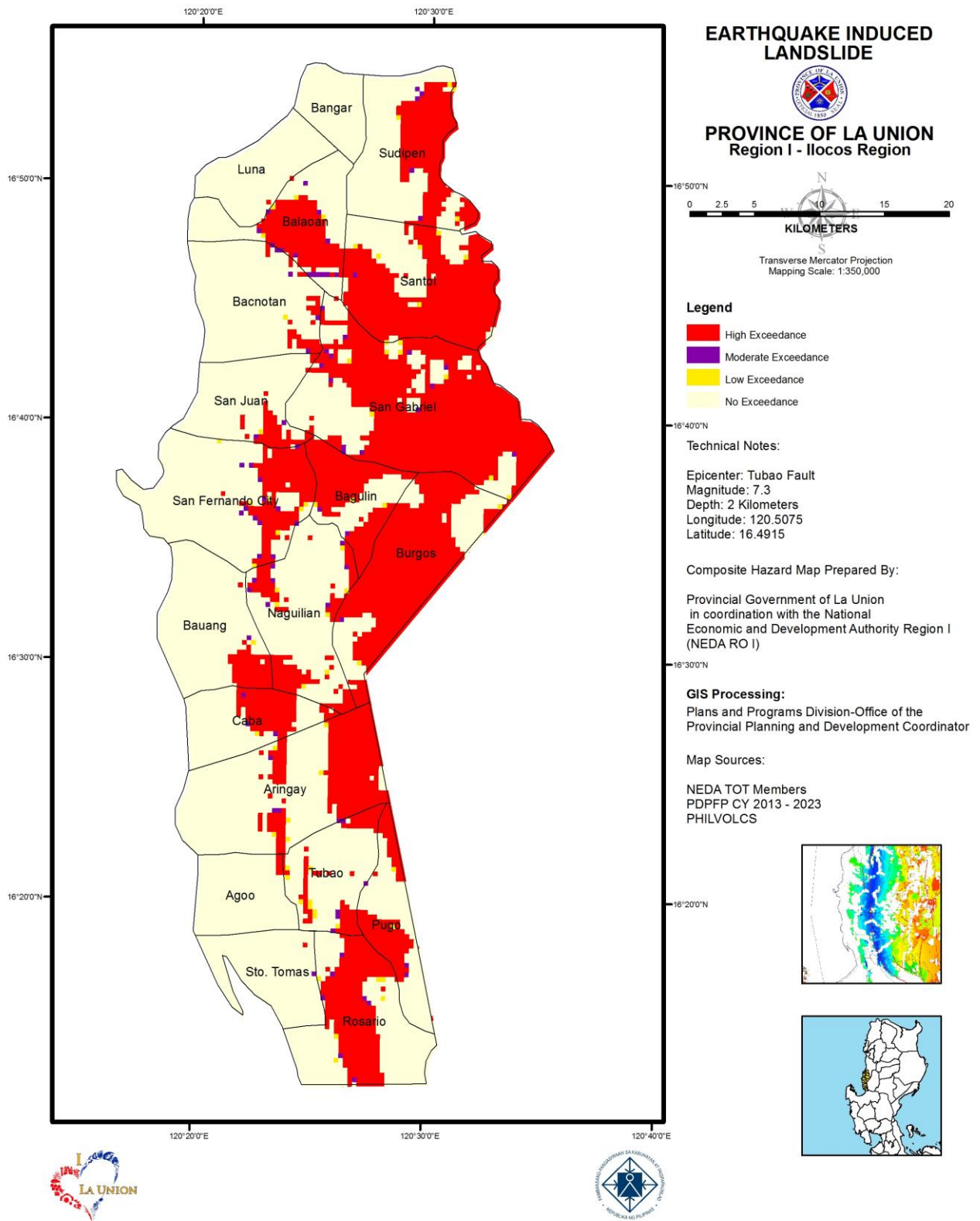
Scenario using the July 16, 1990 Earthquake			
MUNICIPALITY	Susceptibility		
	High	Moderate	Low
Agoo			x
Aringay			x
Bacnotan		x	x
Balaoan	x	x	x
Bangar	x	x	x
Bauang		x	x
Caba			x
Luna	x	x	x
Naguilian			x
Rosario			x
San Fernando		x	x
San Gabriel			x
San Juan		x	x
Santol		x	x
Sto. Tomas			x
Sudipen	x	x	x
Tubao			x

Liquefaction Susceptibility. This is the condition when the ground losses strength due to intense ground shaking and structures built on top of it may sink and tilt. At risk are places with high water content such as old river channels, swamps, river banks, abandoned rivers, coastline and flood plains. Sixteen municipalities and the City of San Fernando are susceptible to liquefaction using the epicenter of the July 16, 1990 earthquake. The municipalities of Agoo, Aringay, Caba, Naguilian, Rosario, San Gabriel, Sto. Tomas and Tubao will have a low susceptibility while Bacnotan, Bauang, San Juan, Santol and the lone city will experience a low to moderate susceptibility in terms of liquefaction. The municipalities of Balaoan, Bangar, Luna and Sudipen on the other hand will experience low to high susceptibility.

MAP NO. 19: LIQUEFACTION HAZARD MAP



MAP NO. 20: EARTHQUAKE INDUCED LANDSLIDE HAZARD MAP



Earthquake Induced Landslide.

The province with its hilly terrain on the eastern part made it susceptible to earthquake induced landslide when an intense ground shaking happens. The municipalities of Luna and Bangar are not susceptible to earthquake induced landslide based on the scenario simulated using the epicenter of the July 16, 1990 earthquake. Agoo will have a low susceptibility while Rosario and Sto. Tomas will have a low to moderate susceptibility to earthquake induced landslide. The City of San Fernando and the remaining fourteen municipalities which include Aringay, Bacnotan, Bagulin, Balaoan, Bauang, Burgos, Caba, Naguilian, Pugo, San Gabriel, San Juan, Santol, Sudipen and Tubao will experience a low to high susceptibility.

Tsunami. Philippine archipelago is surrounded by active trenches which brought a constant threat of tsunami practically in all the coasts of our country. For the province of La Union it is bounded in the west with the West Philippine Sea and is facing the Manila Trench that made our province susceptible to tsunami when an earthquake takes place. Tsunamis have great erosional potential, stripping beaches of sand that may have taken years to build up and undermining trees and other coastal vegetation. It is also capable of inundating inland past the typical high-water level. This fast-moving water associated with the inundating tsunami can crush homes and other coastal structures. Tsunamis may reach a maximum vertical height onshore above sea level, often called a run-up height depending on the intensity of an earthquake.

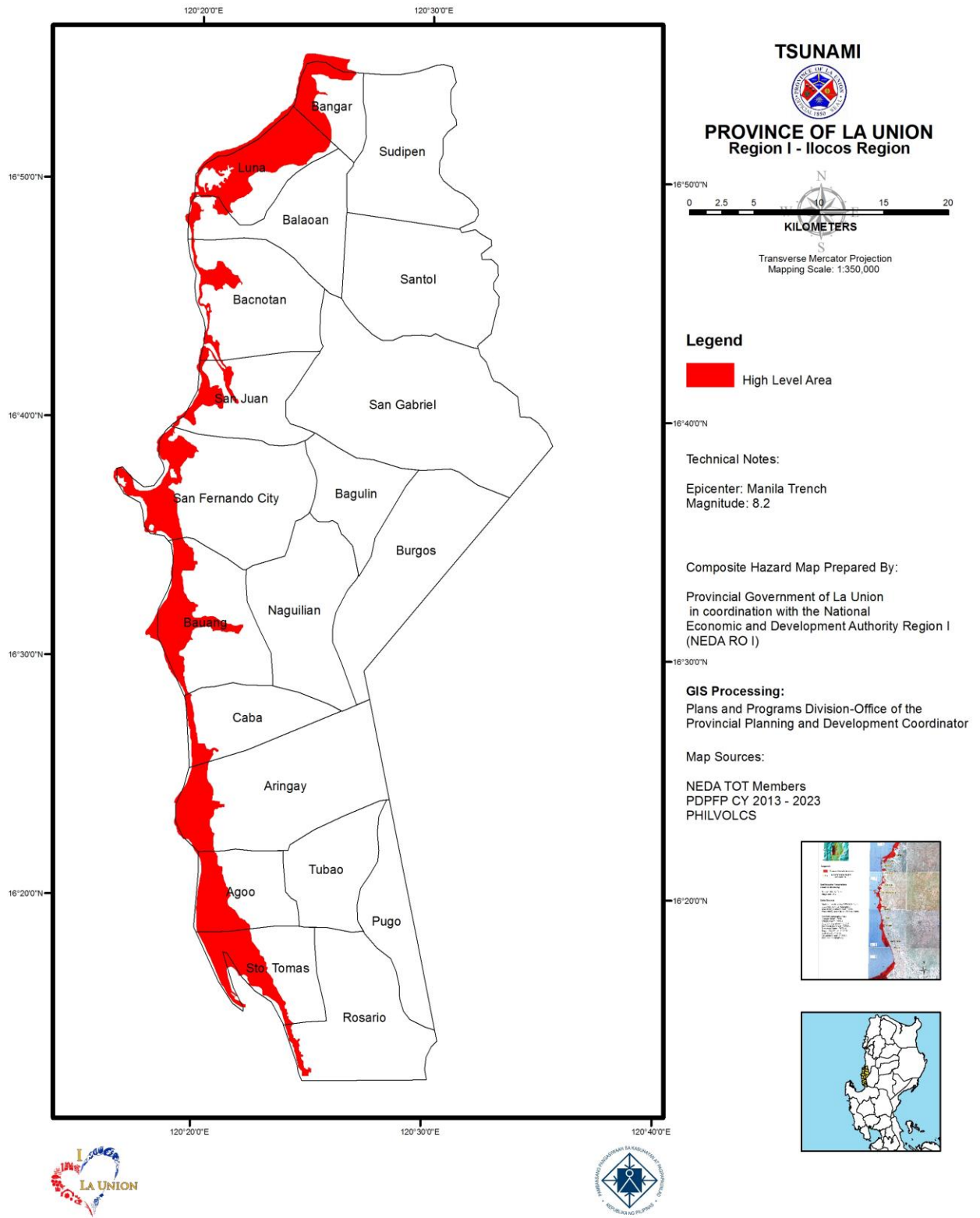
Table No. 16: Earthquake Induced Landslide Susceptibility

MUNICIPALITY	SUSCEPTIBILITY LEVELS		
	Scenario using the July 16, 1990 Earthquake		
	High	Moderate	Low
Agoo			x
Aringay	x	x	x
Bacnotan	x	x	x
Bagulin	x	x	x
Balaoan	x	x	x
Bauang	x	x	x
Burgos	x	x	x
Caba	x	x	x
Naguilian	x	x	x
Pugo	x	x	x
Rosario		x	x
San Fernando	X	x	x
San Gabriel	X	x	x
San Juan	x	x	x
Santol	x	x	x
Sto. Tomas		x	x
Sudipen	x	x	x
Tubao	x	x	x

Table No. 17: Tsunami Susceptibility

MUNICIPALITY	Height (Meters)
Sudipen	7.92
Bangar	7.92
Luna	8.15
Balaoan	8.15
Bacnotan	8.11
San Juan	8.16
San Fernando	8.21 (Northern Part)
	8.37 (Poro Point Area)
Bauang	8.26
Caba	8.26
Aringay	7.0
Agoo	7.0
Sto. Tomas	7.0
Rosario	7.0

MAP NO. 21: TSUNAMI HAZARD MAP



Tsunami Susceptibility. Twelve coastal municipalities in the province namely: Luna, Bangar, Balaoan, Bacnotan, San Juan, San Fernando City, Bauang, Caba, Aringay, Agoo, Sto. Tomas and Rosario are susceptible to tsunami. Epicenter offshore (Manila Trench 8.2 Magnitude) Bangar and Luna will have 7.92m to 8.15m high water which will reach some parts of Sudipen. Worst affected with these height of water will be the coastal towns of San Fernando, Bauang, Agoo, Sto. Tomas, Rosario, Northern Bacnotan and Balaoan with moderate susceptibility. Riverine areas will be severely affected.

Table No. 18: Summary of Hazard Events

MUNICIPALITY	Hazard Events			Ground Shaking	Earthquake Induced Liquefaction	Earthquake Induced Landslide	Tsunami
	Flooding	Rainfall-Induced Landslide	Storm Surge				
Agoo	x		x	x	x	x	x
Aringay	x	x	x	x	x	x	x
Bacnotan	x	x	x	x	x	x	x
Bagulin	x	x		x		x	
Balaoan	x	x	x	x	x	x	x
Bangar	x	x	x	x	x		x
Bauang	x	x	x	x	x	x	x
Burgos	x	x		x		x	
Caba	x	x	x	x	x	x	x
Luna	x		x	x	x		x
Naguilian	x	x		x	x	x	
Pugo	x			x		x	
Rosario	x		x	x	x	x	x
San Fernando	x	x	x	x	x	x	x
San Gabriel	x	x		x	x	x	
San Juan	x	x	x	x	x	x	x
Santol	x			x	x	x	
Sto. Tomas	x		x	x	x	x	x
Sudipen	x	x		x	x	x	x
Tubao	x			x	x	x	

3.3. DRR – CCA Vulnerability and Risk Analysis

Vulnerability refers to the incapacity of a certain population or community to endure the effects of a hostile environment. It can be caused by various outside forces, may be man-made or natural hazards.

In relation to hazards and disasters, vulnerability basically links people with their environment to institutions and economic sectors that concerns them. The concept of vulnerability expresses the multidimensionality of disasters by focusing attention on the totality of relationships in a given situation which constitute a condition that, in combination with environmental forces, produces a disaster.

Moreover, the impact of hazards on a certain community through a vulnerability assessment defines the extent of prioritization to be provided at a given period of time.

The province of La Union like the other provinces in Region 1 is also exposed to several natural hazards like flooding, rain-induced landslides, storm surges, ground shaking and others. These hazards usually lead to the devastation of major economic and social sectors in the province such as agriculture, forestry, coastal or marine, water supply and health.

With the advent of geo-spatial analysis, a vulnerability assessment was conducted to identify, quantify and prioritize vulnerabilities with an effort of lessening and mitigating the effects of identified hazards. The vulnerability assessment also evaluates the susceptibility and capacity of the municipalities of La Union to cope with environmental stresses.

The result of the vulnerability index analysis will serve as reference for sectoral and local planners in making programs and projects to mitigate the impact of hazards. Likewise, this will be used in prioritizing geographic areas in the province in risk reduction and mitigation.

3.3.1. Population

The annual population growth rate from 2010- 2015 is 1.12 percent, a figure higher by 0.07 percent from that of the 2007-2010 figure which is 1.05 percent and lower by 0.22 from that of the 2000-2007 figure which is 1.27 percent (See Figure 3). According to the 2015 actual population census of the Philippine Statistics Authority (PSA), the province's population is seen to double in a span of 62 years, or by year 2077. The annual population growth rate is higher than the region's 1.09 but relatively lower compared with the national APGR of 1.72.

The province's population density increased from 497 in CY 2010 to 527 in CY 2015 which means that in CY 2015, 30 persons more were added to the occupants of a square kilometer.

3.3.1.1. Population Exposure to Flooding

Considering the occurrence of flood at a worst case or a rare event, the PAGASA threshold of 480 mm. of rainfall per day may affect the whole province in general. Based on the Frequency Table for 1-Day Rainfall on Observed Values from 1951 to 2010 of PAGASA, this rare event may likely occur between 30 to 100 years with a likelihood value of 3 and risk score ranges from 3 to 48.

Among the municipalities of La Union, Luna and Bangar will likely be the most affected in terms of flooding with an affected population of 26,463 and 25,824 respectively around 70 percent of their total population. However, the most number of population affected will likely be in the City of San Fernando being the regional capital and business center of the province at 48,508 exposed population or 40 percent of its total population.

In terms of exposed population in highly susceptible areas, the Municipality of Bangar will incur the highest population exposure percentage to flooding affecting 29 percent of its total population or an affected population of 10,360 followed by Sudipen with an exposed population of 3,593 or 21 percent of its total population. At the same time, Luna a coastal municipality will likely be the most affected in terms of exposed population in moderate susceptibility areas affecting 50 percent of its total population or affecting 18,970 while, the City of San Fernando will likely to have the highest number of affected population of 26,102 in low susceptibility areas.

Major consideration in the assessment of health sector is on the quality of water supply particularly on flood-prone settlements as this contributes largely on the health conditions of the populace. The assessment also covers the susceptibility of the population on water-borne diseases like cholera, malaria, leptospirosis and dengue. This can be attributed to the extent of settlements affected by flooding, percentage of

households without source of safe drinking water after a flood incident and the percentage of households exposed to water-borne diseases.

MAP NO. 22: POPULATION EXPOSURE TO FLOODING

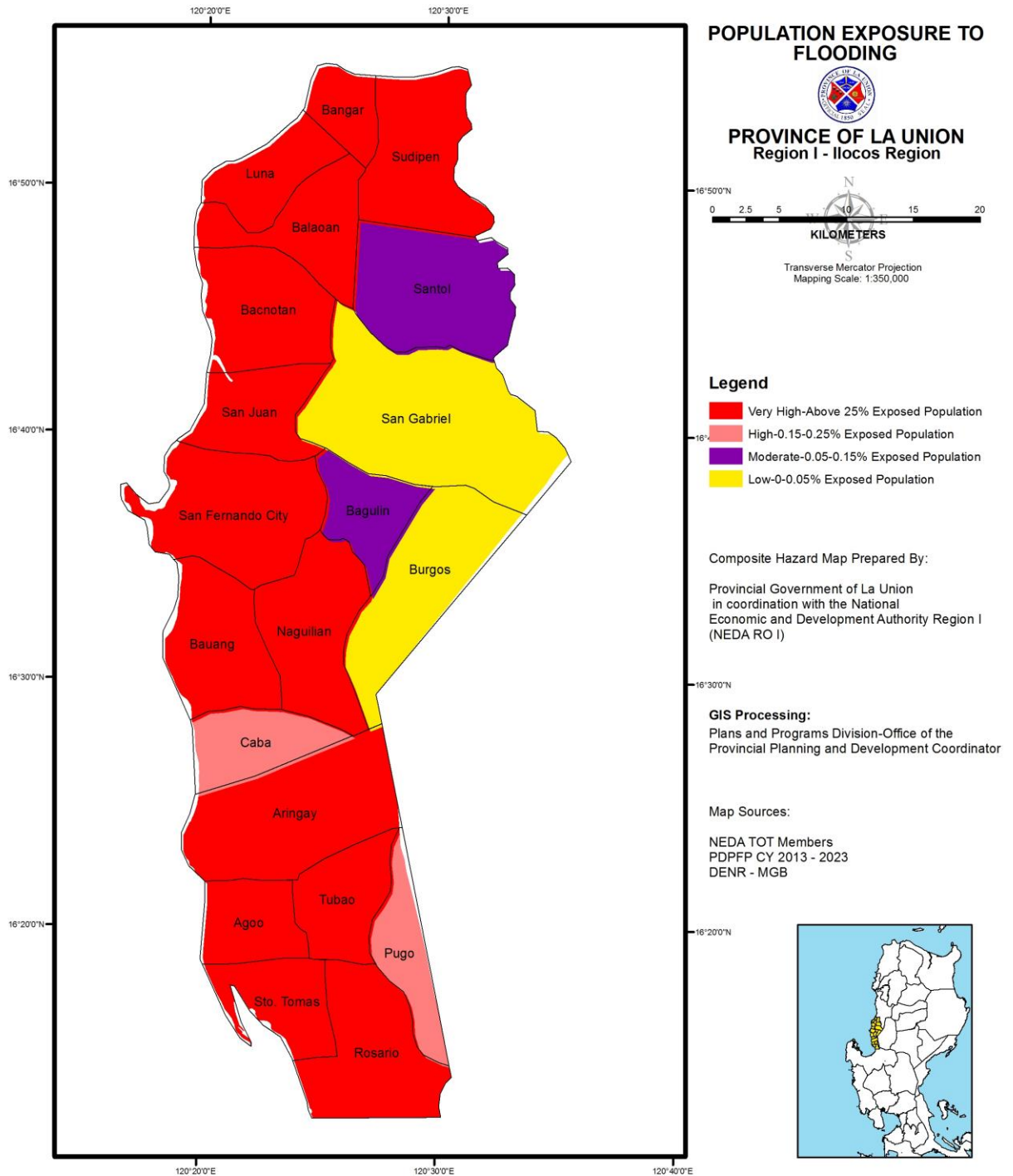


Table. No. 19 Population Exposure to Flooding

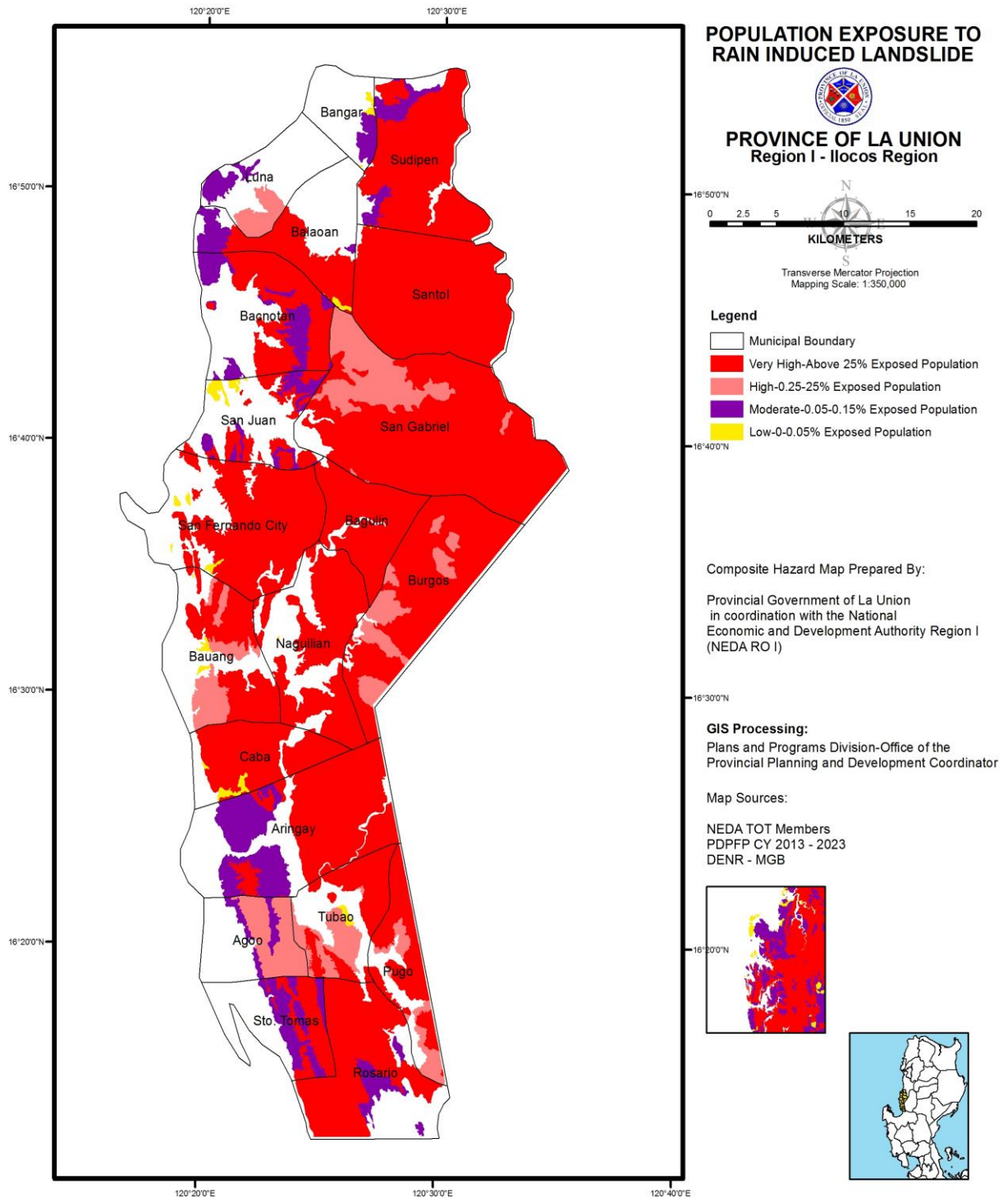
Municipality	Population	Exposed Population High Susceptible Areas	Exposed Population Moderate Susceptible Areas	Exposed Population Low Susceptible Areas	Population Exposure Percentage on High Susceptible Areas	Population Exposure Percentage on Moderate Susceptible Areas	Population Exposure Percentage on Low Susceptible Areas
Agoo	63,692	1,484	14,427	18,939	2%	23%	30%
Aringay	47,458	7,549	2,423	5,941	16%	5%	13%
Bacnotan	42,078	-	10,636	5,068	0%	25%	12%
Bagulin	13,456	612	-	168	5%	0%	1%
Balaoan	39,188	47	9,759	10,006	0%	25%	26%
Bangar	35,947	10,360	9,368	6,096	29%	26%	17%
Bauang	75,032	10,838	3,596	19,712	14%	5%	26%
Burgos	8,067	6	-	8	0%	0%	0%
Caba	22,039	1,264	317	3,837	6%	1%	17%
Luna	35,802	5,269	18,970	2,224	15%	53%	6%
Naguilian	54,221	7,222	5,290	6,999	13%	10%	13%
Pugo	19,690	2,561	3	952	13%	0%	5%
Rosario	55,458	850	8,742	17,083	2%	16%	31%
San Fernando City	121,812	5,494	16,912	26,102	5%	14%	21%
San Gabriel	18,172	-	342	455	0%	2%	3%
San Juan	37,188	2,883	10,101	6,787	8%	27%	18%
Santol	12,476	848	-	876	7%	0%	7%
Sto. Tomas	39,092	2,781	4,534	11,032	7%	12%	28%
Sudipen	17,056	3,593	230	2,443	21%	1%	14%
Tubao	28,729	5,786	1,236	3,405	20%	4%	12%

3.3.1.2 Population Exposure to Rain-induced Landslide

Table No. 20 Table Population Exposure to Rain-induced Landslide

Municipality	Population	Exposed Population High Susceptible Areas	Exposed Population Moderate Susceptible Areas	Exposed Population Low Susceptible Areas	Population Exposure Percentage on High Susceptible Areas	Population Exposure Percentage on Moderate Susceptible Areas	Population Exposure Percentage on Low Susceptible Areas
Agoo	63692	13,506.84	13,334.49	6,998.43	21%	21%	11%
Aringay	47458	24,341.27	6,150.26	4,330.00	51%	13%	9%
Bacnotan	42078	4,273.31	18,894.54	3,476.09	10%	45%	8%
Bagulin	13456	8,368.27	4,457.74	-	62%	33%	0%
Balaoan	39188	403.20	15,502.63	3,926.08	1%	40%	10%
Bangar	35947	-	5,364.83	931.42	0%	15%	3%
Bauang	75032	30,103.01	14,656.46	885.03	40%	20%	1%
Burgos	8067	6,060.62	1,493.43	-	75%	19%	0%
Caba	22039	11,890.91	5,885.18	764.60	54%	27%	3%
Luna	35802	-	6,105.45	4,160.57	0%	17%	12%
Naguilian	54221	19,314.30	16,199.75	21.13	36%	30%	0%
Pugo	19690	10,907.62	3,795.17	-	55%	19%	0%
Rosario	55458	15,202.31	21,027.60	4,416.83	27%	38%	8%
San Fernando City	121812	41,626.91	38,154.31	1,270.09	34%	31%	1%
San Gabriel	18172	13,989.06	3,488.01	-	77%	19%	0%
San Juan	37188	5,371.87	9,603.71	1,496.68	14%	26%	4%
Santol	12476	8,715.09	3,457.66	11.95	70%	28%	0%
Sto. Tomas	39092	5,239.64	11,470.15	5,584.37	13%	29%	14%
Sudipen	17056	7,467.55	6,189.49	1,601.73	44%	36%	9%
Tubao	28729	12,617.20	7,115.47	434.20	44%	25%	2%

MAP NO. 23: POPULATION EXPOSURE TO RAIN-INDUCED LANDSLIDE



Based on the Frequency Table for 1-Day Rainfall on Observed Values from 1951 to 2010 of PAGASA, this rare event may likely occur between 30 to 100 years. The likelihood score of 3 with a risk score that ranges from 3 to 48 was used to assess the vulnerability. Around 492,054 persons or 63 percent of the total population of the province will likely be affected in terms of rain-induced landslide. Table 16 shows that the upland municipalities of San Gabriel affecting 13,989 persons or 77 percent of its total population, Burgos affecting 75 percent of its population and Santol with a 70 percent affected population will likely be the most affected in terms of population exposure percentage in highly susceptible areas.

Likewise, a total of 212,346 persons or 27 percent of the total population of the province will likely be affected in the occurrence of rain-induced landslide in moderate susceptible areas in the province wherein the Municipality of Bacnotan will likely to incur the highest population exposure percentage at 45 percent while Aringay will be the least affected. In terms of exposed population in low susceptible areas, Sto. Tomas will incur the highest percentage of exposed population at 14 percent affected out of its total population affecting 5,584 persons.

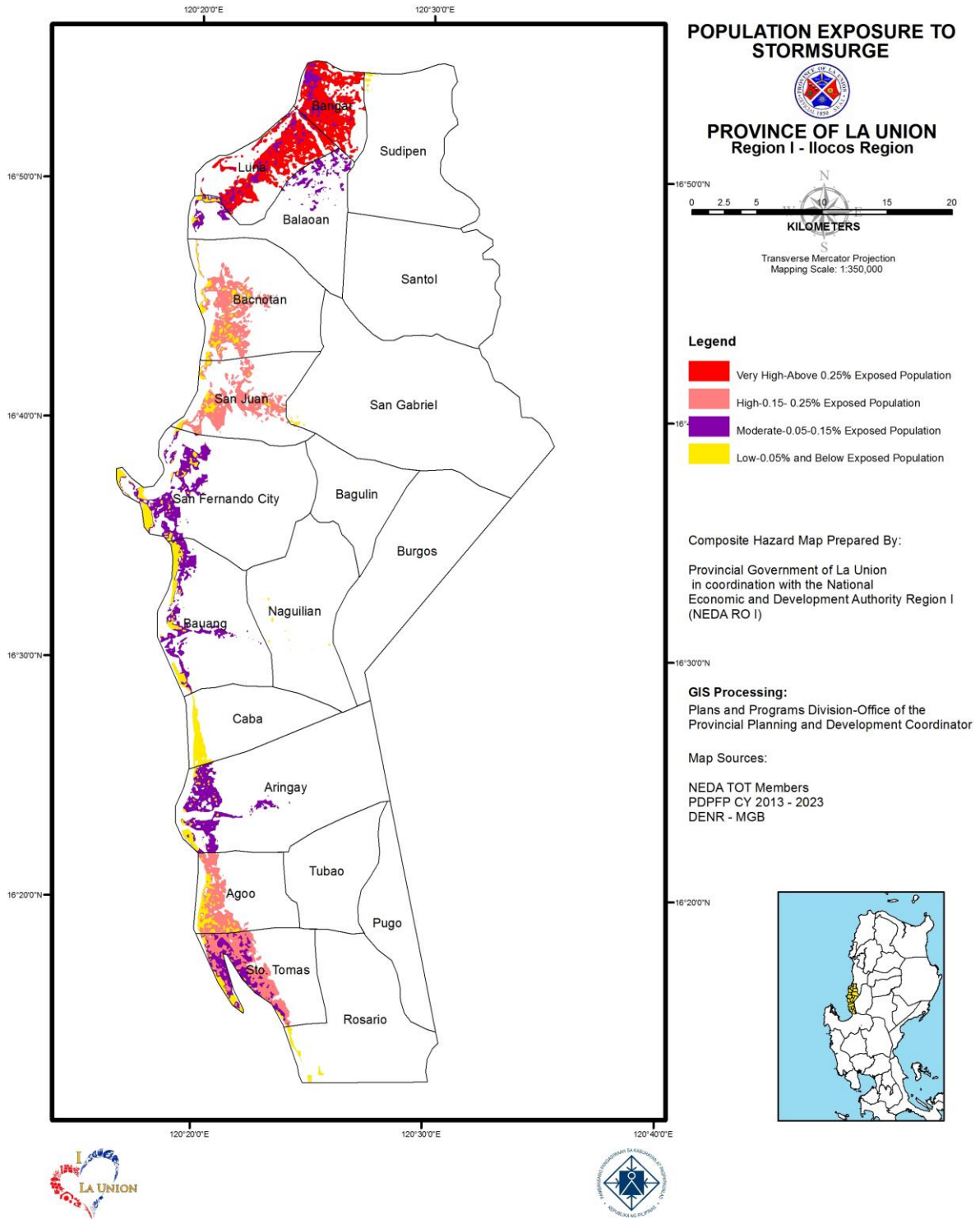
3.3.1.3 Vulnerability of Population to Storm Surge

The province having eleven coastal municipalities and one coastal city is also considered prone to storm surge. A total of 125, 585 persons or about 16 percent of the total population of the province will likely be affected in the event of a storm surge. The Municipality of Bangar will likely be the most affected with potential affected population of 22,984 or equivalent to 64 percent of its total population while five upland municipalities will which include Pugo, Burgos, Santol, Bagulin and Tubao will not be affected by the said hazard. In terms of population exposure in high susceptible areas, the Municipality of Bauang will likely be the most affected with an exposed population of about 3 percent affecting 2,600 persons along its coastal barangays. When it comes to moderate susceptible areas, Sto. Tomas will still likely be the most affected while Bangar will be the most affected in terms of population exposure percentage in low susceptible areas. This is shown in Table 21.

Table No. 21 Vulnerability of Population to Storm Surge

Municipality	Population	Exposed Population High Susceptible Areas	Exposed Population Moderate Susceptible Areas	Exposed Population Low Susceptible Areas	Population Exposure Percentage on High Susceptible Areas	Population Exposure Percentage on Moderate Susceptible Areas	Population Exposure Percentage on Low Susceptible Areas
Agoo	63,692	1,421	2,691	12,397	2%	4%	19%
Aringay	47,458	302	306	3,952	1%	1%	8%
Bacnotan	42,078	324	1,197	7,070	1%	3%	17%
Balaoan	39,188	90	330	3,312	0%	1%	8%
Bangar	35,947	25	3,357	19,602	0%	9%	55%
Bauang	75,032	2,600	739	7,338	3%	1%	10%
Caba	22,039	453	363	677	2%	2%	3%
Luna	35,802	132	2,635	14,157	0%	7%	40%
Naguilian	54,221	-	6	84	0%	0%	0%
Rosario	55,458	-	8	508	0%	0%	1%
San Fernando City	121,812	2,459	1,462	11,154	2%	1%	9%
San Gabriel	18,172	-	1	24	0%	0%	0%
San Juan	37,188	281	805	7,978	1%	2%	21%
Sto. Tomas	39,092	1,167	5,187	8,919	3%	13%	23%
Sudipen	17,056	-	1	72	0%	0%	0%

MAP NO. 24: POPULATION EXPOSURE TO STORM SURGE



3.3.1.4 Potentially Affected Population from Earthquake-induced Landslides

Simulated scenario earthquake with an epicenter in Nueva Ecija affecting the Digdig Fault, the province will incur earthquake induced landslides in almost all of its municipalities. A total of 188,530 potentially affected population or 24 percent of the total population of the province will likely be affected. The table below shows that Burgos an upland municipality will likely to incur the highest population exposure percentage at 76 percent of its total population affecting 6,174 persons in prone areas in the event of an earthquake induced landslide. This is followed by San Gabriel and Santol another upland municipalities which will likely to have population exposure percentage of 72 and 73 percent respectively. Bangar is the only municipality that is likely not to be affected in the said hazard. In this scenario, the epicenter used in the simulation is the epicenter of the 1990 Luzon Earthquake which caused huge damage in the province.

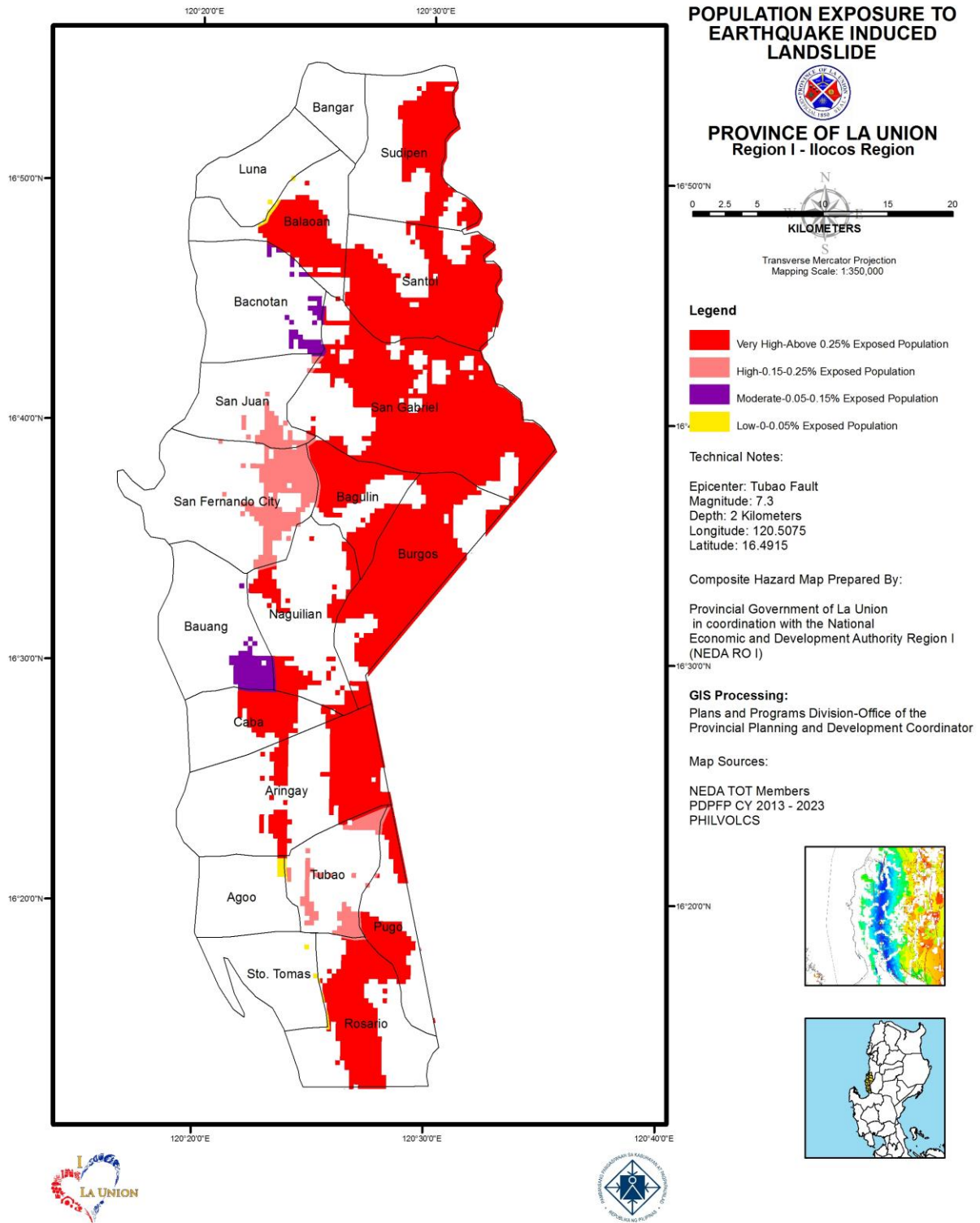
Table No. 22 Potentially Affected Population, Earthquake Induced Landslide (Scenario using the Epicenter of the July 16, 1990 Earthquake)

Municipality	Population	Exposed Population on Prone Areas	Exposed Population on Not Prone Areas	Population Exposure Percentage in Prone Areas	Population Exposure Percentage in Not Prone Areas
Agoo	63,692	1,488	37	2%	0%
Aringay	47,458	15,763	298	33%	1%
Bacnotan	42,078	3,277	73	8%	0%
Bagulin	13,456	9,091	94	68%	1%
Balaoan	39,188	15,815	260	40%	1%
Bauang	75,032	9,879	135	13%	0%
Burgos	8,067	6,174	24	77%	0%
Caba	22,039	6,984	79	32%	0%
Luna	35,802	653	93	2%	0%
Naguilian	54,221	13,042	600	24%	1%
Pugo	19,690	7,589	119	39%	1%
Rosario	55,458	23,831	454	43%	1%
San Fernando City	121,812	29,105	1,064	24%	1%
San Gabriel	18,172	13,233	104	73%	1%
San Juan	37,188	5,459	144	15%	0%
Santol	12,476	8,957	124	72%	1%
Sto. Tomas	39,092	518	61	1%	0%
Sudipen	17,056	6,883	102	40%	1%
Tubao	28,729	6,284	643	22%	2%

3.3.1.5 Potentially Affected Population from Tsunami

The scenario simulated for tsunami has an epicenter offshore along Manila Trench with a magnitude of 8.2 which is considered as the maximum magnitude based on the length of the Manila Trench using Rapid Earthquake Damage Assessment System (REDAS). With this scenario, eleven coastal municipalities and one coastal city in the province namely: Agoo, Aringay, Bacnotan, Balaoan, Bangar, Bauang, Caba, Luna, Rosario, City of San Fernando, San Juan and Sto. Tomas will likely be affected. The Municipality of Luna will likely be the most affected in terms of exposed population in prone areas having an exposed population percentage of 66 percent with a potentially affected population of 23,451. This is followed by the Municipality of Sto. Tomas with a potentially affected population of 14,326 or equivalent to 37 percent of its total population. The least that will likely be affected is the Municipality of Rosario with a potentially affected population of 1,221 about 2 percent of its total population.

MAP NO. 25: POPULATION EXPOSURE TO EARTHQUAKE INDUCED LANDSLIDE



MAP NO. 26: POPULATION EXPOSURE TO TSUNAMI

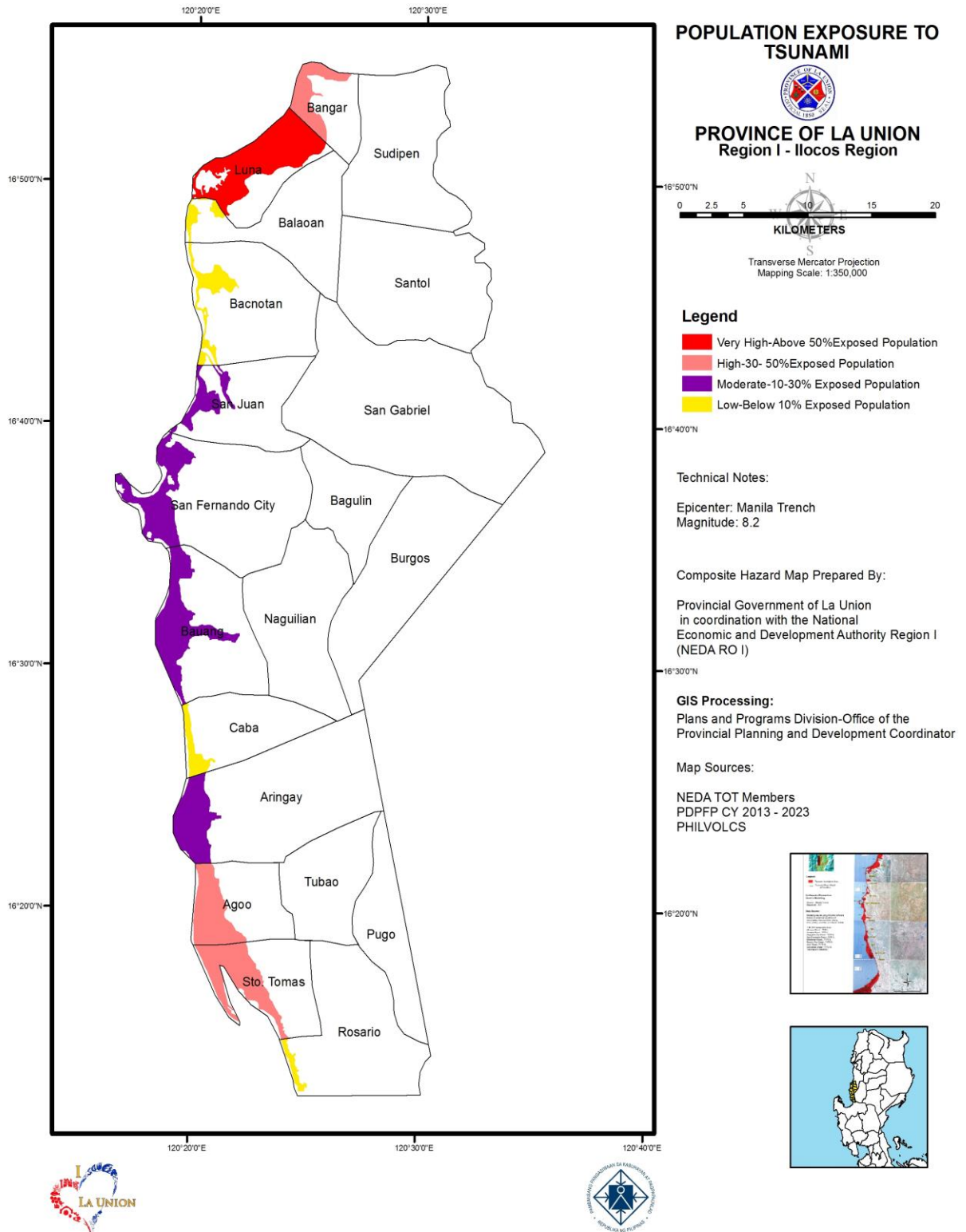


Table No. 23: Potentially Affected Population, Tsunami (Scenario with an Epicenter Offshore along Manila Trench)

Municipality	Population	Exposed Population in Prone Areas	Population Exposure Percentage in Prone Areas
Agoo	63,692	21,572	34%
Aringay	47,458	5,973	13%
Bacnotan	42,078	3,807	9%
Balaoan	39,188	1,700	4%
Bangar	35,947	12,552	35%
Bauang	75,032	21,477	29%
Caba	22,039	1,999	9%
Luna	35,802	23,451	66%
Rosario	55,458	1,221	2%
San Fernando City	121,812	19,945	16%
San Juan	37,188	4,637	12%
Sto. Tomas	39,092	14,326	37%

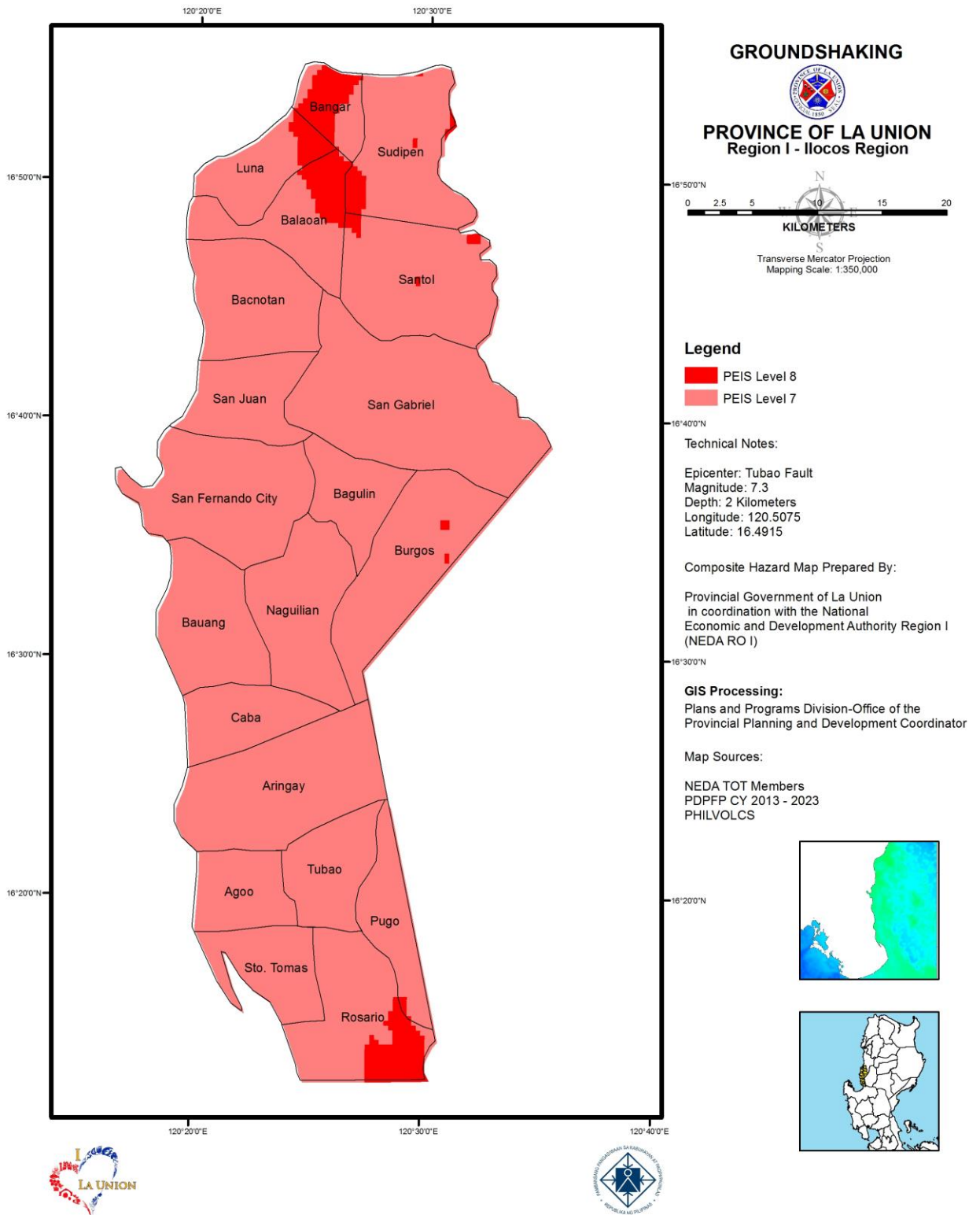
3.3.1.6 Potentially Affected Population from Ground Shaking

For ground shaking, simulations were made to assess possible effects of intense ground shaking in the province. The entire province is susceptible to ground shaking based on Ground Shaking Hazard Map. Using earthquake simulation scenario with an epicenter at Digdig Fault (1990 Earthquake Epicenter), the province will likely to incur 6.0 to 7.0 magnitudes wherein 761,877 persons will likely be affected about 97 percent of the total population of the province. The Municipalities of Bagulin, Bangar, Burgos, Naguilian and Tubao will likely be the most affected wherein they will incur the highest population exposure percentage in prone areas at 100 percent. This means that everyone in the said municipalities will likely be affected and the rest municipalities will likely to incur 94 to 99 percent population exposure in prone areas.

Table No. 24: Potentially Affected Population, Ground Shaking (Scenario using the Epicenter of the July 16, 1990 Earthquake)

Municipality	Population	Exposed Population in Prone Areas	Population Exposure Percentage in Prone Areas
Agoo	63,692	61,051	96%
Aringay	47,458	46,687	98%
Bacnotan	42,078	40,045	95%
Bagulin	13,456	13,456	100%
Balaoan	39,188	38,559	98%
Bangar	35,947	35,947	100%
Bauang	75,032	70,247	94%
Burgos	8,067	8,055	100%
Caba	22,039	21,118	96%
Luna	35,802	35,105	98%
Naguilian	54,221	54,221	100%
Pugo	19,690	19,205	98%
Rosario	55,458	54,938	99%
San Fernando City	121,812	115,382	95%
San Gabriel	18,172	17,627	97%
San Juan	37,188	35,945	97%
Santol	12,476	12,017	96%
Sto. Tomas	39,092	36,960	95%
Sudipen	17,056	16,585	97%
Tubao	28,729	28,729	100%

MAP NO. 27: POPULATION EXPOSURE TO GROUND SHAKING



3.3.2 Built-Up Areas

3.3.2.1 Vulnerability of Built-up Area to Flooding

The built-up areas of the lone City of San Fernando and 17 municipalities will be prone to flooding. About 60.75 percent of the total built-up area of 11,355 hectares will be affected in the case of flooding. Four indicators were used to measure the resiliency of each municipality to flooding with regards to its built-up area which consist of property insurance, presence of flood mitigation measures, building condition and zoning regulation in each municipality.

The province will experience a very low risk up to moderate risk. Tubao, Sto. Tomas, Luna and Pugo will be among those municipalities that will incur a risk score that will fall at the range of 25 – 54 wherein they will experience a moderate risk in their built up areas. Built-up areas of the municipalities of Burgos and Bagulin being upland will not be affected by flooding. The City of San Fernando and Agoos will incur a very low risk while the remaining 14 municipalities will incur low to moderate risk.

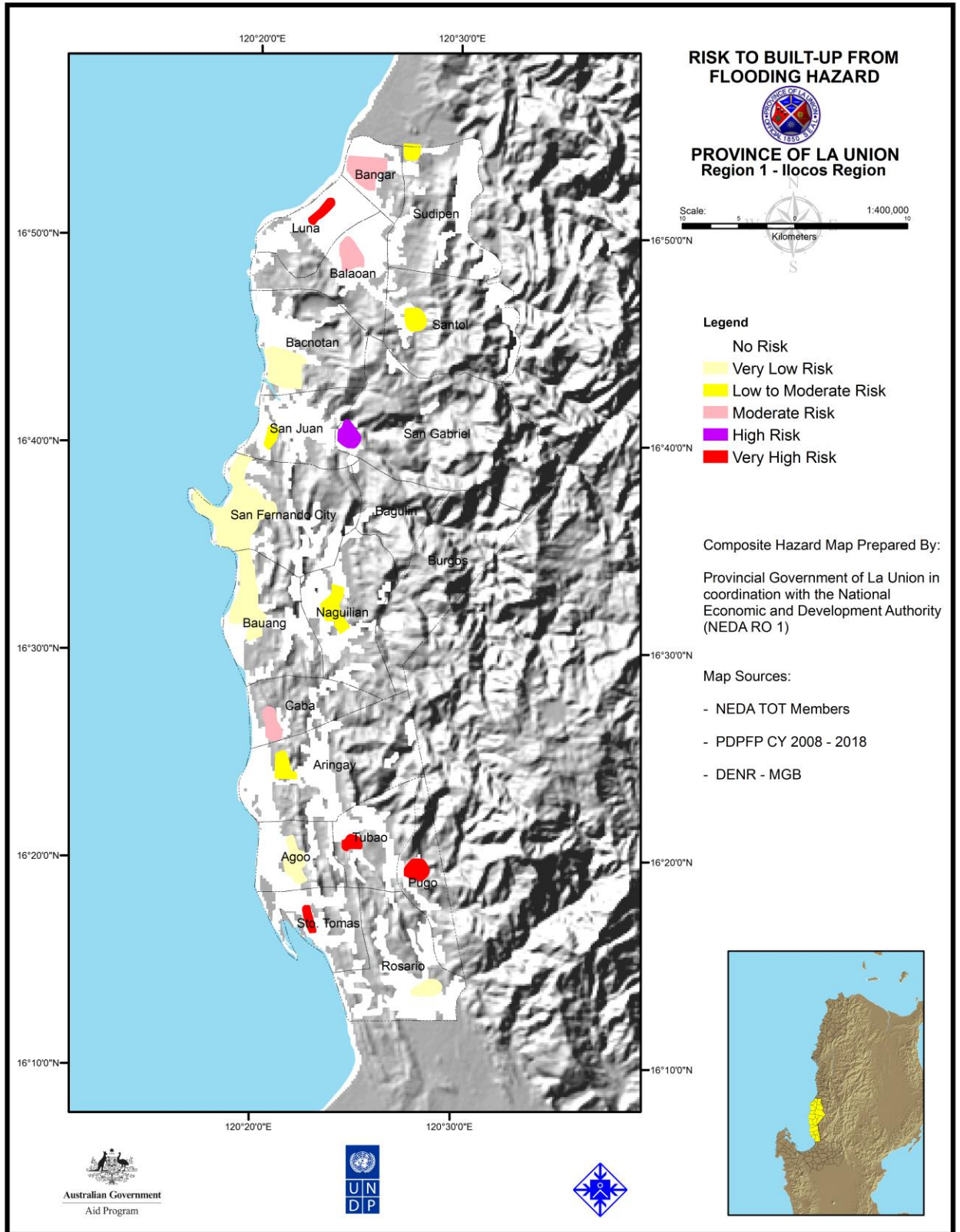
Table No. 25: Vulnerability of Built-up Area to Flooding

Municipality	Built-up Area (Hectares)	Affected Area (Hectares)	Weighted Risk to Flooding
Agoos	571.6995	290.5760	10.7029
Aringay	356.1380	55.2869	15.1394
Bacnotan	1,054.4432	705.9798	13.4067
Balaoan	493.4730	493.4780	21.3924
Bangar	777.8244	769.0080	22.2300
Caba	384.8352	128.5489	22.0454
Luna	239.5456	239.5374	31.5652
Naguilian	593.6210	306.5259	17.8618
Pugo	359.6722	152.3598	36.6230
Rosario	325.7879	270.9526	13.0992
San Fernando	4,155.1734	2,738.3535	8.5517
San Gabriel	383.8774	271.1687	24.4469
San Juan	189.2938	68.3513	16.1704
Santol	354.1760	55.5908	18.7810
Sto. Tomas	193.4960	192.6863	31.3408
Sudipen	211.4150	28.4756	15.9192
Tubao	213.9354	131.6835	30.0705

3.3.2.2 Vulnerability of Built-up Area to Rain-induced Landslide

Slope stabilization measures used, building condition and the zoning regulation were the indicators used in the process to measure the vulnerability when it comes to rain-induced landslide. For the province of La Union, 31 percent of the total built-up area will possibly be affected and will incur very low risk up to moderate risk. The municipalities of Sudipen, Caba, Aringay, Bagulin, Santol and Burgos will incur a risk score at the range of 25 to 54 which means that these municipalities will experience a frequent event with moderate risk. San Gabriel, Tubao and Pugo will experience a low to moderate risk wherein their risk score falls at the range of 13 to 24. On the other hand, the municipalities of Bangar, Luna, Rosario and Sto. Tomas will not experience risk in terms of rain-induced landslide to its built-up area.

MAP NO. 28: RISK TO BUILT-UP FROM FLOODING HAZARD



MAP NO. 29: RISK TO BUILT-UP FROM RAIN-INDUCED LANDSLIDE

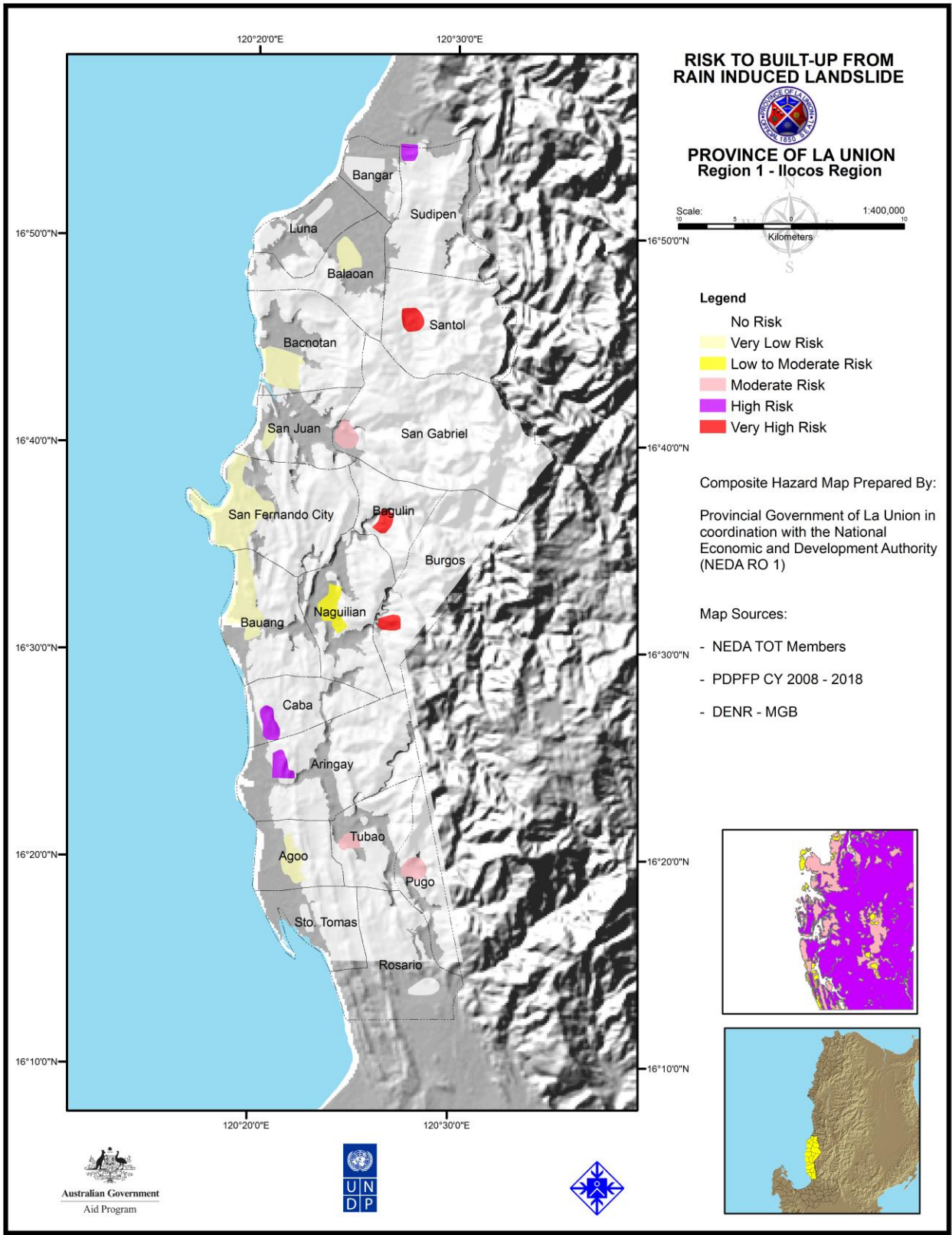


Table No. 26: Vulnerability of Built-up Area to Rain-induced Landslide

Municipality	Built-up Area (Hectares)	Affected Area (Hectares)	Weighted Risk to RIL
Agoo	571.6995	192.3692	8.0124
Aringay	356.1380	337.5228	28.0226
Bacnotan	1,054.4432	103.0090	5.6558
Bagulin	251.3355	229.5188	31.6069
Balaoan	493.4730	13.9387	6.2691
Burgos	245.2203	231.6051	35.7151
Caba	384.8352	368.1120	26.8893
Naguilian	593.6210	185.4075	12.6244
Pugo	359.6722	183.9820	21.3309
San Fernando	4,155.1734	1,027.9713	6.2366
San Gabriel	383.8774	124.7762	17.9993
San Juan	189.2938	8.2498	7.0459
Santol	354.1760	354.1760	34.0948
Sudipen	211.4150	121.1006	25.6144
Tubao	213.9354	36.9588	19.5250

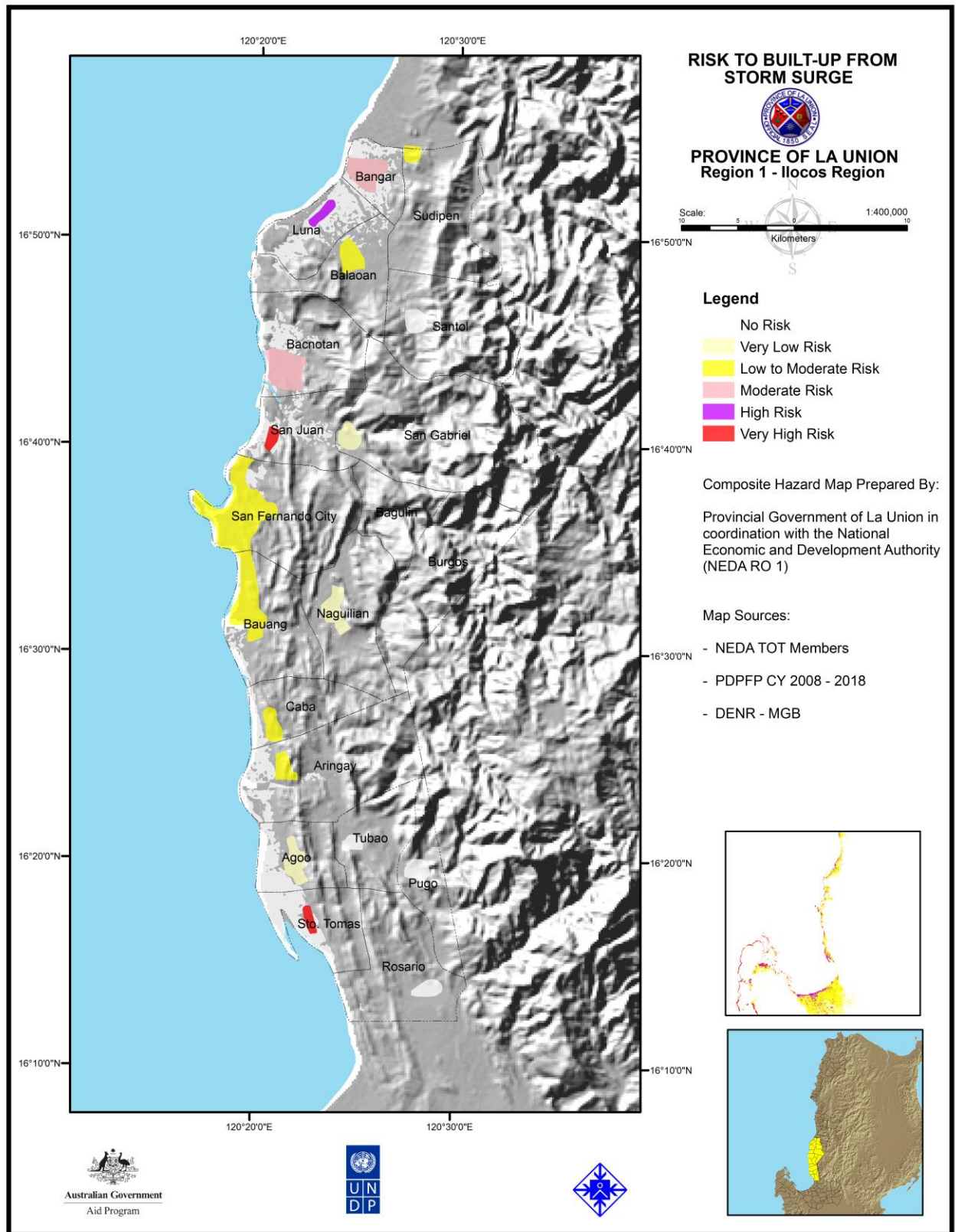
3.3.2.3 Vulnerability of Built-up Area to Storm Surge

Existence of property insurance, access to sea wall and zoning regulation in the municipalities also determines their resiliency in the occurrence of storm surge. Fifteen of which will experience very low risk up to moderate risk. Two municipalities of the province will experience a moderate risk. These were the municipalities of Sto. Tomas and San Juan that will incur a risk score of 27.14 and 28.35 respectively while Bangar, Bacnotan and Luna will experience low to moderate risk. Agoo, Naguilian, San Gabriel, San Fernando, Balaoan, Caba, Aringay and Sudipen will incur a risk scores within the range of 1 to 12 which means that these municipalities will experience low to moderate risk in terms of storm surge. The municipalities of Bagulin, Burgos, Pugo, Rosario, Santol and Tubao will not be affected by storm surge.

Table No. 27: Vulnerability of Built-up Area to Storm Surge

Municipality	Built-up Area (Hectares)	Affected Area (Hectares)	Weighted Risk to Storm Surge
Agoo	571.6995	10.0112	3.7798
Aringay	356.1380	4.1278	8.6535
Bacnotan	1,054.4432	660.2601	17.4900
Balaoan	493.4730	39.7792	7.5595
Bangar	777.8244	664.9460	16.3541
Caba	384.8352	2.1620	7.8622
Luna	239.5456	234.0123	22.8000
Naguilian	593.6210	0.2417	5.4514
San Fernando	4,155.1734	1,327.1089	6.8414
San Gabriel	383.8774	5.3223	5.4514
San Juan	189.2938	169.2269	28.3482
Sto. Tomas	193.4960	129.0041	27.1446
Sudipen	211.4150	1.5959	8.6535

MAP NO. 30: RISK TO BUILT-UP FROM STORM SURGE



3.3.3 Economic Sector

3.3.3.1 Vulnerability of Agriculture to Flooding

The agriculture sector in the lone city and 19 municipalities of the province will be prone to flooding wherein 62 percent of the total agriculture area will be affected. Three indicators which include the vulnerability of crops, the presence of early warning device/access to flood forecasting information and the access to flood control and drainage facilities in agricultural areas were used to determine the vulnerability of every municipality/city to flooding.

Evident in the table above that the province incurred a risk score of 5 to 25.8 which means that the province will experience very low risk to moderate risk on its agriculture sector in terms of flooding. The municipalities of Aringay and Bangar will experience moderate risk at a risk score of 25.83 and 25.85 respectively, while the municipalities of Rosario, Bacnotan, Luna, San Juan, Tubao and Sto. Tomas will incur a risk score that falls in the range of 13 – 24 wherein they will experience low to moderate risk. The agriculture sector in the remaining municipalities will experience a very low risk in terms of flooding.

Table No. 28: Vulnerability of Agriculture to Flooding

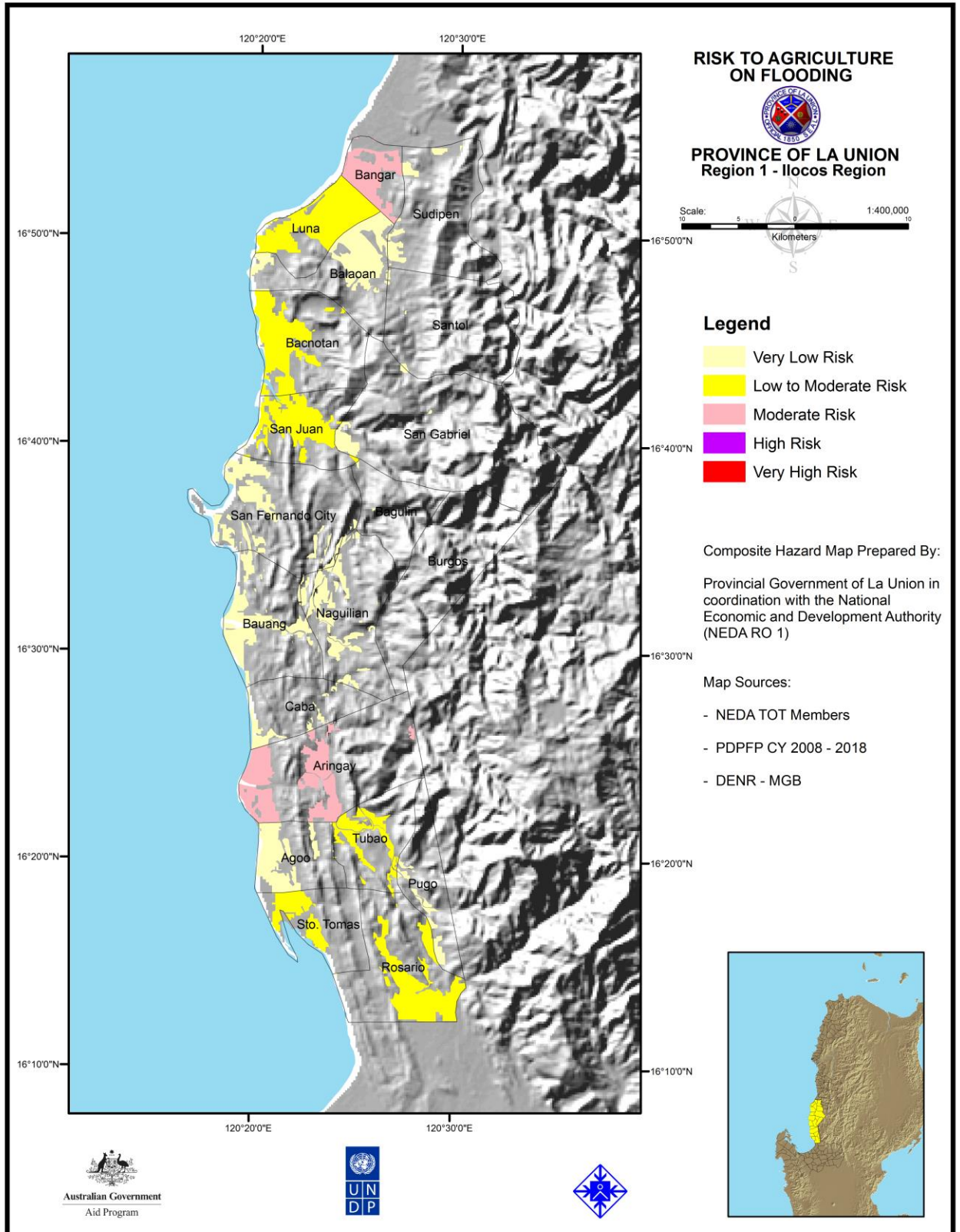
Municipality	Agriculture Area (Hectares)	Affected Area (Hectares)	Affected Area (HSA)	Affected Area (MSA)	Affected Area (LSA)	Weighted Risk to Flooding
Agoo	1,936.8473	1,523.3674	99.7567	808.9754	614.6352	6.3689
Aringay	3,776.6604	2,993.5766	1,416.2214	399.8192	1,177.5360	25.8307
Bacnotan	3,712.7808	2,446.0388	-	1,659.4685	786.5702	14.7033
Bagulin	683.6652	19.7618	6.4992	-	13.2627	8.0131
Balaoan	3,070.0732	2,228.6873	8.5022	1,336.0578	884.1273	5.4240
Bangar	1,952.8033	1,556.3348	741.0280	454.8062	360.5006	25.8471
Bauang	2,916.3329	1,818.2615	818.5576	207.7848	791.9191	10.9050
Burgos	284.5176	0.1292	0.1292	-	-	6.1909
Caba	846.8776	455.5521	79.2322	60.1994	316.1205	8.3621
Luna	3,665.4547	3,166.0639	642.7265	2,292.7058	230.6316	18.0438
Naguilian	4,280.6584	1,533.1949	523.4508	615.6427	394.1014	7.8619
Pugo	814.2237	451.4874	232.8102	0.9882	217.6891	11.7477
Rosario	3,680.6623	2,706.0618	109.8262	1,369.0608	1,227.1749	13.6318
San Fernando City	3,406.1502	1,797.6990	147.7082	1,161.9100	488.0808	10.6252
San Gabriel	2,136.2479	406.8489	-	271.0747	135.7742	11.1384
San Juan	3,187.0890	2,119.1242	411.0654	1,190.0882	517.9707	18.1950
Santol	218.0022	49.9788	-	-	49.9788	10.9200
Sto. Tomas	1,632.4067	1,052.8432	309.1227	477.0607	266.6599	20.1626
Sudipen	1,233.1827	511.4747	8.8683	2.6892	499.9172	11.0765
Tubao	1,639.0429	1,092.7477	631.1937	131.7437	329.8104	20.0290

3.3.3.2 Vulnerability of Agriculture to RIL

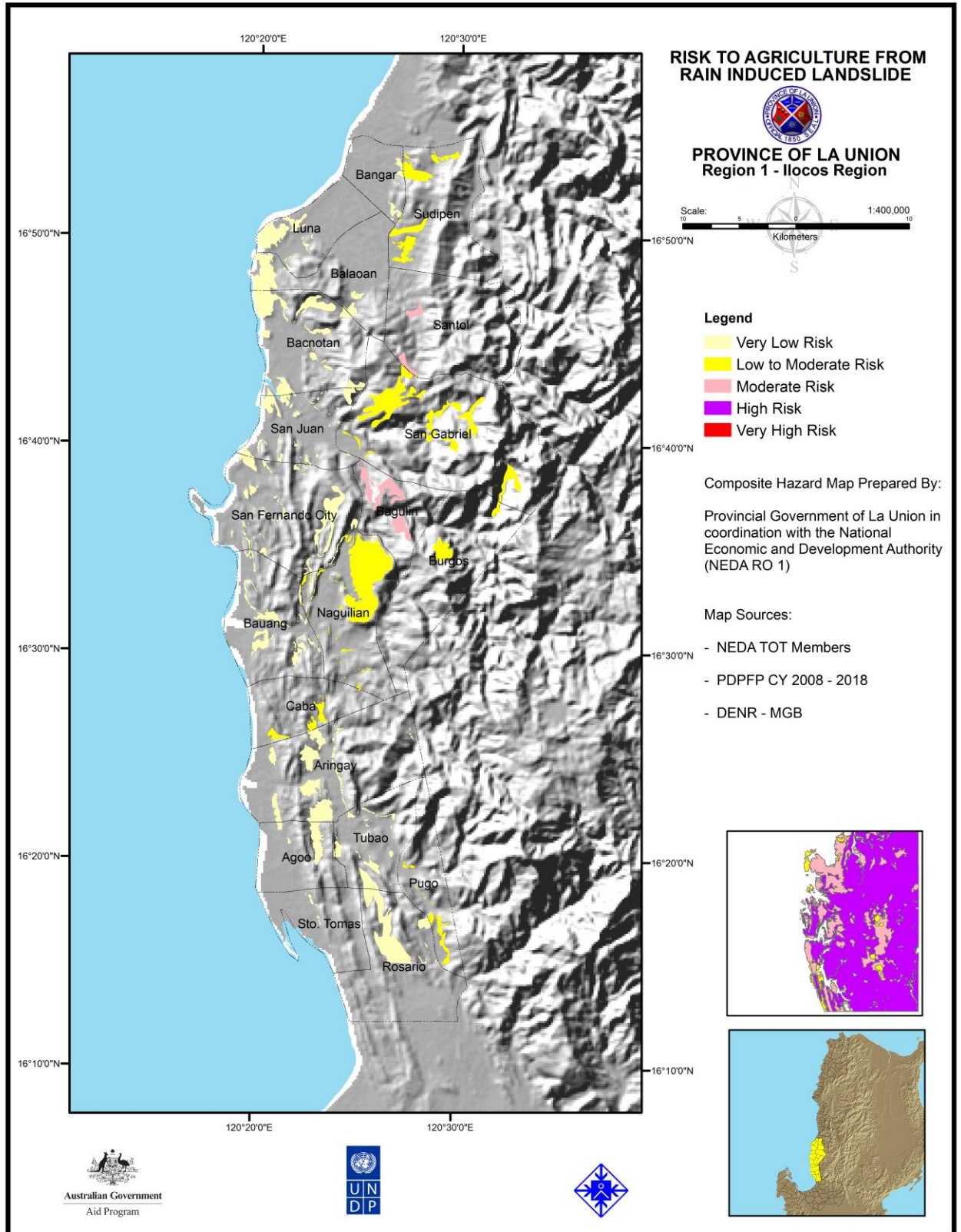
The predominantly hilly terrain of the province made it prone to rain-induced landslides that may cause damage to the agriculture sector. Indicators to measure the vulnerability of the agriculture sector to rain-induced landslide were used. These include application of sustainable & integrated farming practices for high slope areas, agricultural

areas with slope stabilization intervention and the access to rain forecasting information and early warning system.

MAP NO. 31: RISK TO AGRICULTURE FROM FLOODING



MAP NO. 32: RISK TO AGRICULTURE FROM RAIN-INDUCED LANDSLIDE



Thirty one percent of the total agriculture area will be affected and will experience a very low risk up to moderate risk. The upland municipality of Santol will incur the highest risk score at 28.15 in its agriculture sector wherein it is considered to experience a moderate risk to rain-induced landslide. Next to Santol is Bagulin, another upland municipality of the second district. A risk score is recorded at 26.97 which will also experience a moderate risk. Six municipalities which consist of Sudipen, Naguilian, Caba, Pugo, San Gabriel and Burgos will experience low to moderate risk in the event of a rain-induced landslide, while the remaining municipalities will experience a very low risk to their agriculture sector.

Table No. 29: Vulnerability of Agriculture to Rain-induced Landslide

Municipality	Agriculture Area (Hectares)	Affected Area (Hectares)	Affected Area (HSA)	Affected Area (MSA)	Affected Area (LSA)	Weighted Risk to RIL
Agoo	1,936.8473	322.5684	0.1669	93.4238	228.9777	7.0020
Aringay	3,776.6604	1,176.7598	152.2172	147.6805	876.8621	12.3437
Bacnotan	3,712.7808	1,178.4851	0.9141	551.4930	626.0779	7.6729
Bagulin	683.6652	638.5079	178.3369	460.1710	-	26.9685
Balaoan	3,070.0732	621.5860	-	127.5811	494.0049	12.9646
Bangar	1,952.8033	132.7727	-	67.6892	65.0835	6.4950
Bauang	2,916.3329	613.9307	268.1234	273.8072	72.0001	10.1250
Burgos	284.5176	284.3884	284.3884	-	-	22.4991
Caba	846.8776	246.4901	15.9094	173.5293	57.0513	14.3092
Luna	3,665.4547	565.7894	-	40.2973	525.4922	11.9852
Naguilian	4,280.6584	2,028.5328	346.2779	1,682.2207	0.0341	13.8690
Pugo	814.2237	225.8926	48.5727	177.3199	-	15.7244
Rosario	3,680.6623	1,048.7714	261.8901	716.8533	70.0280	11.4300
San Fernando City	3,406.1502	981.9955	207.2326	715.3972	59.3658	12.0600
San Gabriel	2,136.2479	1,721.3873	794.3724	927.0149	-	21.2402
San Juan	3,187.0890	540.2170	55.3050	269.1253	215.7867	9.4050
Santol	218.0022	189.8942	17.2581	172.3807	0.2553	28.1468
Sto. Tomas	1,632.4067	32.7082	-	0.1026	32.6056	9.7425
Sudipen	1,233.1827	768.0842	0.5897	245.9364	521.5581	13.4376
Tubao	1,639.0429	423.4728	98.0515	323.5528	1.8685	11.5044

3.3.3.3 Vulnerability of Agriculture to Storm Surge

Three indicators were also used to measure vulnerability of the agriculture sector to storm surge. This consists of crop type, implementation of storm surge mitigation intervention and the last indicator used was the access to typhoon forecasting information and early warning system.

Fourteen municipalities and the City of San Fernando will experience damage to their agriculture sector. Of the total agriculture area of the province, 27 percent will be affected and will experience very low risk to moderate risk in terms of storm surge. The municipality of Sto. Tomas will incur the highest risk score at 26.35 which means that the agriculture sector in this municipality will experience moderate risk in terms of storm surge.

The municipalities of Bacnotan, Aringay, Caba, San Juan, Bangar and Luna will incur a risk scores that ranges from 13 to 24 which means that they will experience low to moderate risk in terms of storm surge. The City of San Fernando and the municipalities of Sudipen, San Gabriel, Naguilian, Rosario, Balaoan, Bauang and Agoo will experience very low risk in their agriculture sector in the occurrence of storm surge.

MAP NO. 33: RISK TO AGRICULTURE FROM STORM SURGE

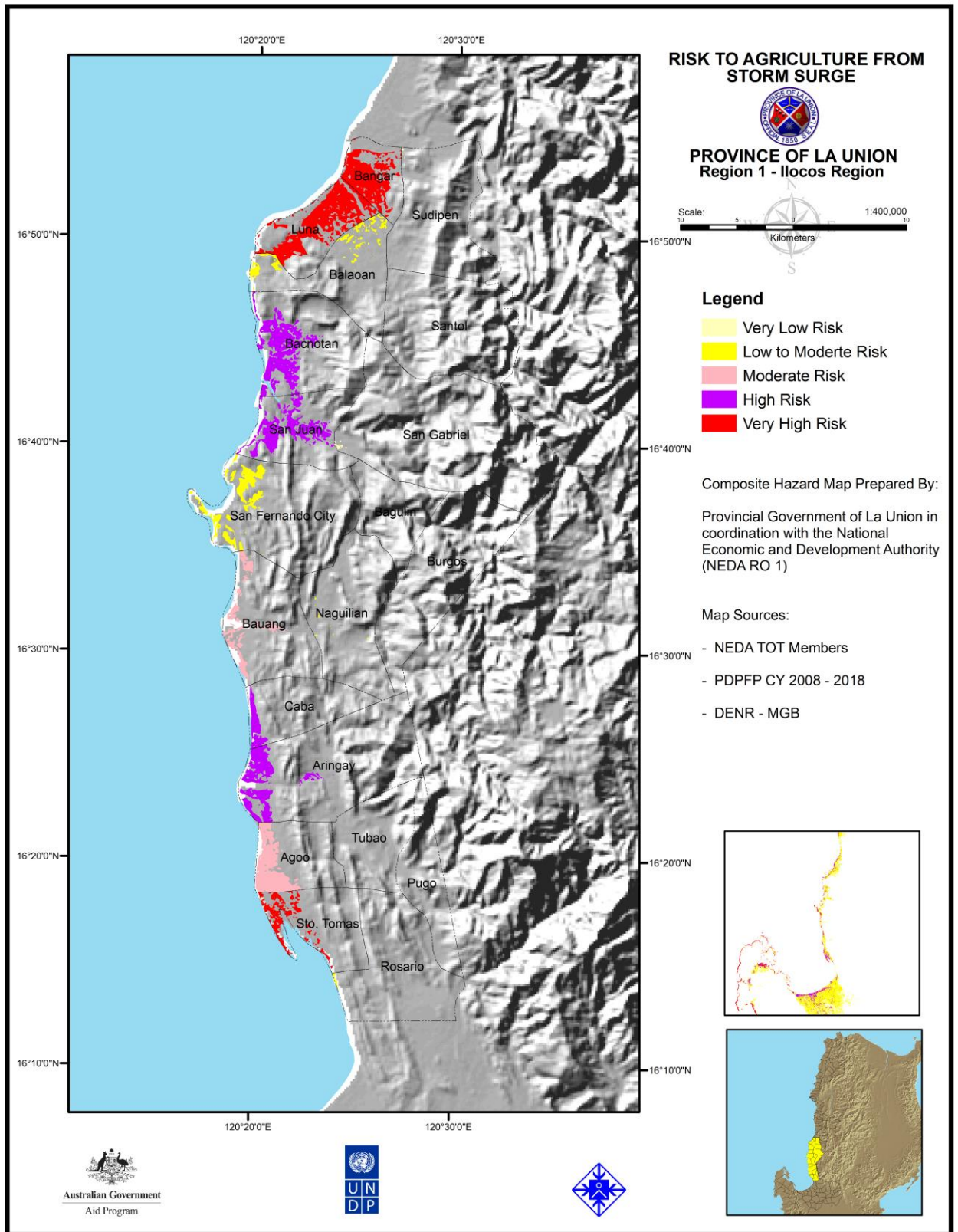


Table No. 30: Vulnerability of Agriculture to Storm Surge

Municipality	Agriculture Area (Hectares)	Affected Area (Hectares)	Affected Area (HSA)	Affected Area (MSA)	Affected Area (LSA)	Weighted Risk to Storm Surge
Agoo	1,936.8473	1,144.4606	59.4219	204.7628	880.2758	11.2864
Aringay	3,776.6604	1,045.9574	58.0289	66.3246	921.6040	14.4946
Bacnotan	3,712.7808	1,543.5498	40.7504	214.5916	1,288.2078	13.2600
Balaoan	3,070.0732	420.9854	1.8348	29.0683	390.0823	6.5579
Bangar	1,952.8033	1,324.4072	-	164.2230	1,160.1843	21.6000
Bauang	2,916.3329	610.7131	38.9387	28.9992	542.7751	8.0243
Caba	846.8776	328.7902	89.9127	76.8177	162.0598	14.4946
Luna	3,665.4547	2,084.5643	2.4283	311.3076	1,770.8284	21.8918
Naguilian	4,280.6584	13.1561	-	0.8864	12.2697	4.9137
Rosario	3,680.6623	18.5815	-	0.1776	18.4039	4.9137
San Fernando City	3,406.1502	806.0123	17.0548	90.3976	698.5599	5.1300
San Gabriel	2,136.2479	22.1605	-	1.1708	20.9897	3.8250
San Juan	3,187.0890	1,138.7102	7.4224	81.9831	1,049.3047	15.1789
Sto. Tomas	1,632.4067	547.9544	66.9937	480.9607	-	26.3494
Sudipen	1,233.1827	5.9572	-	-	5.9572	3.7798

3.3.4 Critical Infrastructures

3.3.4.1 Vulnerability of Critical Infrastructures to Flooding

A likelihood of 3 was used which means that a 480mm/day rainfall amount that caused flooding at different levels of susceptibility has a period of occurrence of 30 to 100 years. A magnifier of 1.30, 1.50 and 1.0 for high, moderate and low susceptibility was designated to determine the vulnerability of the different critical infrastructures.

In the event of flooding in the province, it can be seen from Table No. 31 that 18 municipalities and the lone city will be affected. Burgos an upland municipality of the province will not be affected by flooding in terms of its critical infrastructures. A total of 27 schools will be affected by flooding in the entire province wherein the municipality of Bauang will have the highest number of affected at 6 schools but with a risk score of 28.04 which means that it will incur a moderate risk to flooding. The municipalities of Bangar and Aringay will incur the highest consequence at 46.80 in terms of risk to schools.

The province will also incur risk to its government centers in the case of flooding. 18 municipal/city halls will be flooded. The municipality of Aringay will be the most affected because of its proximity to the river system and will incur a risk score of 62.40. This is followed by the municipalities of Pugo and Bauang with a risk score of 46.80.

Three district hospitals out of the 8 hospitals will be affected by flooding in the province. Rosario District Hospital and Bacnotan District Hospital will incur risk at 41.40, while Caba District Hospital will incur low to moderate risk.

Among the 65 bridges along the national and provincial roads in the province, 32 of which will be affected by flooding. The low lying municipalities of Luna and Bangar will incur the highest risk score at 62.40. Next to Bangar are the municipalities of San Juan and Naguilian at 45.75 which mean that they will experience moderate risk. Also to experience moderate risk are the municipalities of Balaoan and Bacnotan at 41.40 risk score.

Table No. 31: Vulnerability of Critical Infrastructures to Flooding

Municipality	Number of Affected Critical Infrastructures				Weighted Risk to Flooding			
	Schools	Gov't Centers	Hospitals	Bridges	Schools	Gov't Centers	Hospitals	Bridges
Agoo	2	1		1	18.00	36.00		36.00
Aringay	1	1			46.80	62.40		
Bacnotan	1	1	1	3	20.70	41.40	41.40	41.40
Bagulin	1				23.40			
Balaoan	3	1		2	20.70	41.40		41.40
Bangar	2	1		1	46.80	41.40		62.40
Bauang	6	1		6	28.04	46.80		32.16
Burgos								
Caba	1	1	1	1	9.00	12.00	24.00	27.00
Luna	1	1		1	41.40	41.40		62.40
Naguilian	1	1		2	27.00	41.40		45.72
Pugo	1	1		4	9.00	46.80		31.68
Rosario	1	1	1	4	6.00	41.40	41.40	17.07
San Fernando City	2	2		2	14.88	40.32		20.16
San Gabriel	1	1			27.60	12.00		
San Juan	2	1		2	20.16	27.60		45.72
Santol		1				24.00		
Sto. Tomas		1		2		12.00		27.00
Sudipen	1				9.00			
Tubao		1		1		27.60		23.40

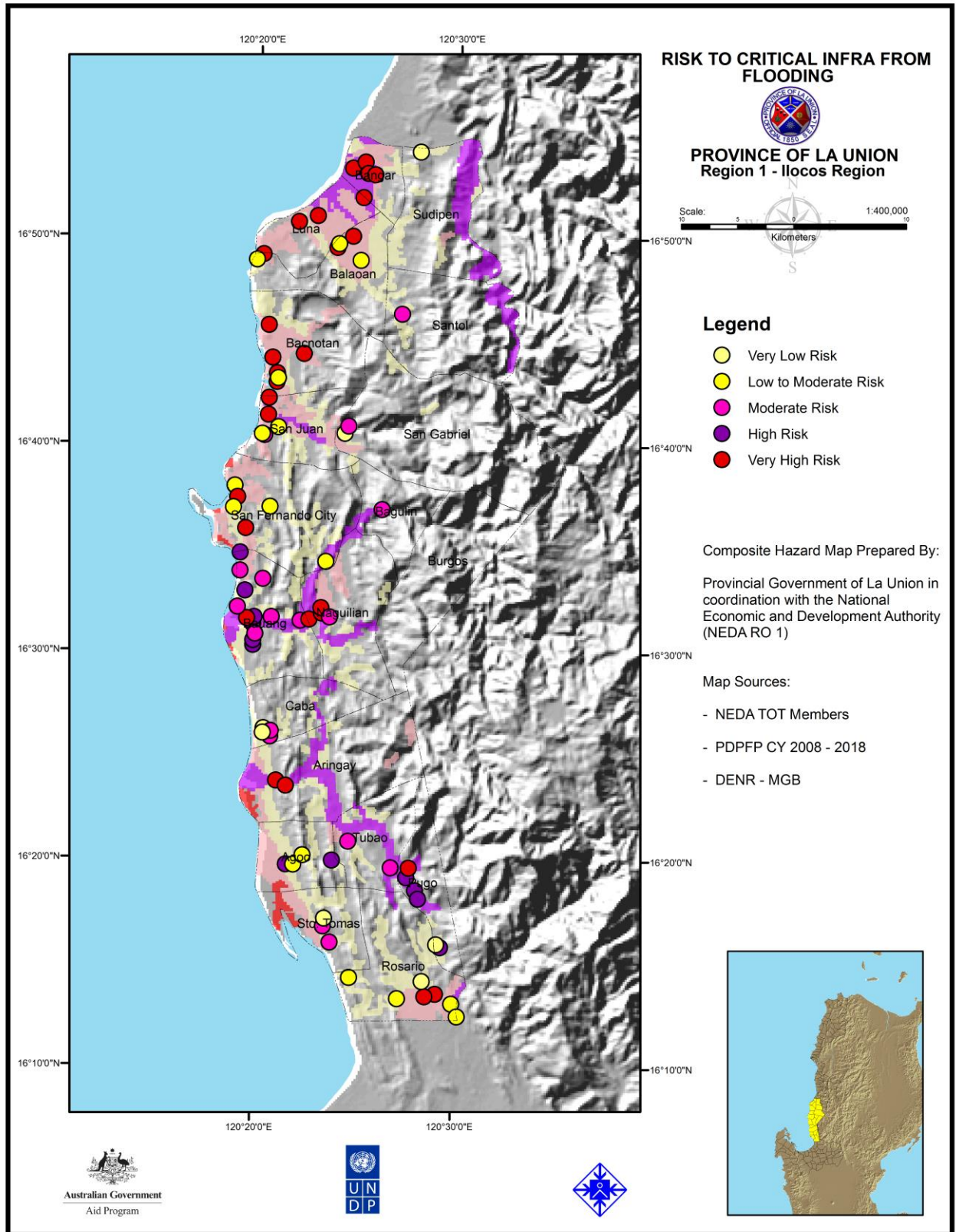
3.3.4.2 Vulnerability of Critical Infrastructures to Rain-induced Landslide

The province is said to be prone to rain-induced landslide because of its hilly terrain and that may cause damage to critical infrastructures. It can be observed from Table No. 28 that 22 schools in the province will be affected in the event of a rain-induced landslide wherein eleven municipalities and the lone city will incur risk. Burgos an upland municipality will incur the highest risk score of 62.40 in terms of its schools. The City of San Fernando, Santol, Sudipen, Agoo, Tubao, Pugo and Bagulin will incur risk at the range of 25 – 54 which means that they will experience moderate risk in terms of rain-induced landslide while Balaoan, Bauang and Luna will incur low to moderate risk and the municipality of Bacnotan will incur the least risk score of 10.08 or equivalent to very low risk.

For government centers, 8 city/municipal government centers will be affected by rain-induced landslide. Upland municipalities of Burgos and Bagulin will incur the highest risk score of 62.40 to their municipal hall if rain-induced landslide will occur. The municipalities of Sudipen, Santol, San Gabriel and the City of San Fernando will incur moderate risk to their government centers while Sto. Tomas will incur low to moderate risk.

Four hospitals in the province will be affected by rain-induced landslide. These are the Caba District Hospital, Balaoan District Hospital, Santol Lying-in and the La Union Medical Center (LUMC) in Agoo. The LUMC will incur low to moderate risk to rain-induced landslide, while the other affected hospitals will incur moderate risk.

MAP NO. 34: RISK TO CRITICAL INFRASTRUCTURES FROM FLOODING



MAP NO. 35: RISK TO CRITICAL INFRASTRUCTURES FROM RAIN-INDUCED LANDSLIDE

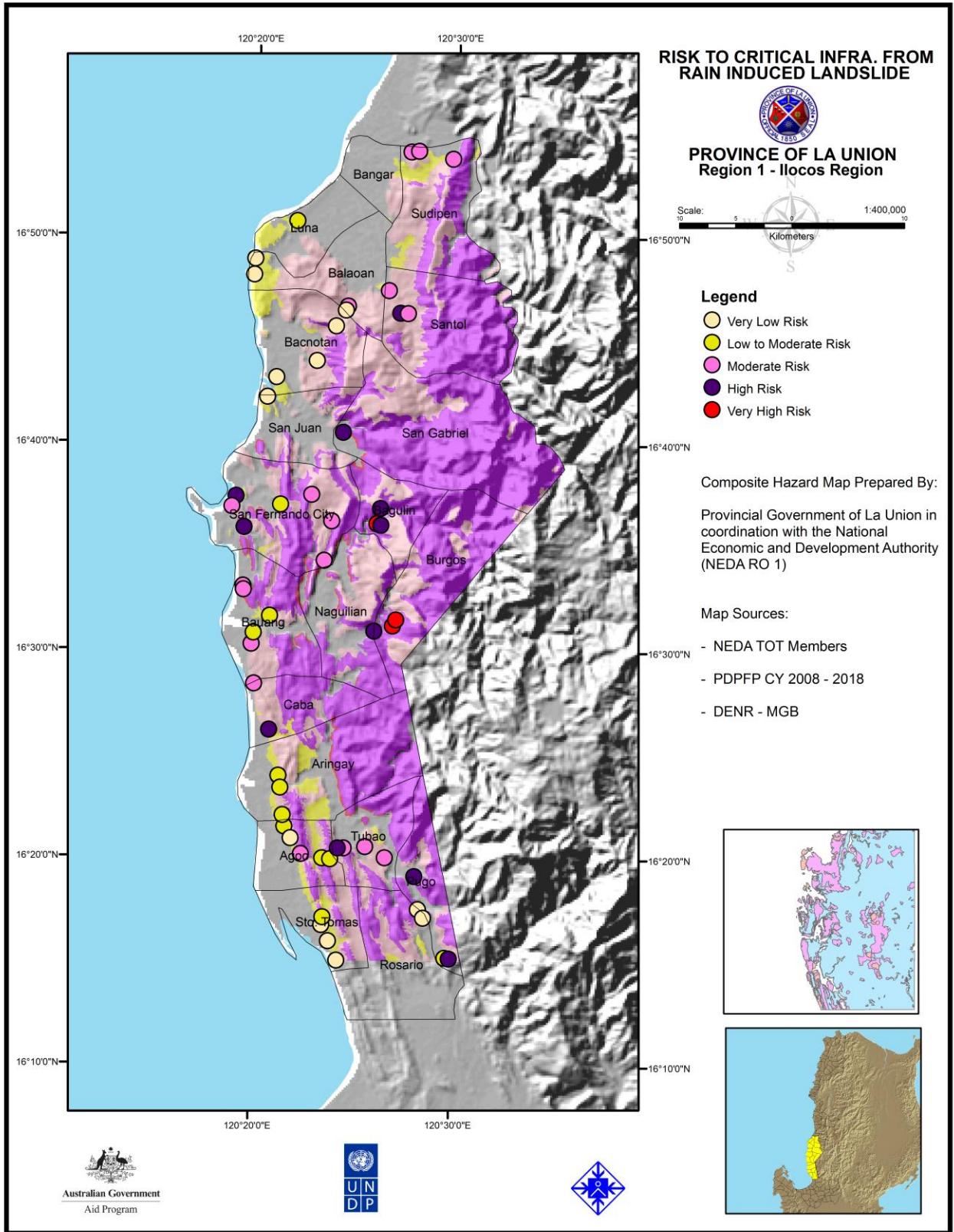


Table No. 32: Vulnerability of Critical Infrastructures to Rain-induced Landslide

Municipality	Number of Affected Critical Infrastructures				Weighted Risk to Rain-induced Landslide			
	Schools	Gov't Centers	Hospitals	Bridges	Schools	Gov't Centers	Hospitals	Bridges
Agoo	1		1	3	35.10		12.00	20.16
Aringay				3				20.16
Bacnotan	3			1	10.08			13.80
Bagulin	2	1			46.80	62.40		
Balaoan	2		1	1	13.44		27.60	9.00
Bangar								
Bauang	2			2	20.16			30.48
Burgos	1	1			62.40	62.40		
Caba			1	1			41.40	31.05
Luna	1				24.00			
Naguilian				1				46.80
Pugo	2			1	45.72			20.70
Rosario				2				11.43
San Fernando City	4	2		1	31.05	44.64		20.70
San Gabriel		1				46.80		
San Juan				1				9.00
Santol	1	1	1		27.60	41.40	27.60	
Sto. Tomas		1		3		24.00		9.00
Sudipen	2	1			27.60	27.60		
Tubao	1			3	41.40			33.24

Twenty three bridges or 35 percent of the total number of bridges in the province will incur risk in the event of a rain-induced landslide affecting 13 municipalities/city. The municipalities of Bauang, Caba, Tubao and Naguilian will incur moderate risk. Likewise, the municipalities of Pugo, Aringay, Agoo, Bacnotan and the City of San Fernando will incur low to moderate risk to their bridges while the municipalities of Balaoan, Sto. Tomas, San Juan and Rosario will experience a very low risk in the case of rain-induced landslide.

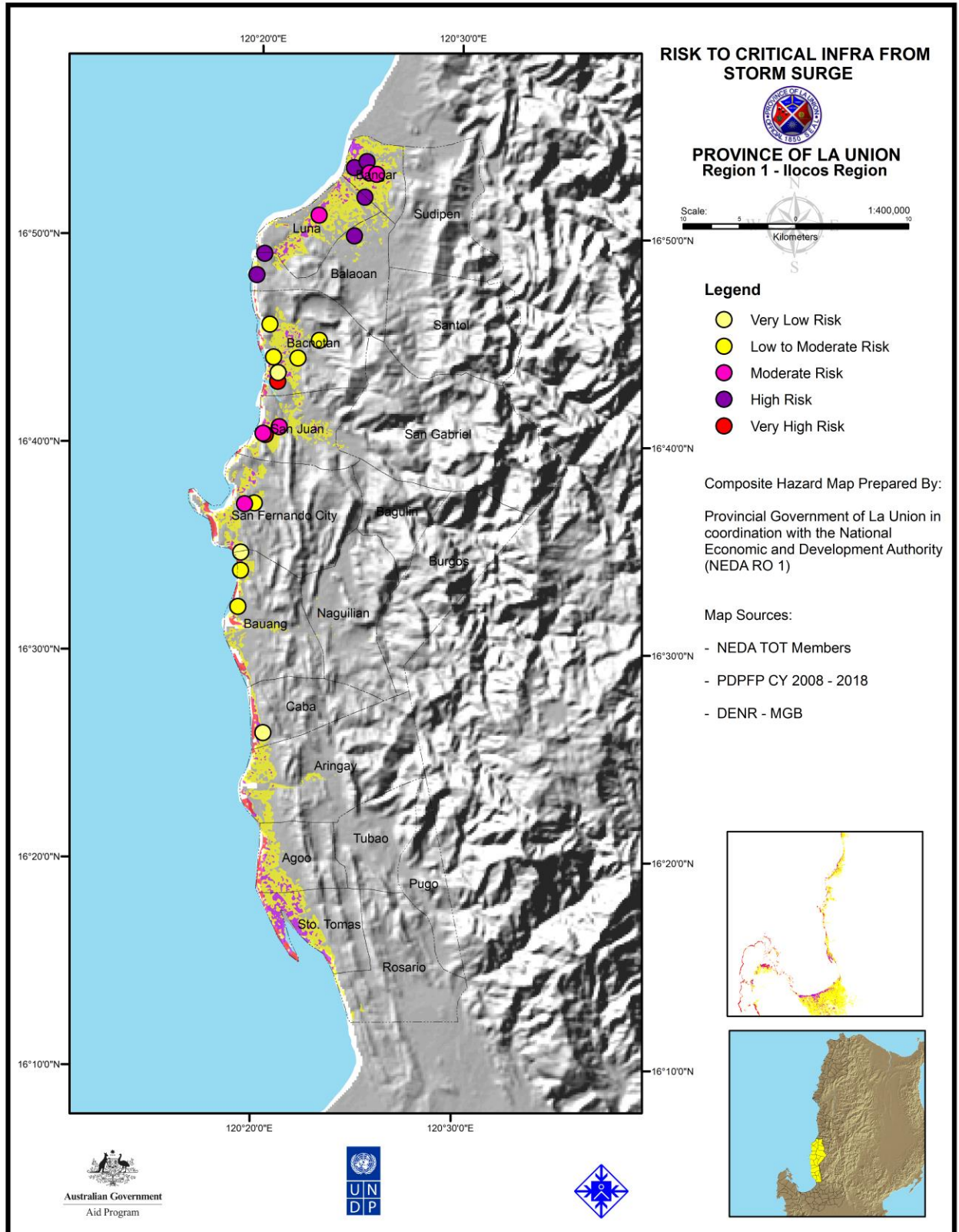
3.3.4.3 Vulnerability of Critical Infrastructures to Storm Surge

The province has eleven coastal municipalities and one coastal city which made it prone to storm surge. It can be drawn from the table below that the City of San Fernando and the municipalities of Bauang, Bacnotan, Balaoan, Luna, Bangar, San Juan and Caba will be at risk in terms of critical infrastructures in the event of a storm surge. Seven schools or 15 percent of the total number of schools in the province will be affected. These were the schools mostly along the coastal. The coastal town of San Juan will experience moderate risk in terms of its schools having a risk score of 25.20. This is followed by the municipalities of Bangar and Bauang that will incur low to moderate risk with the recorded risk scores of 24 and 18 respectively while the municipality of Caba will experience a very low risk to storm surge in terms of its schools affecting only one school.

The municipal halls of Bacnotan, Bangar, San Juan and Luna together with the city hall of San Fernando will incur risk when a storm surge occurs. The municipal hall of San Juan with its proximity to the coast will incur the highest risk score of 72. The City of San Fernando and the municipalities of Bangar and Bacnotan will incur moderate risk to their municipal/city halls while the municipality of Luna will experience low to moderate risk to its municipal hall in the case of a storm surge.

The Bacnotan District Hospital in the municipality of Bacnotan will be the only hospital in the province that will incur risk in the event of a storm surge.

MAP NO. 36: RISK TO CRITICAL INFRASTRUCTURES FROM STORM SURGE



Eleven bridges or 17 percent of the total number of bridges will be affected in the occurrence of a storm surge. Four bridges will be affected in the municipality of Bacnotan and three from Balaoan and one bridge each for Bangar, Bauang, Luna and the City of San Fernando. Bangar will have the highest risk score of 48 which means that it will experience a moderate to storm surge in terms of bridges. Likewise, the municipalities of Balaoan and Luna will incur a moderate risk with risk scores of 37.8 and 36 respectively. The City of San Fernando and the municipality of Bacnotan will incur a low to moderate risk while the municipality of Bauang will incur a very low risk in terms of its bridges.

Table No. 33: Vulnerability of Critical Infrastructures to Storm Surge

Municipality	Number of Affected Critical Infrastructures				Weighted Risk to Storm Surge			
	Schools	Gov't Centers	Hospitals	Bridges	Schools	Gov't Centers	Hospitals	Bridges
Bacnotan		1	1	4		54.00	12.00	18.00
Balaoan				3				37.80
Bangar	2	1		1	24.00	36.00		48.00
Bauang	2			1	18.00			12.00
Caba	1				9.00			
Luna		1		1		24.00		36.00
San Fernando City		1		1		27.00		18.00
San Juan	2	1			25.20	72.00		

3.3.5 Road Network

A total of 481.43 km road network of the province was considered in the assessment done. This consists of 203.03 km national road and 278.40 km provincial road in the province. The impact of risk contributed by hazards into our road network may as well affect the economic activity of the province.

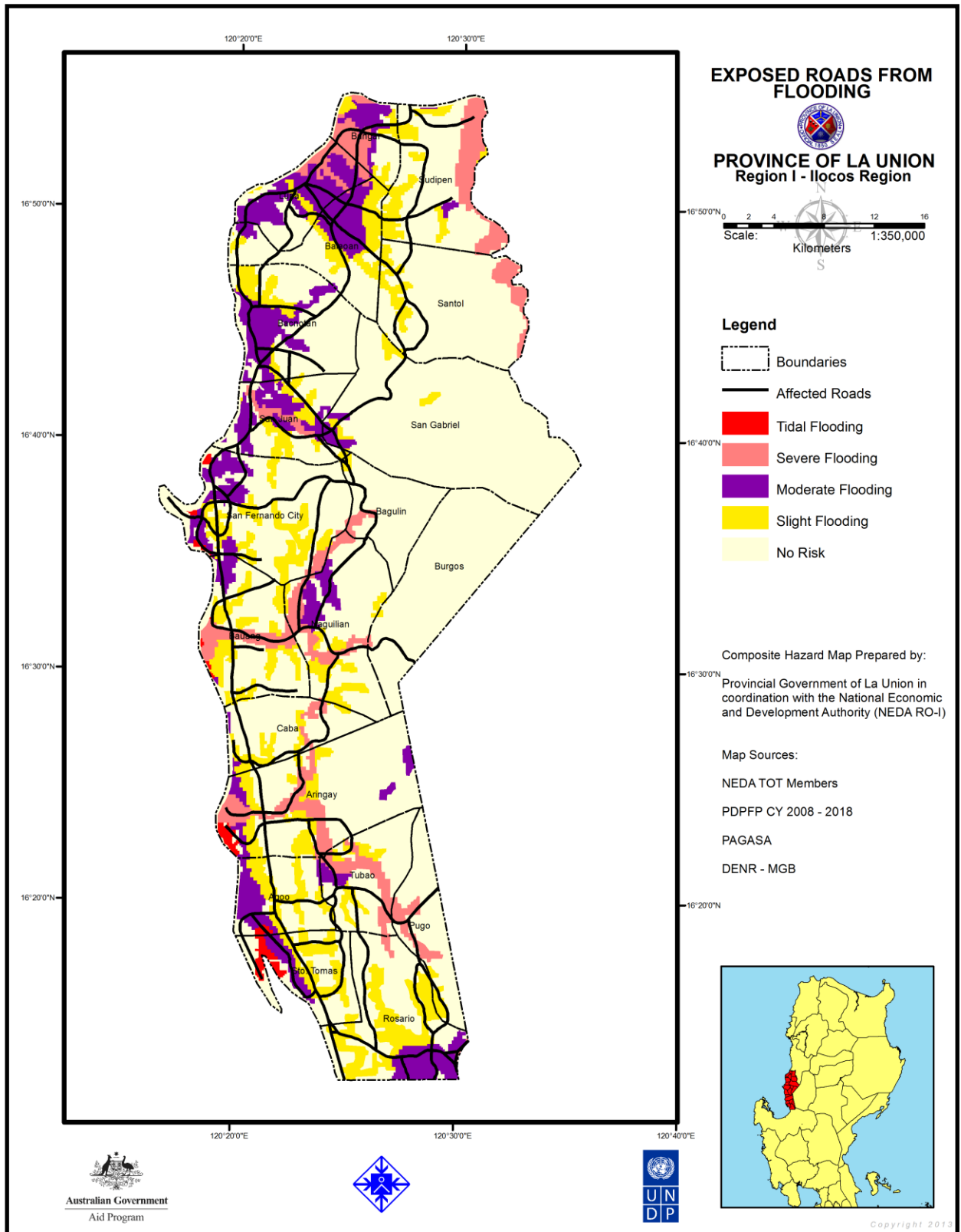
3.3.5.1 Vulnerability of Road Network to Flooding

In the event of flooding in the province, a total of 255.90 km or 54 percent of the total road network of the province will be affected, wherein 117.67 km form part of the national road network and 138.23 km of the provincial roads. In a rare event of flooding, 26.08 km national road and 32.42 km provincial in the highly susceptible areas will be affected. A total of 99.64 km road network located in moderately susceptible areas and 97.77 km in low susceptible areas will also be affected.

Table No. 34: Vulnerability of Road Network to Flooding

Type of Road Network	Road Length	Affected Road Length (HSA)	Affected Road Length (MSA)	Affected Road Length (LSA)	Total Affected Road Length
National Road	203.03	26.08	48.62	42.98	117.68
Provincial Road	278.40	32.42	51.02	54.79	138.23
Total	481.43	58.50	99.64	97.77	255.91

MAP NO. 37: EXPOSED ROADS FROM FLOODING



3.3.5.2 Vulnerability of Road Network to Rain-induced Landslide

A total of 255.45 or 53 percent of the total road network of the province will be affected of rain-induced landslide. Not only on the highly susceptible areas to landslide were included vulnerable but also included to be prone were possible accumulation areas which are the low lying areas in the province. 38 percent of the affected road length or equivalent to 96.06 km will be affected for the national roads in the province while 159.39 km provincial roads form the remaining 62 percent.

Table No. 35: Vulnerability of Road Network to Rain-induced Landslide

Type of Road Network	Road Length	Affected Road Length (HSA)	Affected Road Length (MSA)	Affected Road Length (LSA)	Total Affected Road Length
National Road	203.03	20.00	52.84	23.22	96.06
Provincial Road	278.40	48.27	93.76	17.37	159.39
Total	481.43	68.26	146.60	40.58	255.45

3.3.5.3 Vulnerability of Road Network to Storm Surge

In the case of storm surge in the province, the 12 coastal municipalities will be affected in terms of their road network wherein 87.80 km road length or 18 percent of the road network will be affected. It can be seen from the table below that this consists of 42.70 km national roads and 45.10 of the provincial roads. In the highly susceptible areas, 2.12 km road length will be affected, while 14.38 in moderately susceptible areas and 71.3 km in low susceptible areas.

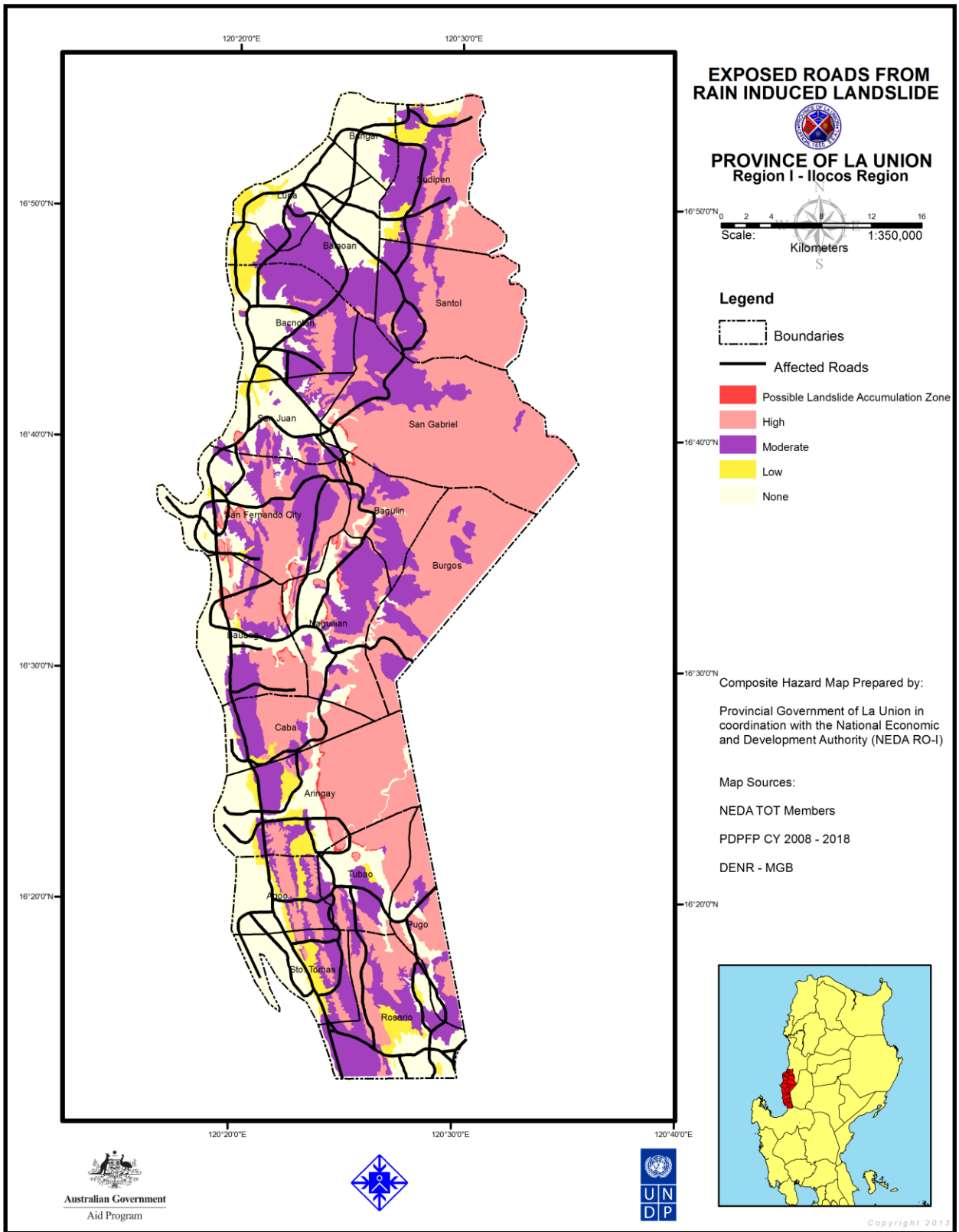
Table No. 36: Vulnerability of Road Network to Storm Surge

Type of Road Network	Road Length	Affected Road Length (HSA)	Affected Road Length (MSA)	Affected Road Length (LSA)	Total Affected Road Length
National Road	203.03	0.71	6.62	35.37	42.70
Provincial Road	278.40	1.41	7.76	35.93	45.10
Total	481.43	2.12	14.38	71.30	87.80

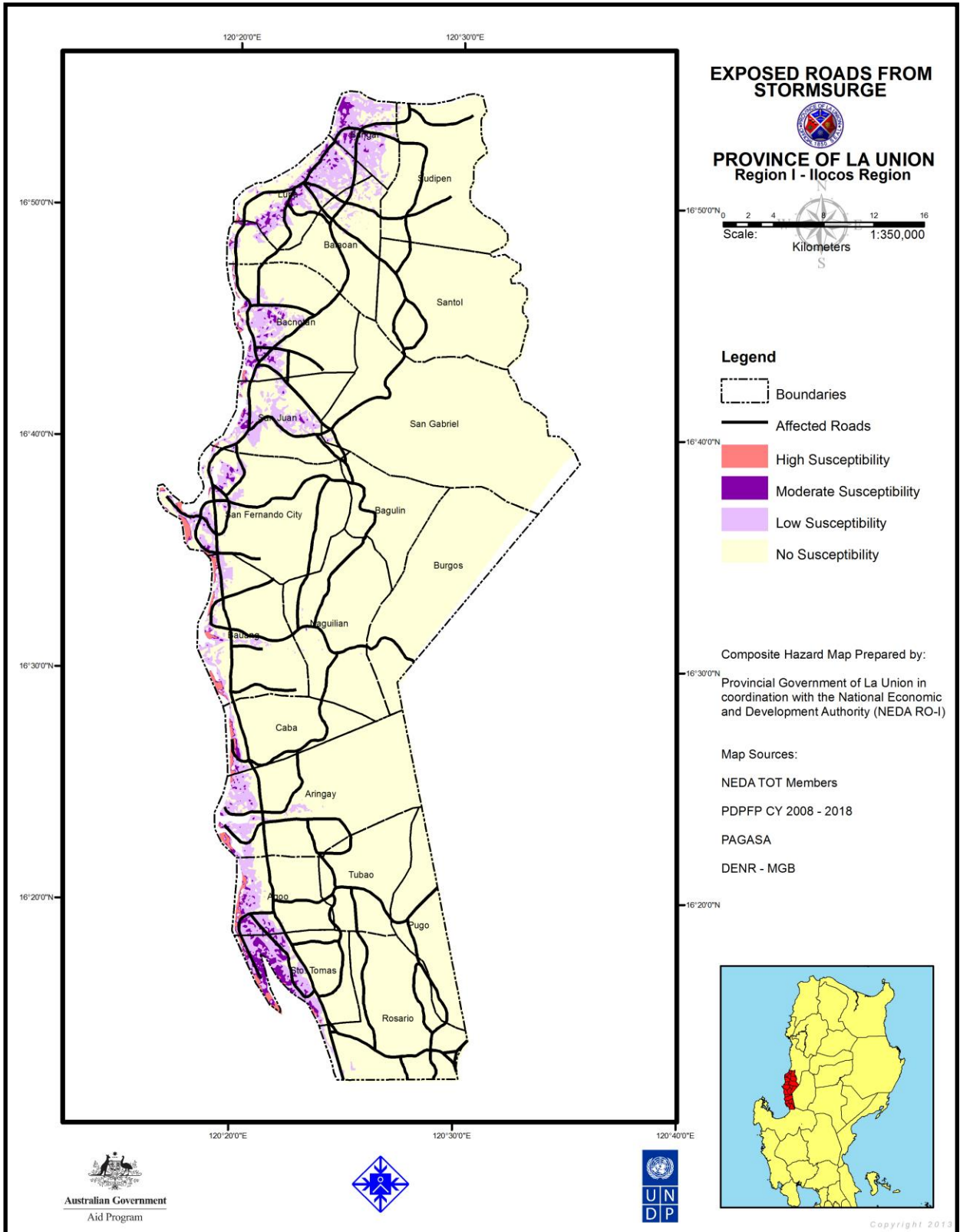
3.3.5.4 Vulnerability of Road Network to Earthquake Induced Landslide

In the event of an earthquake in the province, the province will likely to incur earthquake induced landslides in almost all of its municipalities because of its hilly terrain. Using simulated scenario earthquake with an epicenter in Nueva Ecija affecting the Digdig Fault, the province will likely to incur damage to its road network in terms of earthquake induced landslides. It can be seen from the table below that a total of 98.03 km road or around 20 percent of the total road network will likely to be affected in the event of an earthquake induced landslide. 26.23 km or 27 percent of which are national roads while 71.80 km or the remaining 73 percent are provincial roads.

MAP NO. 38: EXPOSED ROADS FROM RAIN-INDUCED LANDSLIDE



MAP NO. 39: EXPOSED ROADS FROM STORM SURGE



MAP NO. 40: EXPOSED ROADS FROM EARTHQUAKE INDUCED LANDSLIDE

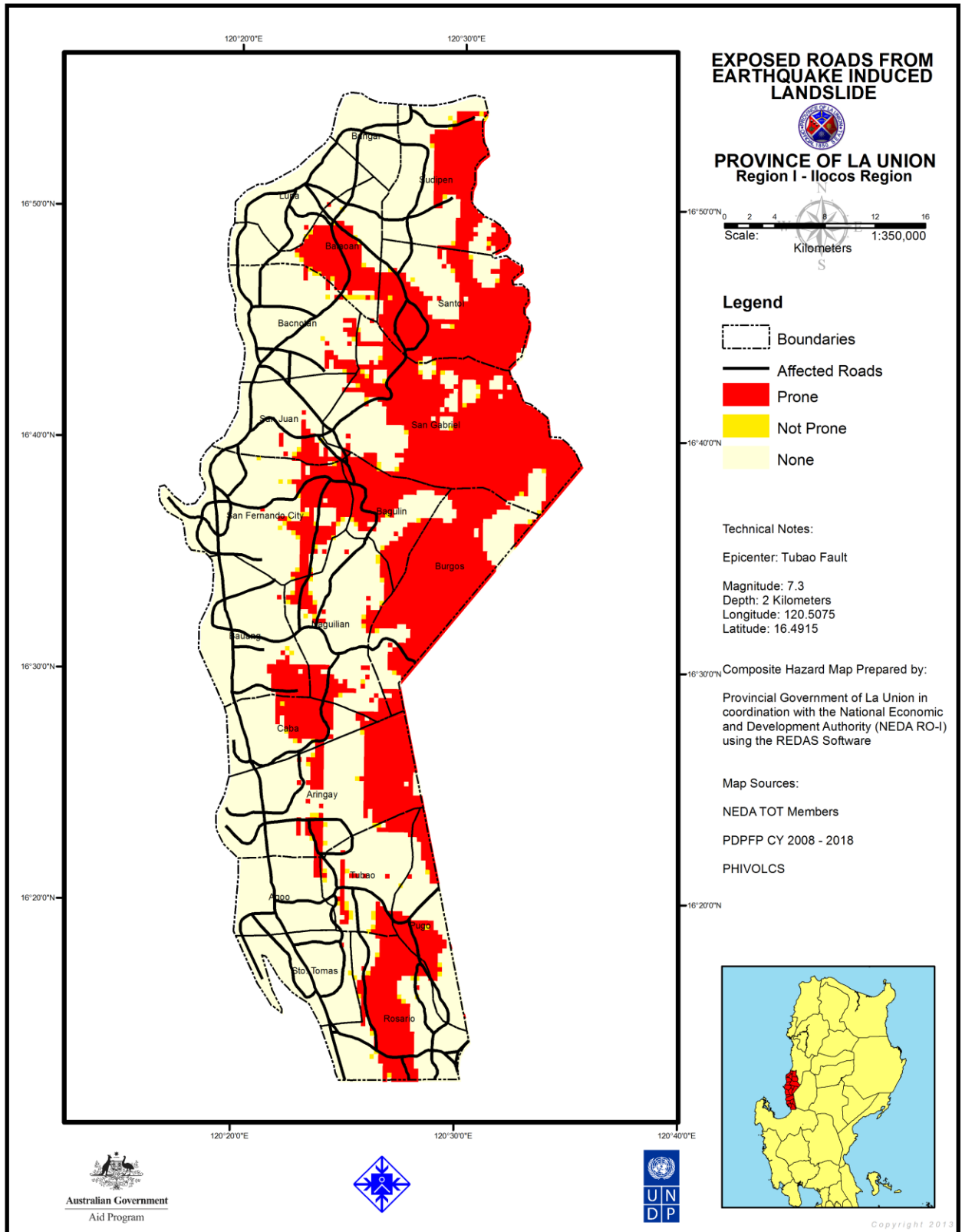


Table No. 37: Vulnerability of Road Network to Earthquake Induced Landslide

Type of Road Network	Road Length	Affected Road Length within Prone Areas	Affected Road Length within Not Prone Areas	Total Affected Road Length
National Road	203.03	24.80	1.43	26.23
Provincial Road	278.40	66.68	5.12	71.80
Total	481.43	91.48	6.56	98.03

3.3.5.5 Vulnerability of Road Network to Liquefaction

Simulated scenario earthquake with an epicenter in Nueva Ecija affecting the Digdig Fault, the province will likely to incur liquefaction in almost all of its municipalities and that may cause damage to its road network.

A total road length of 420.48 km or 87 percent of the total road network will likely be affected in the event of a liquefaction in the entire province. Around 104.32 km or 21 percent of the total roads will likely be affected within prone to liquefaction areas in the province while 66 percent or equivalent to 316.16 km road will likely be affected within not prone areas to liquefaction.

Table No. 38: Vulnerability of Road Network to Liquefaction

Type of Road Network	Road Length	Affected Road Length within Prone Areas	Affected Road Length within Not Prone Areas	Total Affected Road Length
National Road	203.03	43.93	125.10	169.03
Provincial Road	278.40	60.39	191.06	251.45
Total	481.43	104.32	316.16	420.48

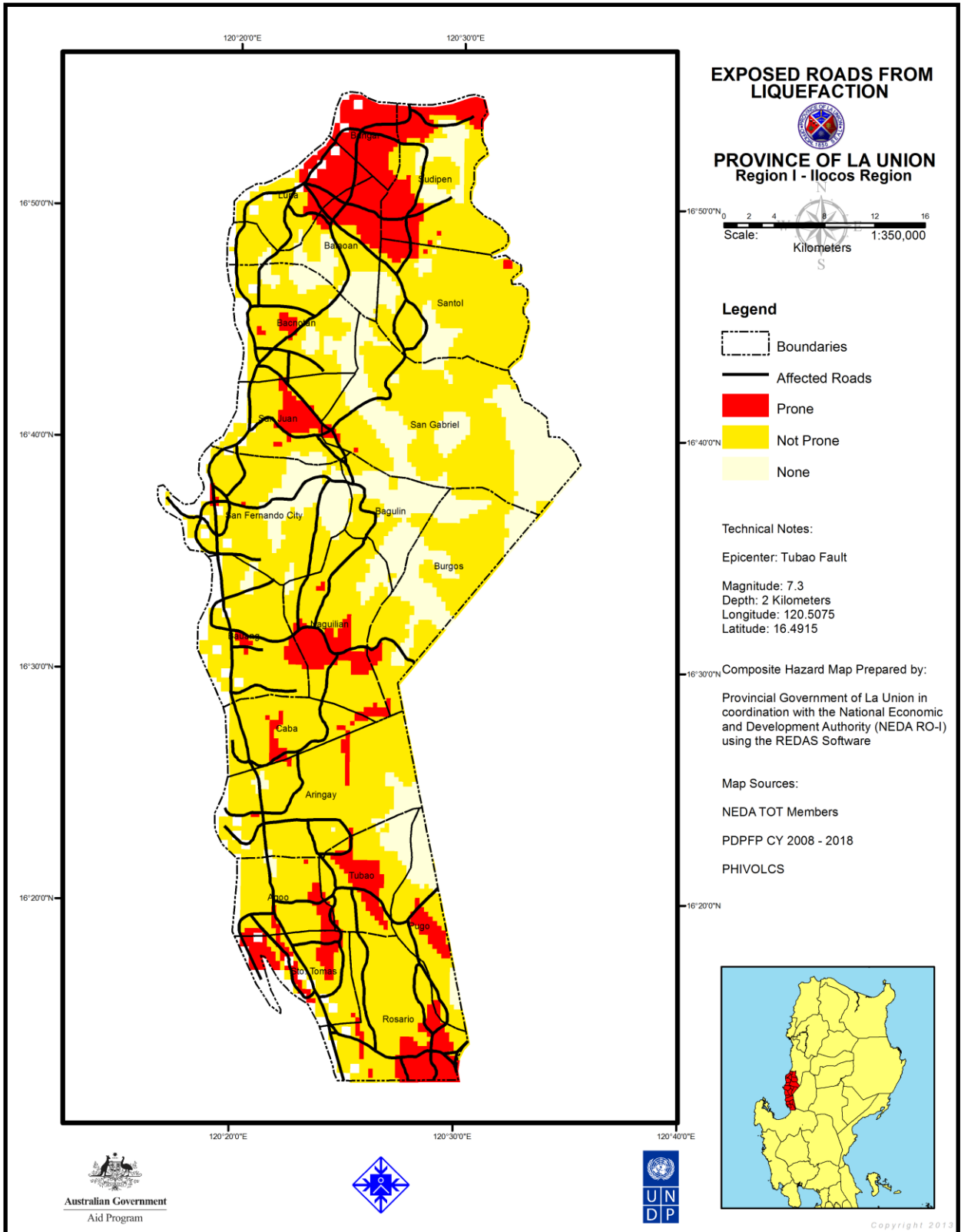
3.3.5.6 Vulnerability of Road Network to Tsunami

In the event of a tsunami based on the simulation made with an epicenter offshore along Manila Trench and a maximum magnitude of 8.2 based on the length of the Manila Trench using REDAS, 19 percent of the province’s road network or equivalent to 90.33 km road will likely to be affected in the eleven coastal municipalities and one coastal city in the province. This includes the City of San Fernando, Municipalities of Agoo, Aringay, Bacnotan, Balaoan, Bangar, Bauang, Caba, Luna, Rosario, San Juan and Sto. Tomas.

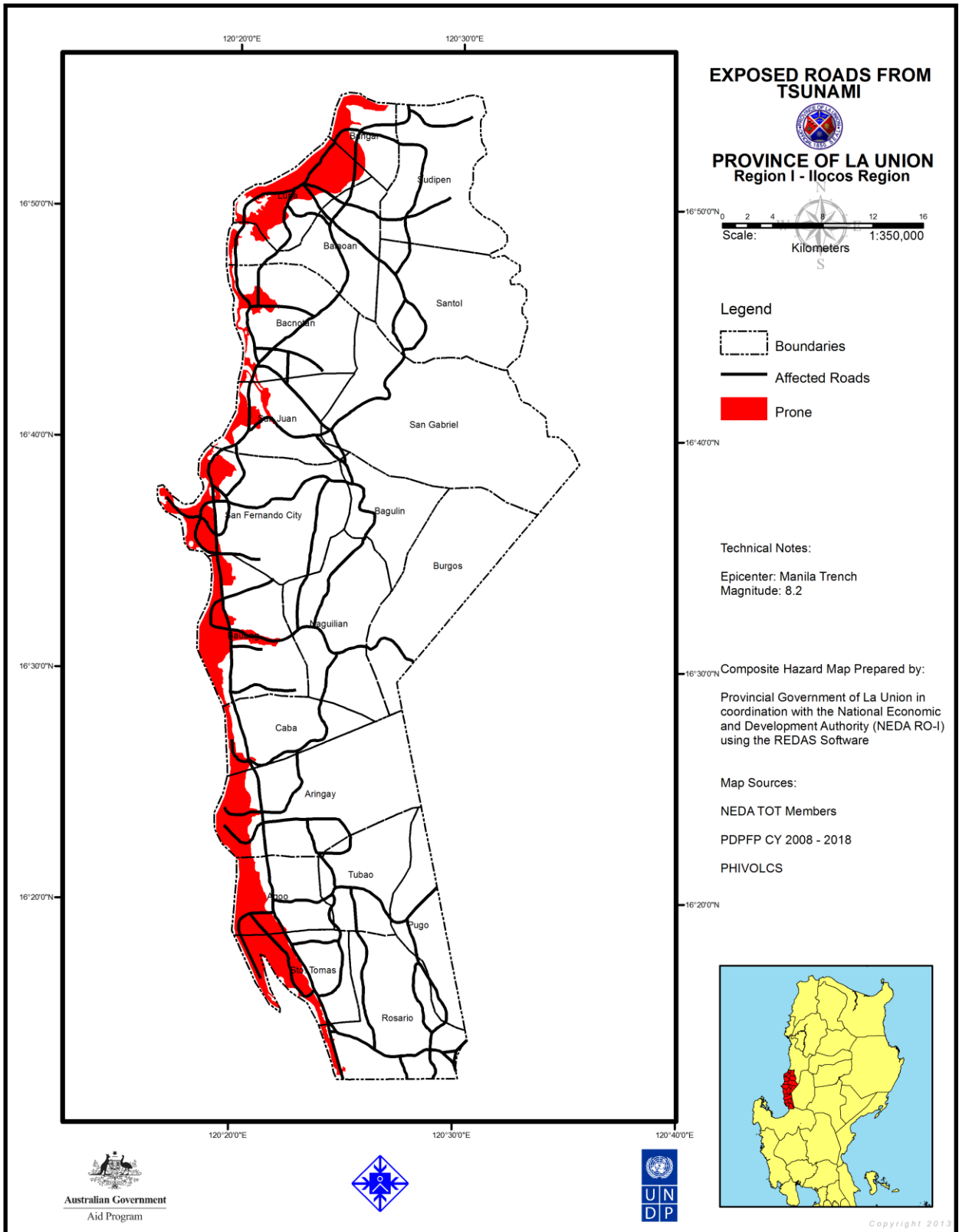
Table No. 39: Vulnerability of Road Network to Tsunami

Type of Road Network	Road Length	Affected Road Length within Prone Areas
National Road	203.03	44.08
Provincial Road	278.40	46.25
Total	481.43	90.33

MAP NO. 41: EXPOSED ROADS FROM LIQUEFACTION



MAP NO. 42: EXPOSED ROADS FROM TSUNAMI



4. ECONOMY

4.1 Economic Structure

4.1.1 Industry Concentration

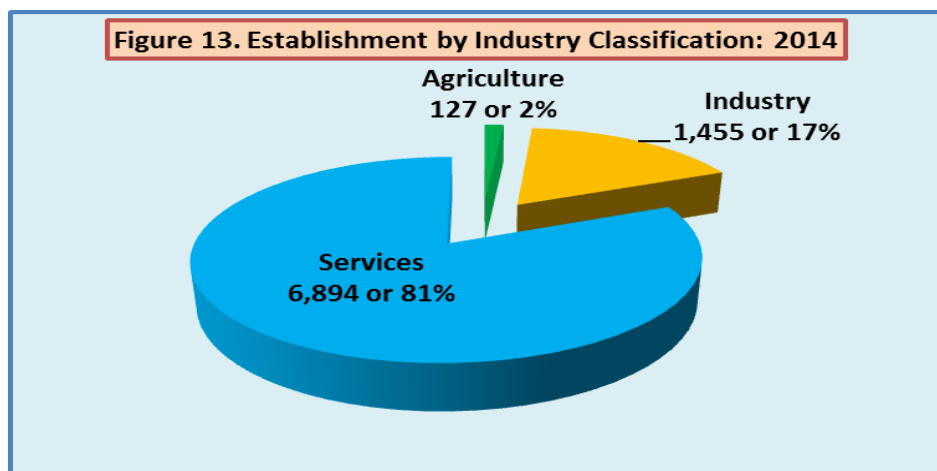
As of CY 2014, there are 8,476 establishments operating in the province. Majority of these establishments are under the wholesale and retail trade and Repair of Motor vehicles and Motorcycles with a total no of 3,595.

The 19 Major manufacturing establishments that exist in the province are as follows: the Cement Factory in Bacnotan (HOLCIM), Coca-Cola Plant in San Fernando City, Pepsi Cola Plant in Rosario and the five (5) redrying and flue-curing plants (3 in Agoo, 1 in Bacnotan and 1 in Tubao). Steel Corporation, Ice Plant, Soil Tech Agricultural Products, Pilipinas Shell Petroleum Corporation, Petron, Caltex and Shell Depot are also found in San Fernando City. Other establishments found in the Province include B-Meg Satellite Plant (Feed mill) in San Juan and Bacnotan, Bauang Private Power Plant Corporation and the Shell Liquefied Petroleum Filling Station in Rosario.

Out of the 8,476 establishments in the province, more than one-half or 81.33 percent or a total of 6,894 are under Services, 17.17% or 1,455 are for Industry and 1.49 or 127 for agricultural industries. Please see Figure 13 below. More establishments are found in District 1 with a total of 4,637 against 3,839 establishments in the second district. San Fernando City, being the region's and the province's business center, have the most establishments with 2,625 or 56.61 percent of the districts total while Bauang in the 2nd District have the most at 821 or 32 percent of the districts total.

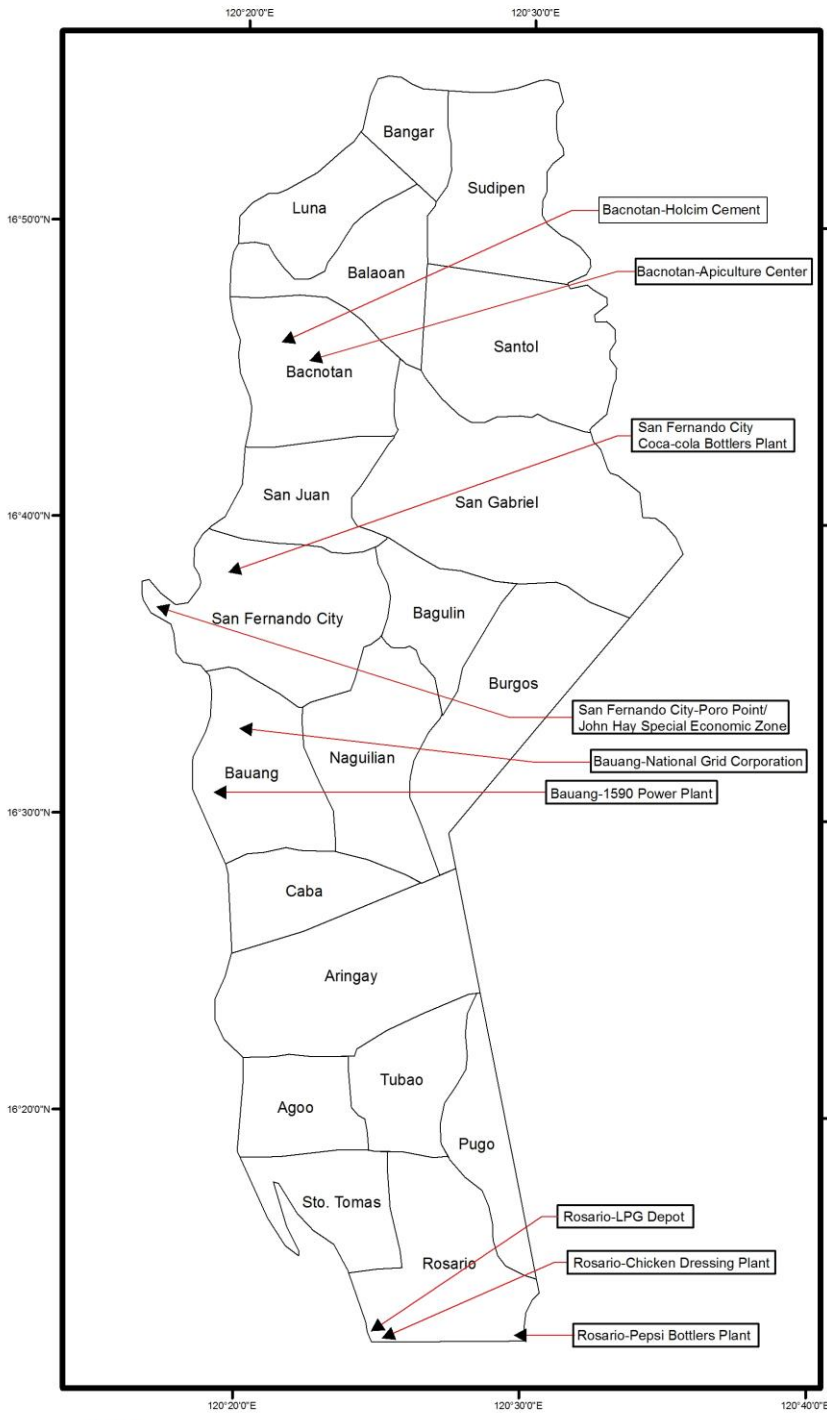
The manufacturing business in the province is mainly composed of the different cottage industries. They are the income-supplementing activities where people can engage in even during off-season. These are handicrafts, metal crafts, furniture, garments, ceramics and food processing, etc.

Commercial activities in the province consist mostly of wholesale and retail business. Again the City of San Fernando, the business center has the highest share with 32 percent of the provincial total.



Source of Data: Provincial Statistics Authority

MAP NO. 43: LOCATION OF INDUSTRIES



LOCATION OF INDUSTRIES



PROVINCE OF LA UNION
Region I - Ilocos Region



Transverse Mercator Projection
Mapping Scale: 1:350,000

Map Prepared By:

Provincial Government of La Union
in coordination with the National
Economic and Development Authority Region I
(NEDA RO I)

GIS Processing:

Plans and Programs Division-Office of the
Provincial Planning and Development Coordinator

Map Sources:

NEDA TOT Members
PDPFP CY 2013 - 2023
PCLUP 1993-2002
PLPEM GUIDELINES 2007



4.1.2 Agriculture, Fishery, Poultry

SAFDZ. Strategic Agriculture and Fishery Development Zone. A large part of the province is of watershed/forestry zone which is in the eastern part. In the western part is the lowland which is the strategic fishery/crop sub-development zones.

Built up areas are largely located along major roads. See Map No. 44: SAFDZ Map.

4.1.2.1 Agriculture

Palay remains to be the major cash crop of the province. The total area planted with palay is 38,693 hectares, of which, 24,596 hectare were irrigated while the remaining 14,097 hectares were rainfed. The province's production for the year 2015 is 187,148 Metric Tons where only 86,061 Metric Tons were consumed giving the province an average sufficiency level of 124%.

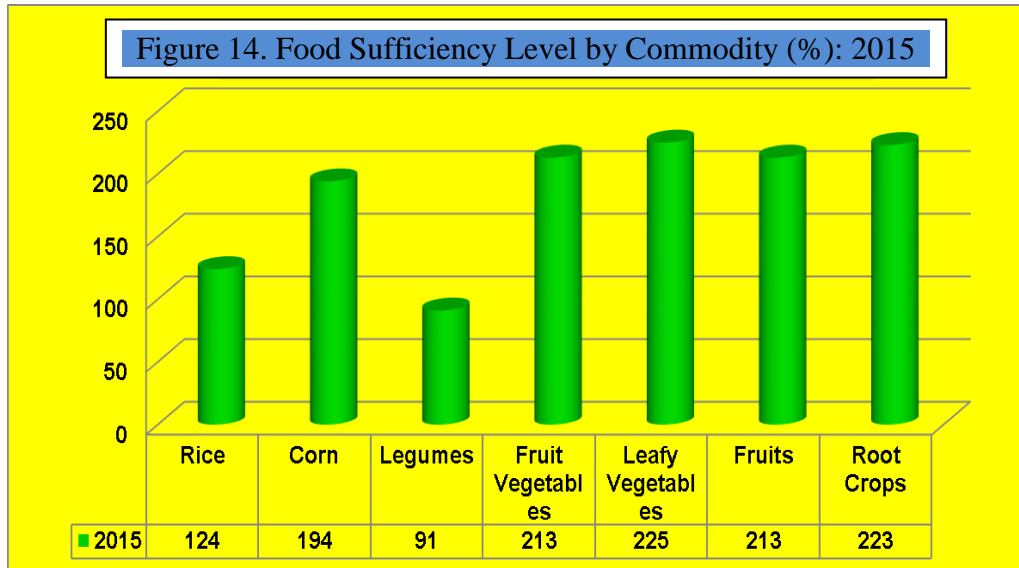
The highest producer is San Juan with 16,766 while Bagulin having the Least at 2726 metric tons.

La Union is one of the top producers of corn in the region with an average annual production of 27,508 Metric Tons. In 2015 alone, corn production yielded P229,696,330.00 in terms of income giving employment to 1,238 people. The largest area planted with yellow corn can be found in San Juan of District I with an area of 630 hectares while Tubao of District II has the biggest production of green corn at 1,295 Metric Tons.

In terms of fruit trees production, the province is 166% sufficient. Mango dominated all the fruit trees with a total production of 32,250 Metric Tons. District II with an area of 2,389 almost doubled the area of District I at 1,261 hectares. Bauang of District II has the widest area of fruit trees planted (541 has.) with a production of 7,361 metric tons while Bagulin and upland area of the same District has the lowest produce of 1,052 metric tons with 82 hectares covered.

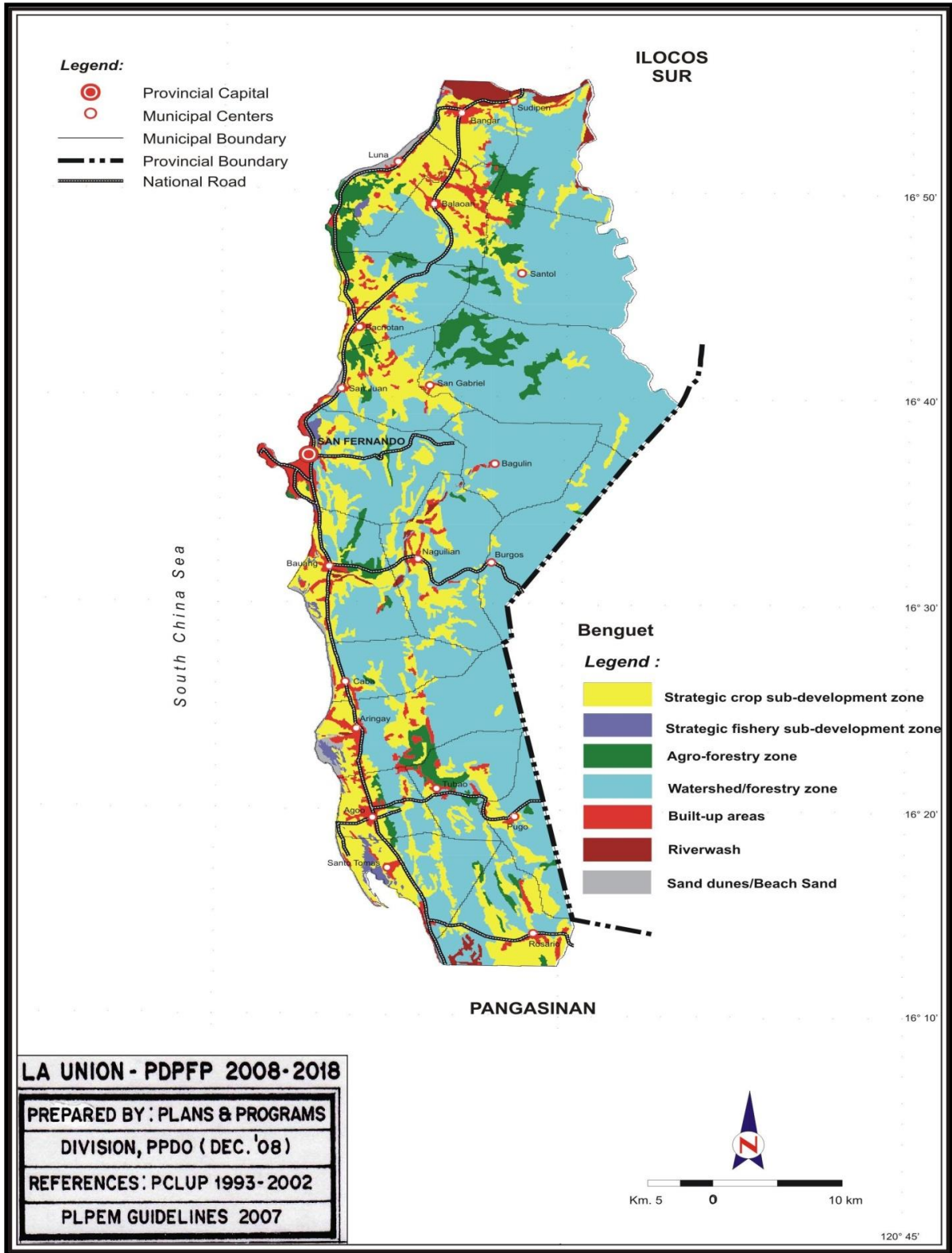
Fruits, Root crops, Leafy and fruit vegetables are in the level of more than 200% sufficiency level. This shows that these commodities are more than enough for the consumption of the province.

For legumes, the total area of 2,981 had only produced 4,311 Metric Tons making the province deficit at 409 metric tons or with a 91% sufficiency level.



Source of Data: Office of the Provincial Agriculturist

MAP NO. 44: SAFDZ MAP



MAP NO. 45: PRODUCTION AREA

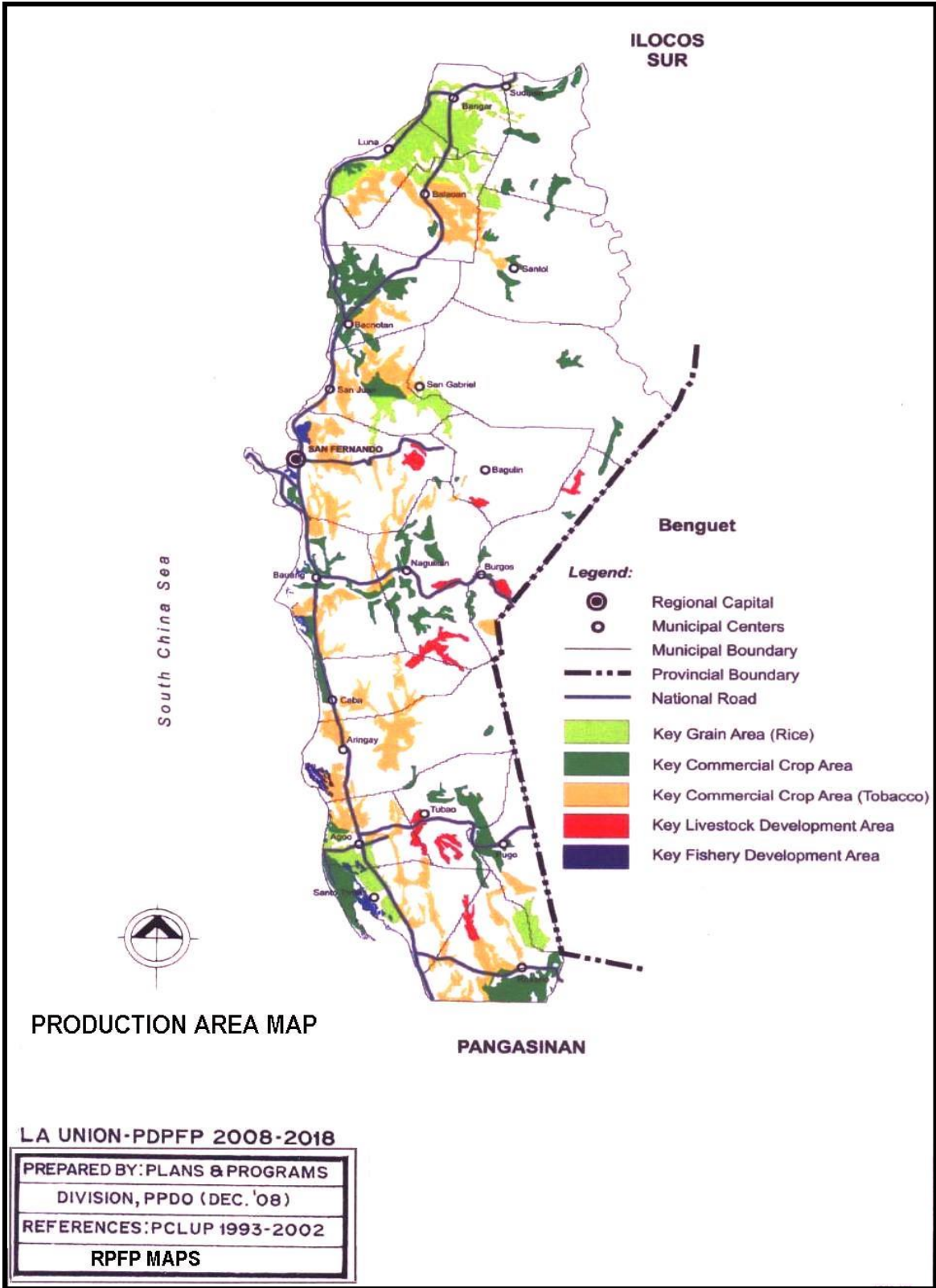


TABLE 40. EMPLOYMENT AND INCOME GENERATED BY COMMODITY: 2015		
COMMODITY	EMPLOYMENT GENERATED	INCOME GENERATED (PhP)
RICE	12,381	1,827,245,000.00
CORN	1,238	229,696,330.00
HIGH VALUE CROPS (Legumes, Vegetables, Fruits, Rootcrops, Commercial Crops)	4,378	4,692,578,200.00
FISHERY	13,365	1,607,752,300.00
TOTAL	31,362	8,357,271,830.00

Source of Data: Office of the Provincial Agriculturist

4.1.2.2 Fishery

In 2015, the total fish production was 18,087.53 Metric Tons while the consumption requirement of the province was 17,306.35 Metric Tons; hence, the sufficiency level of La Union is 105%. The total additional employment generated out of fish production was 13,365 and the total income computed was P1,683,655.90. District II has higher fish production compared to District I at 11,428.41 metric tons (63.18%) vs 6,659.42 metric tons (30%).

The City of San Fernando the regional seat of government offices have the highest fish production of 2,125.95 metric tons with income generated at Php212.00 Million while Sto. Tomas a fish magnet municipality of the second district had the highest fish produce of 3,821.57 metric tons with Php346 Million income generated for the year. All upland municipalities on both Districts have the least fish produce averaging at 52 metric tons. See Table 41.

TABLE 41. FISH PRODUCTION AND INCOME GENERATED: CY 2015		
INDICATORS	PRODUCTION (MT)	INCOME GENERATED (P'000)
Freshwater Aquaculture	485.25	38,820.00
Brackishwater	2,263.75	226,375.00
Municipal Fishing	9,692.14	969,239.00
Communal Fishing	1,114.00	55,700.00
Commercial Fishing	655	65,500.00
Fish Pens/Fish Cages	1,189.50	101,107.50
Brackishwater Cage/Pen	1,781.32	151,412.20
Payao/MZP	604.37	60,437.20
Seaweeds	300.70	15,035.00
Sea Urchin	1.50	30.00
TOTAL	18,087.53	1,683,655.90

Source of Data: Office of the Provincial Agriculturist

4.1.2.3 Livestock and Poultry

As per report of the Office of the Provincial Veterinarian, the total production of 36,629 metric tons recorded in 2014 decreased to 36,137.43 metric tons in year 2015 due to the lost on typhoons. However, the production is still sufficient to fill the demands based on the computation of production against consumption which reflects a sufficiency level of more than 100% in all livestock commodities. (See Table 42).

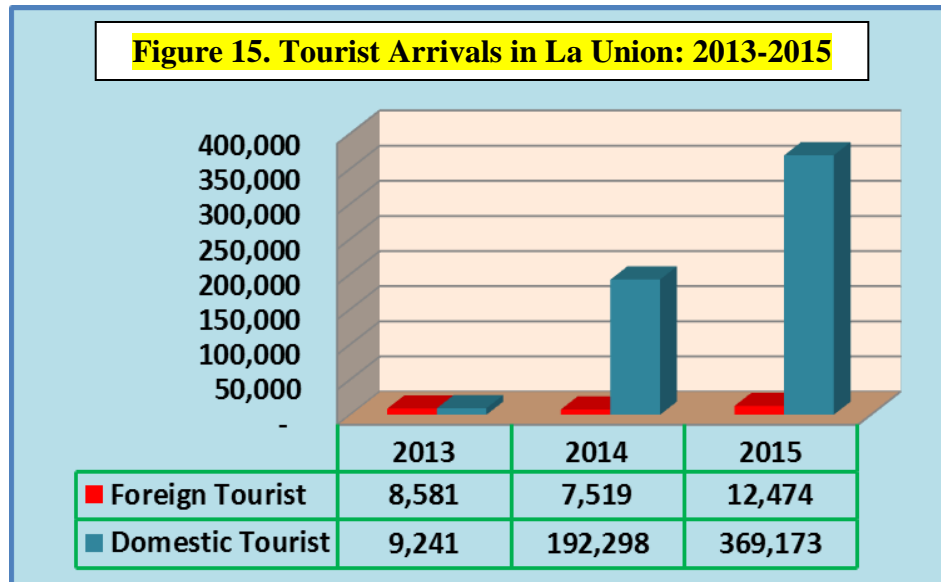
TABLE 42. LIVESTOCK AND POULTRY: 2015			
INDICATORS	PRODUCTION (MT)	CONSUMPTION (MT)	SUFFICIENCY LEVEL (%)
BEEF	1,377.38	1,022.65	134.69
CARABEEF	701.22	443.67	158.05
PORK	17,459.86	11,577.96	150.80
CHEVON	188.52	180.94	104.19
POULTRY	16,410.45	7,600.64	216.00
TOTAL	36,137.43	20,825.86	

Source of Data: Office of the Provincial Veterinarian

4.1.3 Tourism

Recognizing the dominance of the tourism industry vis-a-viz its role in the circle of economy, the Province of La Union thus its tourism platform taking into consideration its strategic location (as gateway to Ilocandia and Baguio City) and renown as a place in Ilocandia where the most number of conveniences, supplies and support facilities for visitors are available like a) shopping convenience and personal services, b) variety of hotel accommodations and restaurant facilities, c) entertainment facilities, souvenir and gift shops, d) parks, beaches, forest and other nature centers, e) transport terminals such as airport, seaport and land transportation, f) central bank, commercial and rural banks, and foreign currency exchange, etc.

The stretch of white and gray sand beaches along the towns of La Union is the main attraction to tourists. In the province tourist belts are located along the shores of San Juan, San Fernando City, Bauang and Agoo. Its calm crystal water is ideal for water skiing, snorkeling, swimming, scuba diving, wind surfing and boating. Its gifted multitude scenic landscapes is a tourism haven as well, and eco-tourism development. Surfing is now a tourism booster in the province owing to its long waves best for long board surfing. The stable peace and order situation and the tourism areas in La Union are the main attractions to local and foreign tourists.



Source of Data: Department of Tourism

Tourists continue to visit La Union. Since 2015, total tourist arrivals continued to post positive growth by 48 percent (Refer to Figure 15). It grew to 381,649 tourist arrivals compared to CY 2014 at 199,817 tourist arrivals. Domestic tourists continued to account for a major bulk of tourists visiting the province. It totaled 369,173 higher than CY 2014 with a total of 192,298. Foreign tourist arrivals pictured an increase from 7,519 foreign tourists in CY 2014 to 12,474 in CY 2015. Majority of the foreigners came from East Asia (5,521 or 44.26%) North America (1,584 or 13%), Western Europe (1,385 or 11.10%) and Asean (1,148 or 9.20%) refer to Table 43 and 44.

Table 43. TREND OF TOURIST ARRIVALS IN LA UNION 2005-2015

YEAR	TOTAL	FOREIGN	PERCENT	DOMESTIC	PERCENT
2005	36,971	3,506	9.48	33,412	90.5
2006	49,300	6,326	12.83	42,447	87.2
2007	56,538	5,950	10.52	50,351	89.5
2008	62,585	10,484	16.75	52,101	83.25
2009	61,169	13,726	22.44	47,443	77.56
2010	61,158	13,715	22.43	47,443	77.57
2011	81,891	12,513	15.28	69,378	84.72
2012	78,523	7,239	9.22	71,284	90.78
2013	17,822	8,581	48.15	9,241	51.85
2014	199,817	7,519	3.76	192,298	96.24
2015	381,647	12,474	3.27	369,173	96.73

Source of Data: Department of Tourism

Table 44. SOURCES OF FOREIGN TOURISTS TO LA UNION: 2013-2015						
COUNTRY	2013		2014		2015	
	Number of Visitors	% Share	Number of Visitors	% Share	Number of Visitors	% Share
WESTERN EUROPE	1,139	13.27	1,401	18.63	1,385	11.10
NORTHERN EUROPE	96	1.12	152	2.02	221	1.77
SOUTHERN EUROPE	85	1.00	273	3.63	636	5.10
EASTERN EUROPE	79	0.92	48	0.64	78	0.63
NORTH AMERICA	763	8.89	1,119	14.90	1,584	12.70
SOUTH AMERICA	87	1.01	80	1.06	470	3.77
EAST ASIA	5,557	64.76	3,436	45.70	5,521	44.26
SOUTH ASIA	60	0.70	189	2.51	114	0.91
ASEAN	269	3.13	208	2.77	1,148	9.20
OCEANIA	247	2.88	432	5.74	682	5.47
MIDDLE EAST	194	2.26	177	2.35	610	4.89
AFRICA	5	0.06	4	0.05	25	0.20
TOTAL	8,581	100.00	7,519	100.00	12,474	100.00

Source of Data: Department of Tourism

The new transformative agenda of having La Union as the heart of Agri-tourism in Northern Luzon by 2025 will promote the national gifts and treasures of the province. The province will be promoting 3 tourism circuits and its treasures.

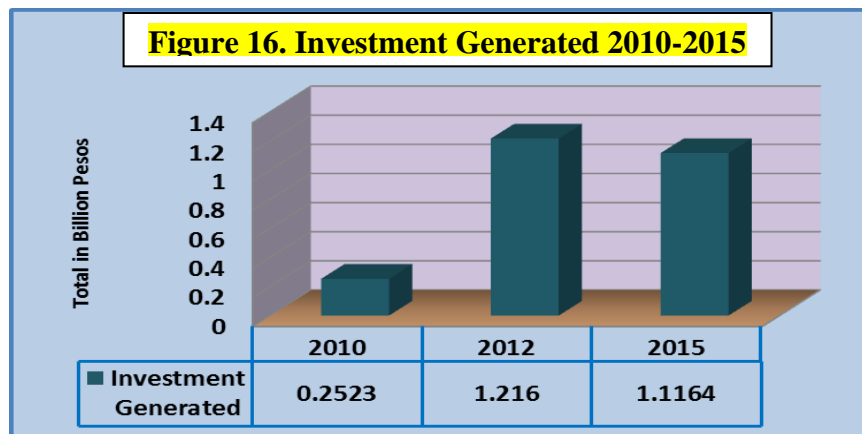
Northern Tourism Circuit	Tourist Drawers
Sudipen Bangar Luna Balaoan Bacnotan Santol	Bamboo Weaving Capital Loom Weaving Namacpacan Church Luna Stones Sea Urchin Ranch Baroro River Farm Apiculture Farm Agro-Forestry Falls
Central Tourism Circuit	
San Juan San Fernando Bauang San Gabriel Naguilian Bagulin	Surfing Capital of the North Regional Service Center Gastronomic Capital Fruit Basket of the North Tangadan Falls Vegetable Bowl of La Union Basi Capital Soft Broom Capital
Southern Tourism Circuit	
Caba Aringay Sto. Tomas Agoo Rosario Pugo Tubao	Bamboo Furniture Capital Mango Capital Bangus Capital Dried Fish Capital Agoo Basilica Dinengdeng Capital Farm Tourism Antique Furniture Wood Carving/Furniture Tourism Adventure Agri-Tourism

4.1.4. Investment Potentials

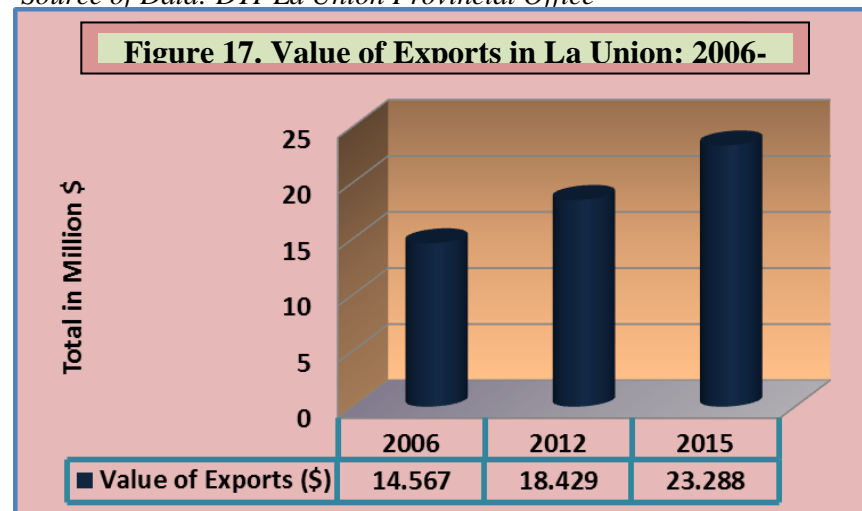
a. Investment, Exports and Job Generation

The province is strategically located as international shipping, air route and land based positions that attract both local and foreign investments. It is the growth center of education, trade, and commerce in Region I and endowed with a well skilled manpower. Major development projects have been established like the Poro Point Special Economic and Freeport Zone and the on-going negotiation of the Regional Industrial Center and various infrastructure projects. All of these are expected to generate investment not only in the province but also in the entire region.

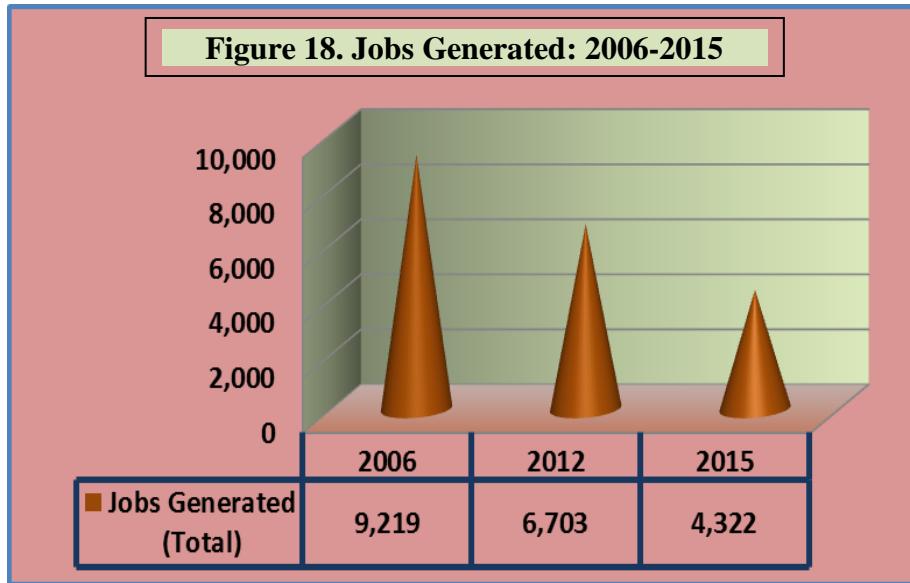
Investment's inflow in the province experienced a slight decline pattern generating a total of P1.216 Billion in CY 2012 to 1.1164 Billion in CY 2015. Exports earnings seen to grow in 2012 accounted at \$18.429 Million versus \$ 23.288 Million in 2015. In terms of job generation continued to view the labor market as weak as shown in figure below.



Source of Data: DTI-La Union Provincial Office



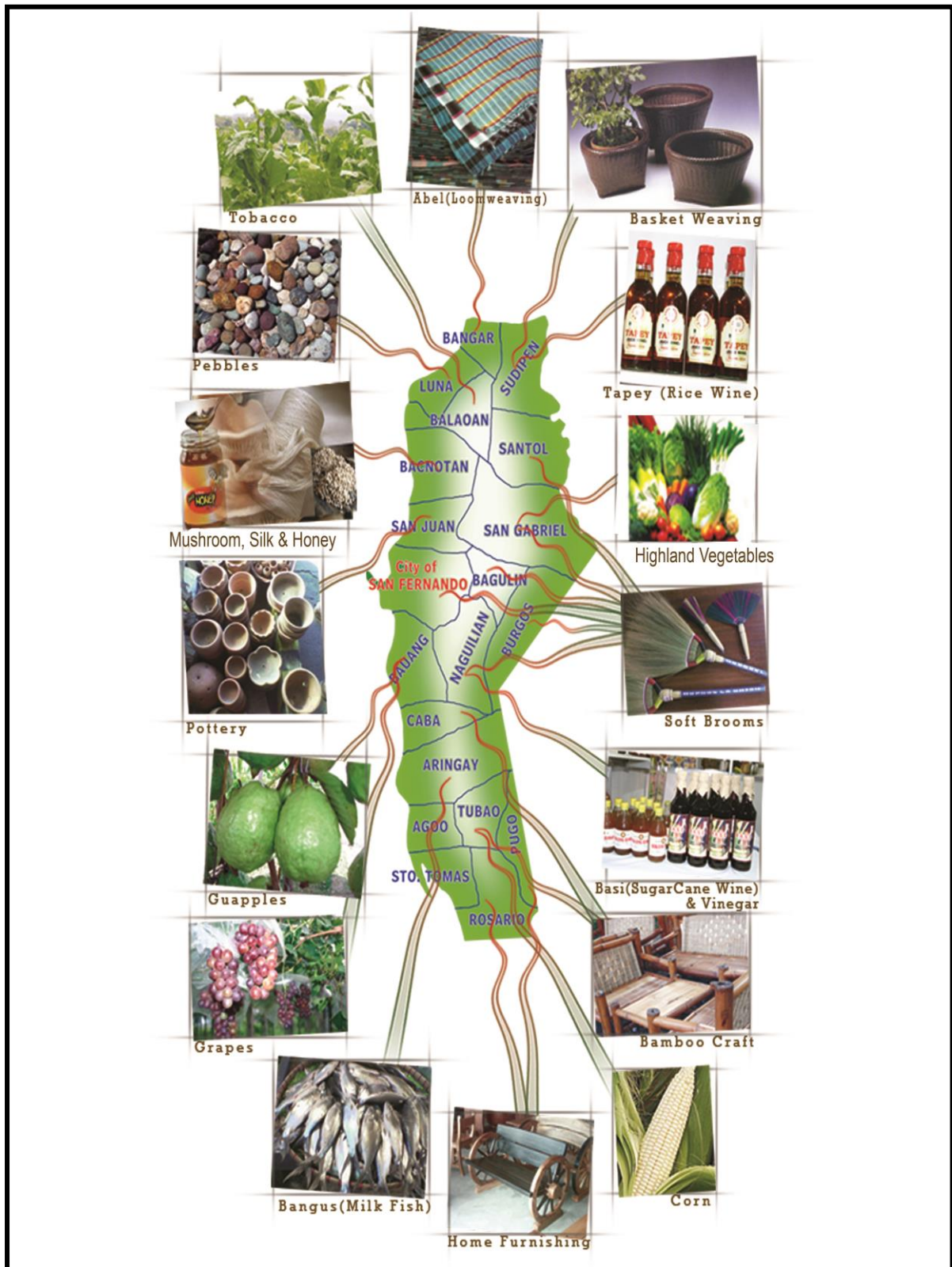
Source of Data: DTI-La Union Provincial Office



Source of Data: DTI-La Union Provincial Office

Among the export gainers were tobacco and feldspar/pebbles. On the other hand, among the export losers were gifts, decors and house wares (GDH). Many of these industries have shifted to local market.

MAP NO. 46: ONE TOWN ONE PRODUCT (OTOP)



4.1.5 One Town One Product “OTOP”

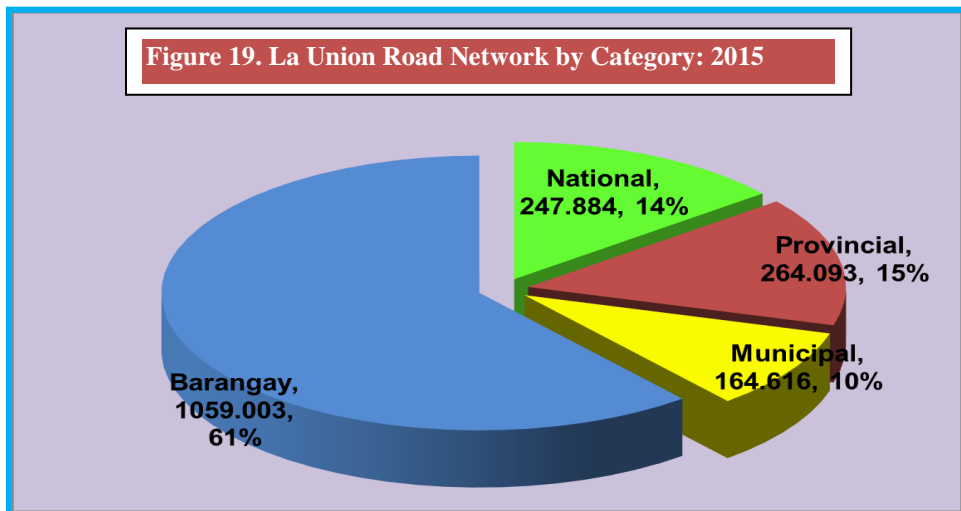
The nineteen municipalities and one city have its own distinct product which is their major industry and they are as follow: City of San Fernando and the upland municipalities of Bagulin, Burgos, San Gabriel and Santol – softbroom, Agoo-rice based cakes, Aringay-bangus, Bacnotan-mushroom and honey, Balaoan-sea urchin, Bangar-handloom, Bauang-guapple, Caba-bamboo craft, Luna pebbles, Naguilian-basi, San Juan-yellow corn, Santo Tomas-daing, Sudipen-bamboo basket, Tubao-native tobacco and Pugo and Rosario-antique and wood furnitures.

5. TRANSPORTATION, ACCESS AND LINKAGES

5.1 External Access

5.1.1 Roads and Bridges

There are four (4) main roads that linked the different municipalities of the province. From south to north is the Ilocos Highway; from east to west are the Naguilian Road, Aspiras Highway and the Kennon Road, which traverse peripherally the town of Rosario at its southern part.



Source of Data: DPWH-LUED, PEO, MEO/CEO

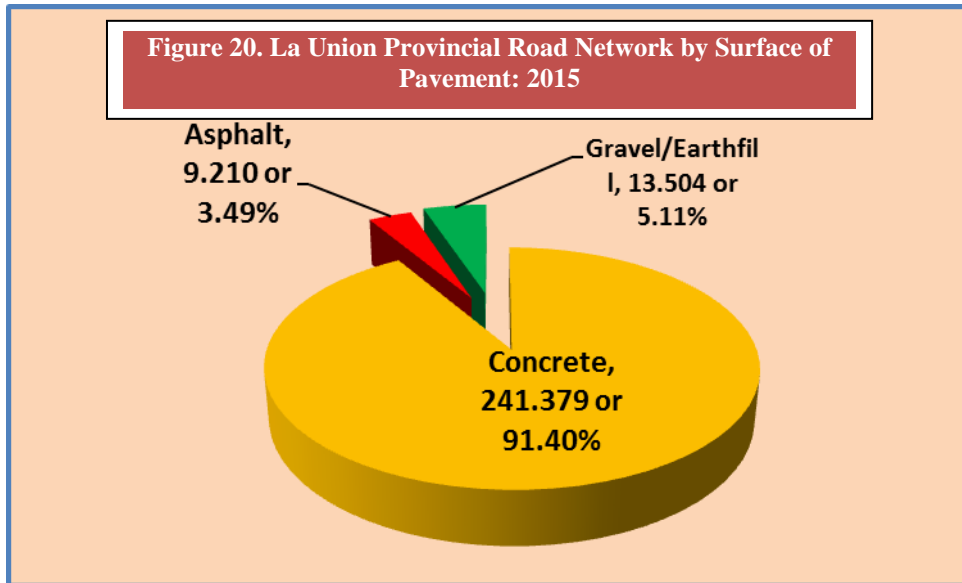
The province has a road network measuring 1,735.596 kilometers. Barangay Roads has the greatest share in the network which comprises about 61.02% of the total or 1,059.003 kilometers. The remaining is distributed as follows: National Road (14.28 % or 247.884 kilometers), Provincial Road (15.22% or 264.093 kilometers), and City/Municipal Roads (9.48% or 164.616 kilometers). Refer to Figure 20. However, 91.40% (241.379 kilometers) of the provincial road length has already been concreted, 3.49% (9.210 kilometers) was asphalted and 5.11% (13.504 kilometers) are still gravel and earthfill/unsurfaced roads, respectively as shown in Figure 20.

Majority of 587 number of bridge span of the province is made of concrete with a total length of 6,509.77 meters or 68%. Other existing bridges are steel (422.80 meters or 4.42%), composite (569.38 meters or 5.95%), timber (572 meters or 5.97%), footbridge (1,273.75 meters or 13.31%), bailey (199.28 meters or 2.08%) and jumbo (26 meters or 0.27%) by referring to figure 21.

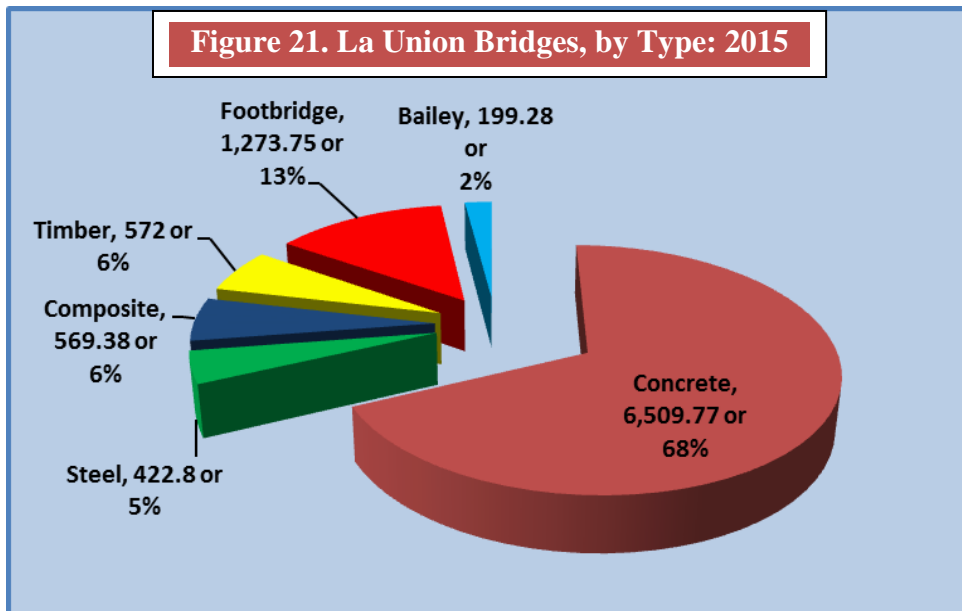
The City of San Fernando of the 1st district has the longest paved surface covering 148.555 kilometers. Burgos has the least with 26.467 kilometers. To date, San Gabriel is registered with the longest barangay road network at 107.629 kilometers while Caba of the 2nd District has the shortest with 11.821 kilometers.

The increase in road network and significant improvement of road pavement manifest that the province’s shares under R.A. 7171, SLRF funds

and BUB for farm-to-market roads facilitate the socio-economic development directed to uplift the living standard of the people, thus, the province is ready enough for the rapid urbanization and industrialization.



Source of Data: Provincial Engineer's Office



Source of Data: DPWH-LUED, PEO, MEO/CEO

5.1.2 Air Access

La Union has one airport located in Canaoay, City of San Fernando. It is classified as a secondary or alternate airport for general aviation with concrete strip dimension of 1,200 meters by 36 meters with an elevation of 3.96 meters. Improvements and upgrading of the airport was under the supervisory authority of the BCDA Management – JPDC. It is equipped with a control tower, VCR, telephone, telegraph station, powerhouse, and fire fighting unit and terminal building for the daily passengers. The San Fernando Airport functions as alternate

to Baguio City's Loakan Airport accommodating chartered turbo-prop aircrafts. The airport also caters to Manila-based charter operators, flying schools and domestic flights. At present, the San Fernando City Airport is adequate for YS-11 of International Civil Aviation Organization (ICAO) Code No. 2 under visual flight rules (VFR) operations. Its landside and airside facilities and systems are compliant with ICAO Standards and Recommended Practices (SRP) for secondary airports.

5.1.3 Water Access

One of the best harbors can be found in the City of San Fernando. The government, cognizant of its potentials has delegated the responsibility of developing the port to the Philippine Ports Authority (PPA) and Poro Point Industrial Corporation – BCDA. It is a national port of entry open to both coastwise and overseas shipping. Vessels docking at the port are mostly cargo ships plying the coastwise and or tourist passengers.

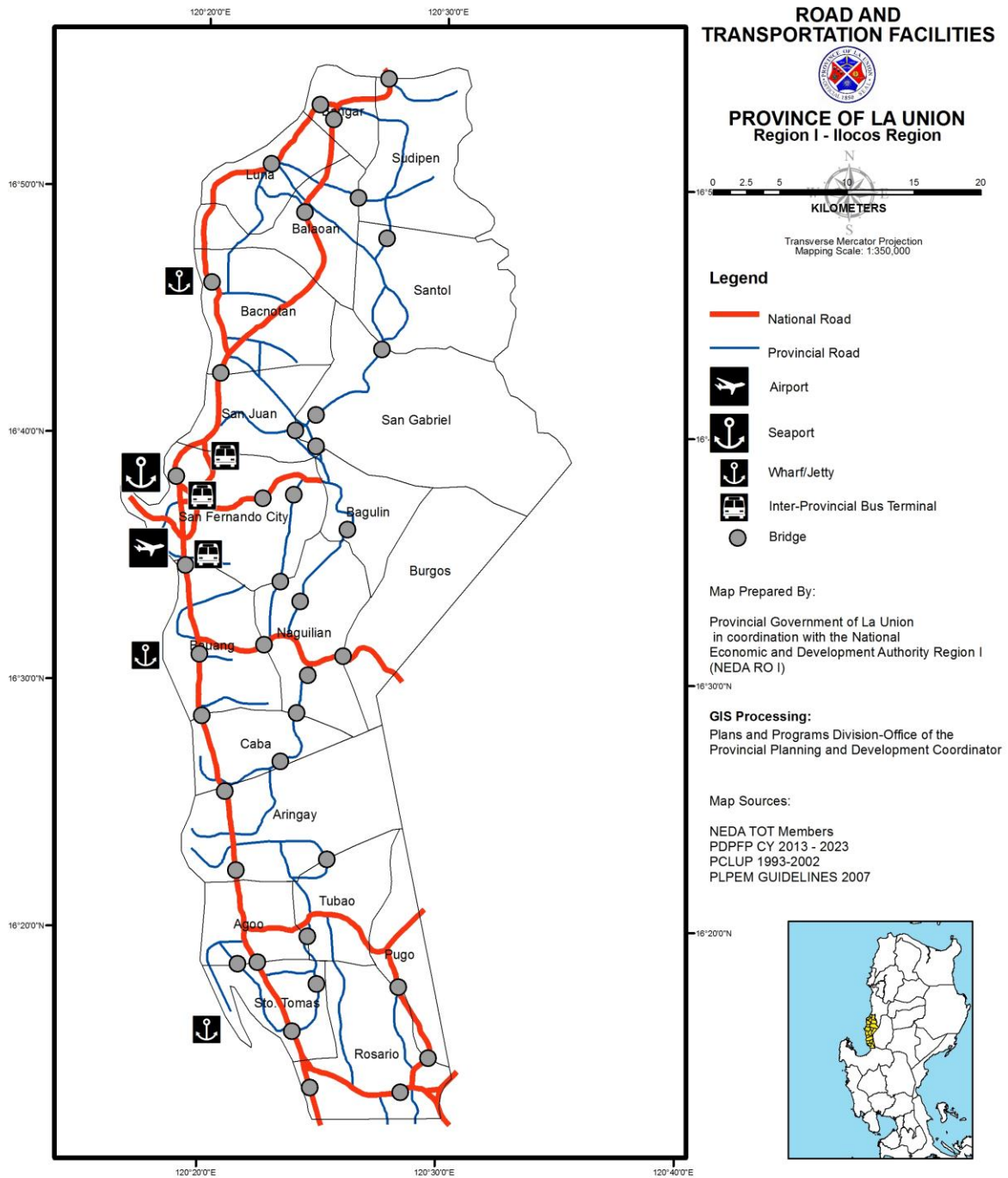
The province's produce and those from the nearby provinces are transported out of the region through the San Fernando Base Port in Poro Point. Production requirements and raw materials such as coal, fertilizers, etc. are also brought into the region through the port. The seaport was eventually developed into a transshipment port to and from the neighboring countries.

In addition, there are 5 international ports under the administration of Poro Point Industrial Corporation-BCDA, the conveyor pier of Philex, Pier No. 1 and 2, LCT Ramp, UCC Private Pier while 4 are commercial privately owned piers – the Holcim Inc. Plant (former Bacnotan Cement Industries), Shell LPG Depot/Gasoline and 1590 Energy Corporation. Raw materials such as mining products, copper concentrated, etc. are being exported here. Occasionally, tobacco leaf is also exported through this port. Cement factories like Holcim Cement of Bacnotan and Northern Cement Corporation are some of the establishments that use this port in transporting their products.



In 2015, the Philippine Ports Authority (PPA) – PMO San Fernando City, La Union recorded a total of 55 domestic shipcalls (2015) from all the ports within the province which are under its jurisdiction, posting a 190 percent increase from the shipcalls recorded in 2006. Inbound cargoes increased from 46,336 MT in 2006 to 52,234 MT. The overall increase in inbound cargoes can be attributed to the increase in demand of petroleum products due to the increased power energy utilization at 1590 Energy Corporation. The 100 percent increase in out-bound cargoes, is due to the increased demand of river mix (aggregates) needed in refilling the eroded private pier in Bacnotan.

MAP NO. 47: ROAD AND TRANSPORTATION FACILITIES



6. INCOME EMPLOYMENT, SERVICE ACCESS AND POVERTY

6.1 Total and Average Income, Expenditure and Savings

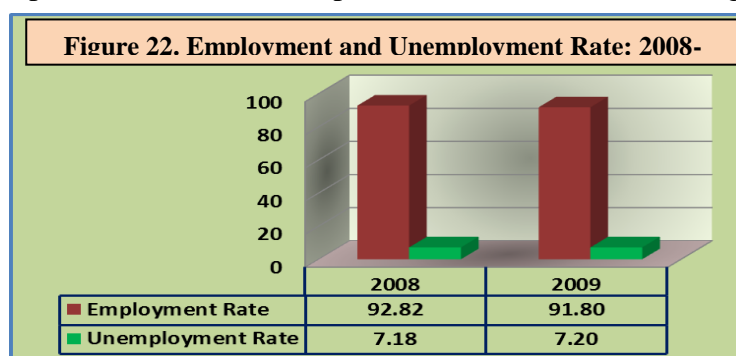
When it comes to income, the City of San Fernando, the center of trade and industry has the highest income which is 23.66% of the 1st district, while Burgos on the other hand, with only P43,131,008.91 total income has the lowest which is equivalent to only 1.23% of the total income of the province. Refer to Table 45. Total and Average Income, Expenditure and Savings.

Table 45. TOTAL AND AVERAGE INCOME, EXPENDITURE AND SAVINGS: 2015				
District/Municipality/ City	Income Class	Total Income	Expenditures	Savings
District I		1,220,105,455.19	1,536,170,646.61	(316,672,054.93)
Bacnotan	1 st	123,154,627.60	244,170,646.61	(121,016,019.01)
Balaoan	1 st	99,234,529.74	208,554,079.89	(109,319,550.15)
Bangar	3 rd	84,780,677.70	73,076,905.26	11,703,772.44
Luna	3 rd	81,021,570.54	74,864,919.87	6,156,650.67
City of San Fernando*	Class C Component City	561,387,951.98	602,979,425.39	(41,591,473.41)
San Gabriel	4 th	62,481,348.99	60,901,633.86	1,579,715.13
San Juan	2 nd	99,028,126.49	130,646,016.71	(31,617,890.22)
Santol	4 th	50,411,663.93	59,581,146.66	(9,169,482.73)
Sudipen	4 th	58,604,958.22	82,002,735.87	(23,397,777.65)
District II		1,132,709,759.21	1,185,026,484.44	(52,316,725.23)
Agoo	1 st	200,001,121.21	164,124,261.24	35,876,859.97
Aringay	2 nd	101,096,215.98	84,605,597.21	16,490,618.77
Bagulin	5 th	51,567,933.43	53,979,166.21	(2,411,232.78)
Bauang	1 st	195,770,310.08	242,526,849.02	(46,756,538.94)
Burgos	5 th	43,131,008.91	42,783,284.12	347,724.79
Caba	4 th	57,936,259.66	63,515,526.37	(5,579,266.71)
Naguilian	1 st	130,037,068.73	183,702,738.53	(53,665,669.80)
Pugo	5 th	53,145,897.22	46,056,205.53	7,089,691.69
Rosario	1 st	150,200,541.94	134,444,256.50	49,971,203.41
Sto. Tomas	4 th	83,756,806.60	100,229,338.53	(16,472,531.93)
Tubao	4 th	66,066,595.45	69,059,261.18	(2,992,665.73)
La Union	1 st	1,502,039,443.72	1,327,474,327.66	174,565,116.06
TOTAL		3,854,854,658.12	4,049,278,322.22	(193,816,800.59)

Source of Data: Provincial Treasurer's Office

6.2 Employment and Unemployment Rate

The province has an employment rate of 92.82 percent in 2008 to 91.80 percent in 2009, a slight decline of 1.02 percent. For the unemployment rate, it shows a 7.18 percent in 2008 to 8.20 percent in 2009. Refer to the figure below.



Source of Data: Philippine Statistics Authority

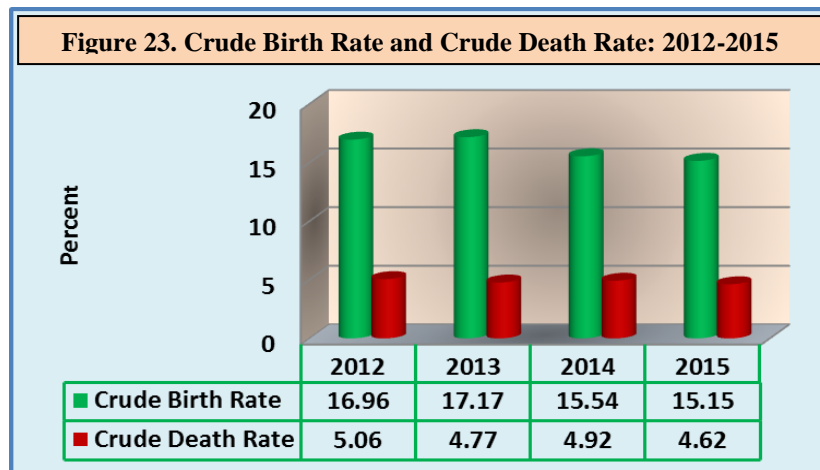
6.3 Social Services

6.3.1 Health Services

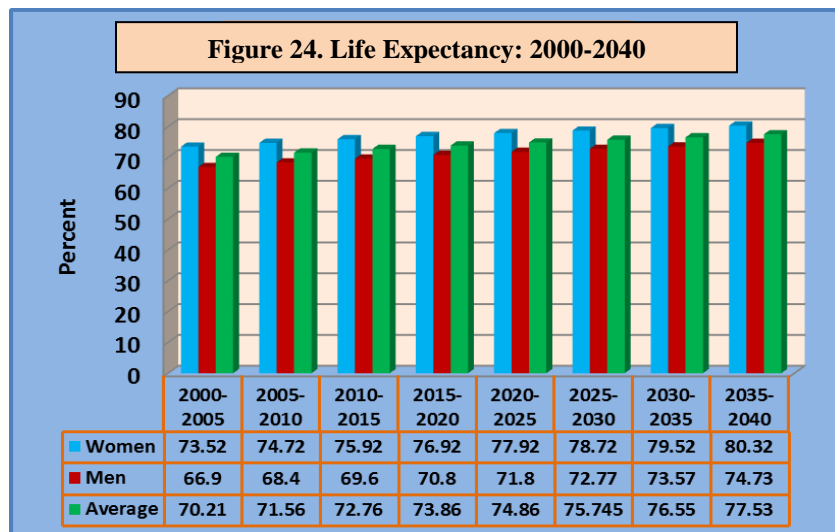
6.3.1.1 Births and Deaths

Crude Birth Rate (CBR) showed a declining trend from 17.17 percent in 2013 to 15.15 percent in 2015 as shown in Figure 23. Majority of the municipalities decreases in CBRs. The City of San Fernando having a slight remarkable increase of 4.78 percent from 2013.

Crude Death Rate (CDR) recorded a slight decline from 4.92 percent in 2014 to 4.62 percent in 2015 per 1,000 populations. Tubao in District II registered the highest CDR at 6.96 percent (CY 2015) followed by Agoo with 6.32 percent and City of San Fernando of District I had a rate of 6.42 percent. Twelve (12) municipalities observed having a downward trend of death rates.



Source of Data: Provincial Health Office



Source of Data: Provincial Health Office

6.3.1.2 Life Expectancy

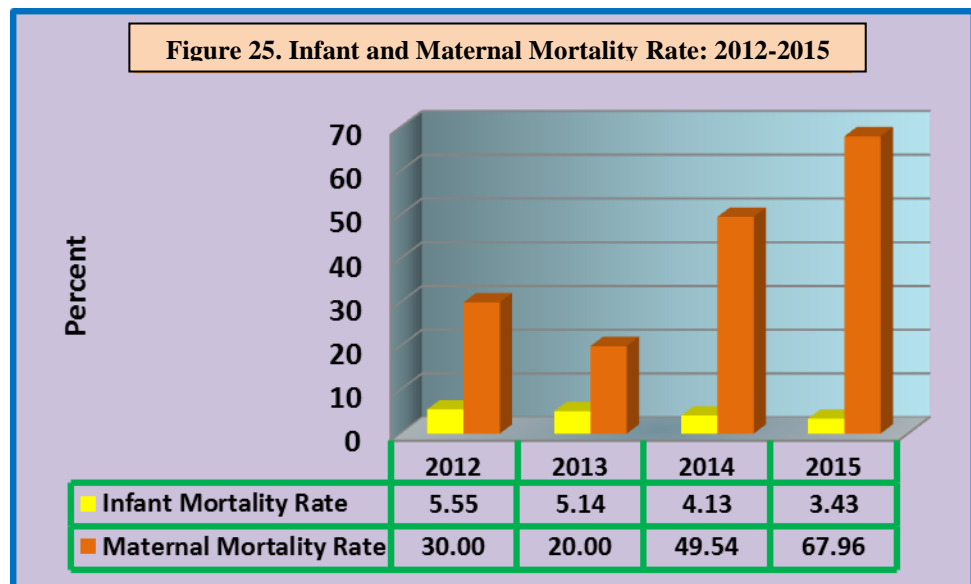
The average life expectancy at birth increased from 70.21 years in (2000-2005) to 73.86 years in (2015-2020). Life expectancy of females is higher than males with female’s life expectancy of 76.92 years compared to 70.8 years for males. By 2035-2040, it is projected to reach 77.53 years. Longer life expectancy implies an increasing proportion of the aging population on old age dependents. Refer to Figure 24.

6.3.1.3. Infant Mortality Rate

For the past 4 years, it was noticed a declining trend in the infant mortality rate from 5.55 percent in 2012 and slid down to 3.43 percent for CY 2015 with pre-maturity as the number one among the ten leading causes of infant mortality followed by pneumonia. Refer to Figure 25.

6.3.1.4. Maternal Mortality Rate

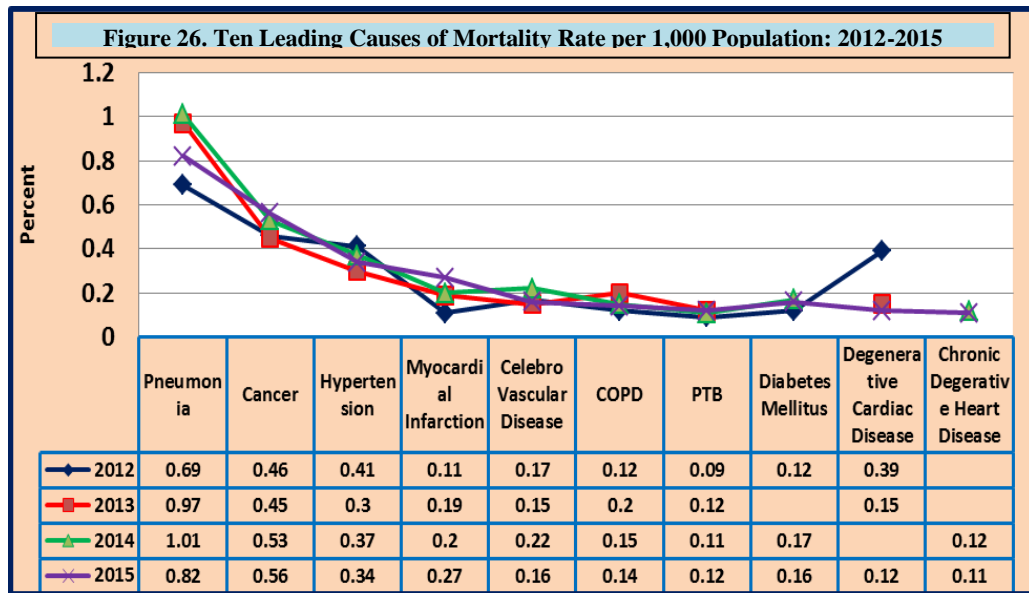
Maternal Mortality Rate (MMR) posted an increasing trend from 30 percent in 2012, 49.54 percent (2014) to 67.96 percent (2015) except for CY 2013 that resulted to 20 percent as shown below.



Source of Data: Provincial Health Office

6.3.1.5 Mortality Rates

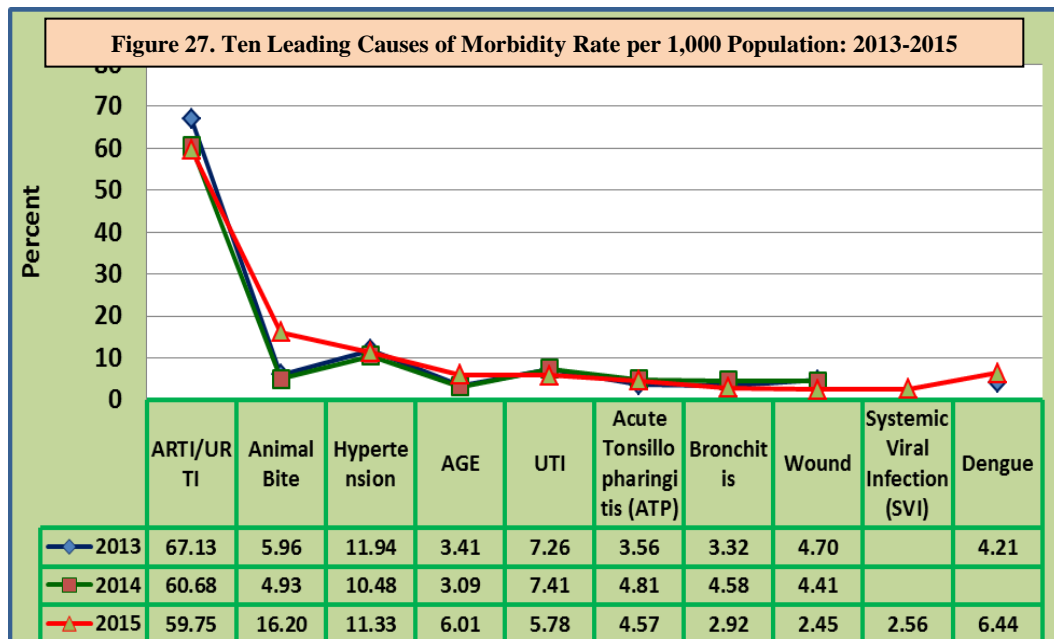
Uneven result of mortality of the province is seen in Figure 26. Pneumonia is the number one leading causes of mortality among the ten leading causes, second is cancer in all forms and the third is Hypertension.



Source of Data: Provincial Health Office

6.3.1.6. Morbidity Rates

Morbidity Rates results a declining trend to almost leading causes as pictured in Figure 27. Acute Respiratory Infection leads the causes of Morbidity in 2013, 2014 and 2015 at 67.13%, 60.68% and 59.75%, respectively per 1,000 populations. Hypertension pictures second among the ten leading causes.



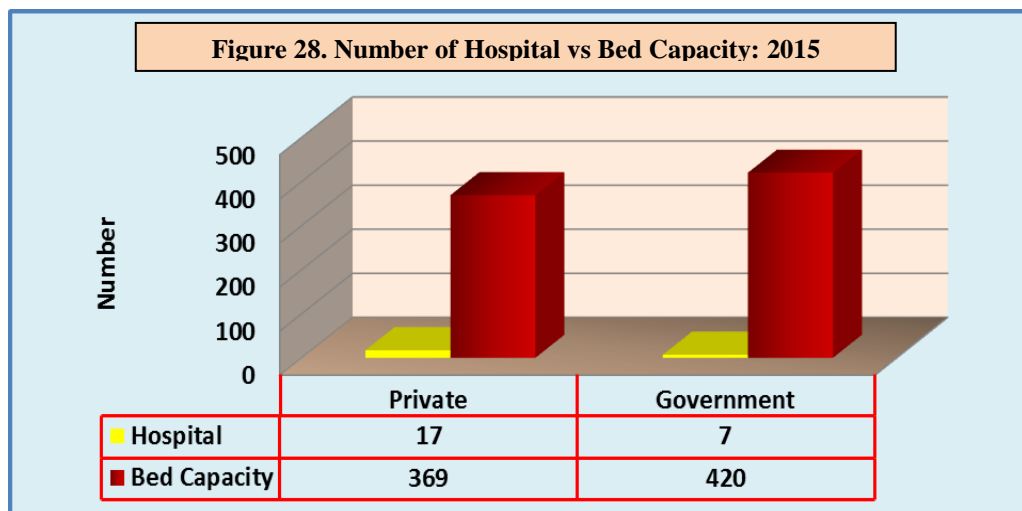
Source of Data: Provincial Health Office

6.3.1.7 Hospitals

A total of 24 hospitals are located in La Union including lying-ins and clinics, of which 17 are privately owned and the other (7) are managed by the government. These hospitals have a total bed capacity of 789, four hundred eighty nine (789) in public hospitals and 369 in private hospitals. Among the government hospitals, the Ilocos Training and Regional Medical Center accounts 200 beds. Refer to Figure 28.

The Barangay Health Workers referred complicated cases to the 5 District Hospitals. Looking at the distribution of hospitals in the province, more are located in developed and urban municipalities. Most hospitals with modern means of facilities and communication services are located in San Fernando City and Agoo.

Assessing the adequacy of hospital services, more bed capacities, modern equipment and drugs are available in modern hospitals than in public/district hospitals. At present, district hospital facilities were improved/upgraded/provided thru the Economic Development Fund of the province and the Hospital Facilities Enhancement Program (HPEP) from the Department of Health.

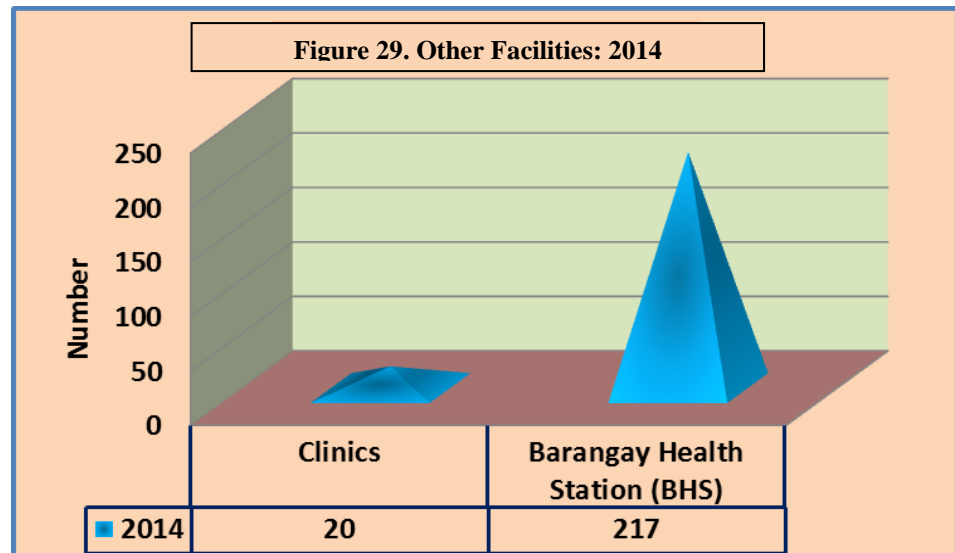


Source of Data: Provincial Health Office

The Provincial Government of La Union operates the La Union Medical Center and five district hospitals-Bacnotan, Naguilian and Rosario District Hospitals, Caba Medicare and Community Hospital and Northern La Union Maternity and Children’s Hospital in Balaoan. In 2003, Republic Act No. 9259 made LUMC a non-stock, non-profit local government owned and controlled corporation. The conversion of the five district hospitals into public-private mix type non-stock and non-profit hospitals. La Union Medical Center was implemented into a model enterprise for Sustainability and Development and Gawad Galing Pook awardee with 100 – bed capacity, state of the art medical equipment’s, accessible to the poor community of La Union and the nearby provinces of Ilocos Sur, Ilocos Norte, Pangasinan and Benguet. (See Map No. 48. Health Facilities).

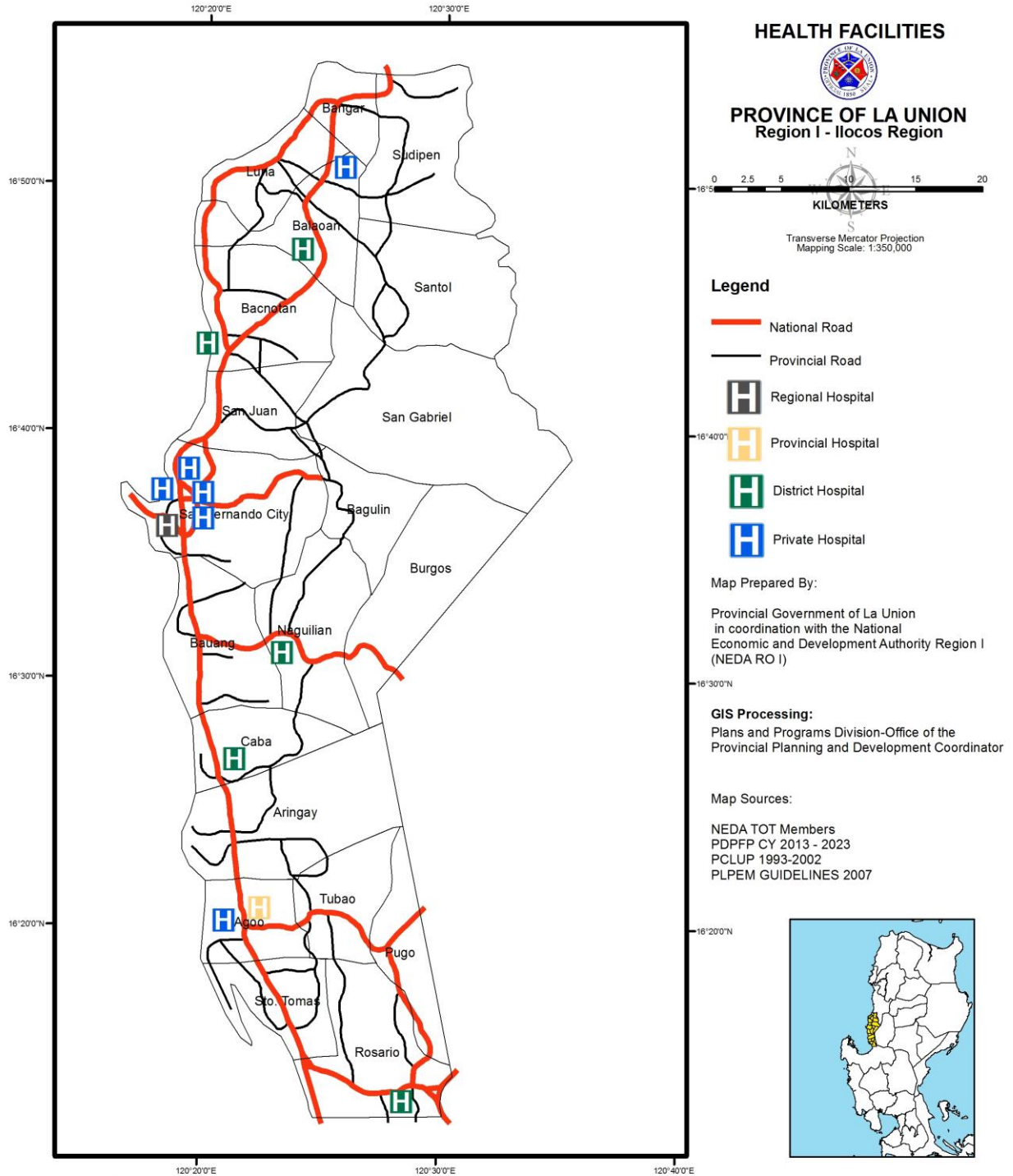
6.3.1.8 Health Centers/Clinics/BHSs

A total of 237 health facilities operate in La Union. In each municipality there are twenty (20) Rural Health Units/FP clinics and 217 Barangay Health Stations (BHS). Burgos an upland area had the least with five (5) Barangay Health Stations. Average population served by 1 BHS is 3,591. Around 38 percent of the total barangays have BHS. Presence of private clinics and diagnostic centers are located in urban municipalities that cater health services to middle upper income class population. The preventive and promotive aspect of health is the main thrust of the health sector in the province. See Figure 29.



Source of Data: Provincial Health Office

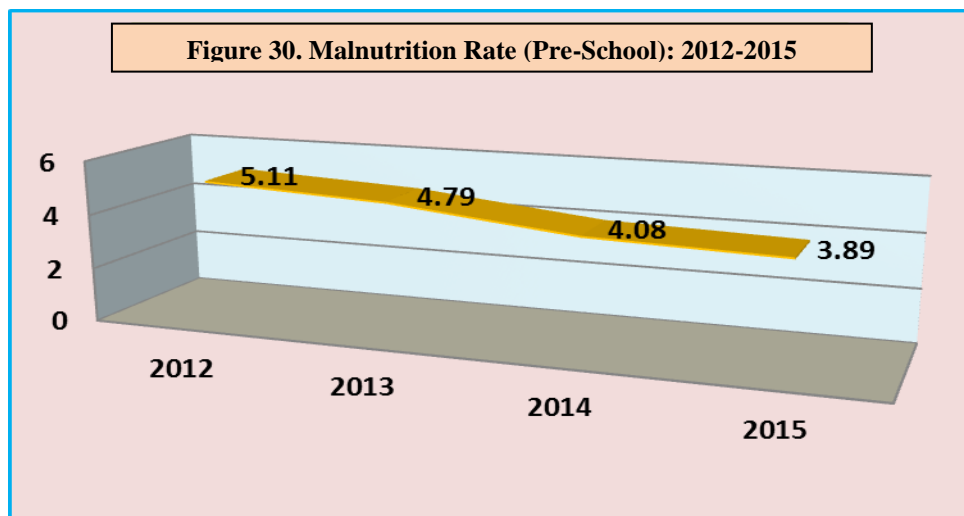
MAP NO. 48: HEALTH FACILITIES



6.3.1.9 Nutrition Food and Vitamin Supplementation

Nutrition is another important component of the provincial integrated public health efforts.

Operation Timbang, the mass weighing of pre-schoolers is a priority of the province to monitor the nutritional status of children provincewide. Malnutrition rate (Severely Underweight + Underweight) posted 3.89 percent compared to 2013 results of 5.11 percent or 1.22 percent lower because of the latest standard being used which is the Child Growth Standard (CGS). The International Reference Standard (IRS) being used (2008-2009) comprised are the Below Normal and Below Normal Very Low which includes mild cases while in the previous years the Philippine Reference Standard (PRS) are being used that limit only to moderate and severe cases to find out the malnutrition rate situation of the province as well as the municipality/city. For CY 2015, District II (4.67 percent) scenario is worse than District I (3.83 percent) and the province at 3.89. Refer to the figure below.



Source of Data: Provincial Health Office-Nutrition Division

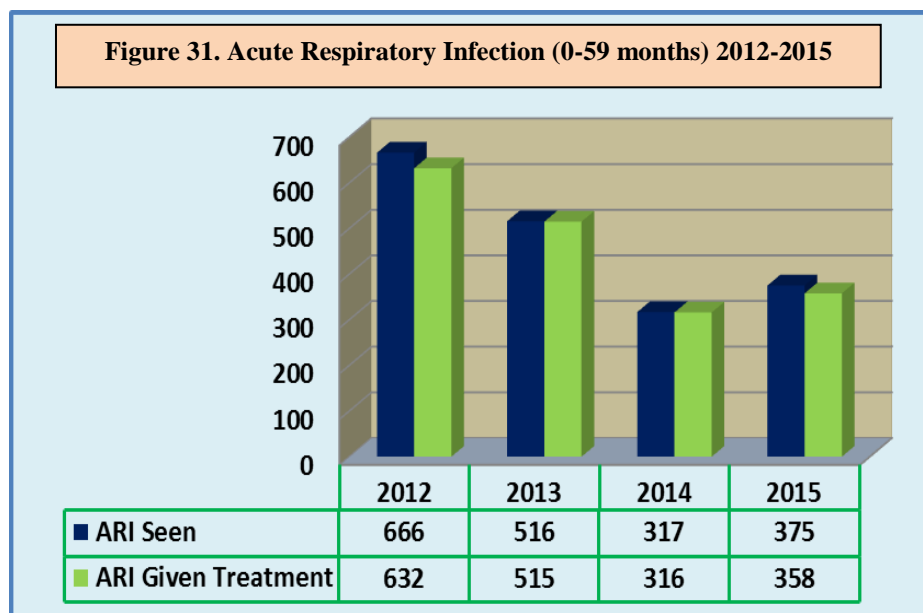
6.3.1.10 Control of Acute Respiratory Infection

Respiratory infections, particularly pneumonia, among children five years old and below, have been a perennial problem. The Department of Health as well as the Provincial Health Office has been trying to address to reduce both mortality and morbidity rates.

Although the Local Government Units (LGUs) have been devolved, the DOH, always had been extending assistance in the form of medicines and supplies to the different health facilities in the province, to augment what is being provided for by the local government, aside from the technical assistance that is regularly given.

The Local Government Performance Program (LPP) provided ample support in the implementation of the CARI Program being one of the components of the Child Survival Programs, of which LPP is catering to.

Referring to Figure 31 show the number of ARI cases were seen along with those given treatment.



Source of Data: Provincial Health Office

6.3.1.11 Tuberculosis Data

Tuberculosis is a preventable and curable disease but still it is a major health problem with 961 patients has TB Symptoms and underwent DSSM. District I figure exceeded more than one – half (51%) vs District II at 49 percent.

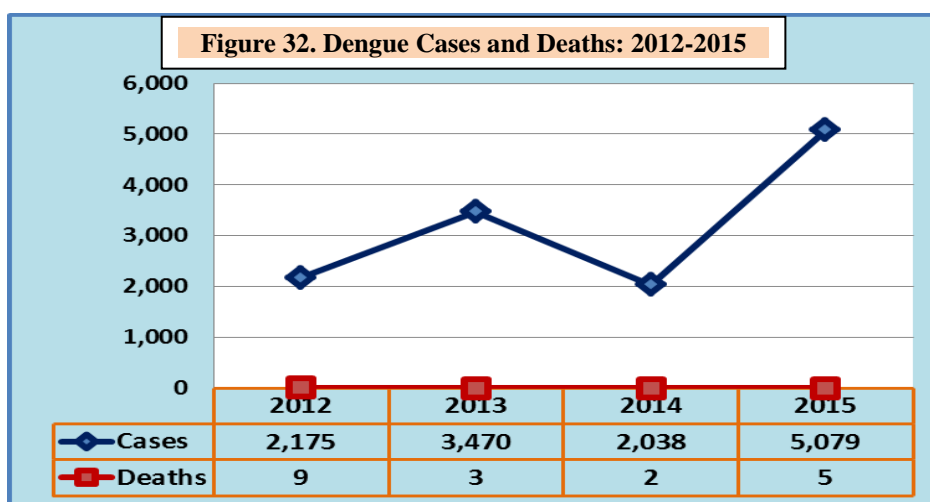
The Provincial Health Office facilitates the certification of Health Facilities as “DOTS CENTERS” in order to increase access to PHILHEALTH services. There were 4 facilities accredited and certified by PHILHEALTH as “DOTS CENTERS” namely the La Union Medical Center, City Health Office of San Fernando, Bacnotan RHU, Balaoan RHU and including the 5 District Hospitals.

6.3.1.12 Dengue

Dengue Hemorrhagic Fever is one of the most harmful and resurgent tropical diseases in the past years with expanding geographical distribution of both virus and mosquito vectors, increased frequency of outbreaks, and emergence of the hemorrhagic type in new areas.

An uneven figure of probable Dengue Fever (DF)/Dengue Hemorrhagic Fever Dengue (DHF) cases was noted in the province. Dengue cases show an uneven increase - decrease surveillance update as shown in figure 39. Thus, in CY 2012 a total of 2,175 cases were reported then increases to 3,470 cases in CY

2013 and figured out to decline at 2,038 cases in CY 2014 and it gradually increases to 5,079 cases in CY 2015. It was noted that nine (9) died in CY 2012 and went down to five (5) deaths in CY 2015, respectively. For the prevention and control of dengue and other mosquito-borne diseases several strategies were implemented by the Provincial Government of La Union during the past years. Intensive information radio campaign/plugs, symposia, meetings and clean-up drives were waged. Proper spraying and defogging were done every year in 19 municipalities and 1 city, 20 public markets, 14 slaughter houses and the different school campus in the Province. The Provincial Government of La Union distributed mosquito screens for schools and additional machines and chemicals while the Department of Health (DOH) gave additional chemicals and Ovicidal-Larvicidal (O-L) Trap. A La Union Dengue Operation Task Force was created to oversee and study other innovations and strategies for the prevention of the deadly disease.



Source of Data: Provincial Health Office

6.3.1.13 Animal Bite

Animal bite is very alarming. In CY 2012 about 4,621 animal bite cases were seen and it doubled in CY 2015 at 12,775 animal bite cases seen. With this scenario the Provincial Government of La Union with the Department of Health, Agriculture Education and Interior and Local Government waged an Information and Education Campaign to increase awareness in the Anti-Rabies Program thru print and radios, symposiums and convocations in-schools.

6.3.1.14 Family Planning/Population Management

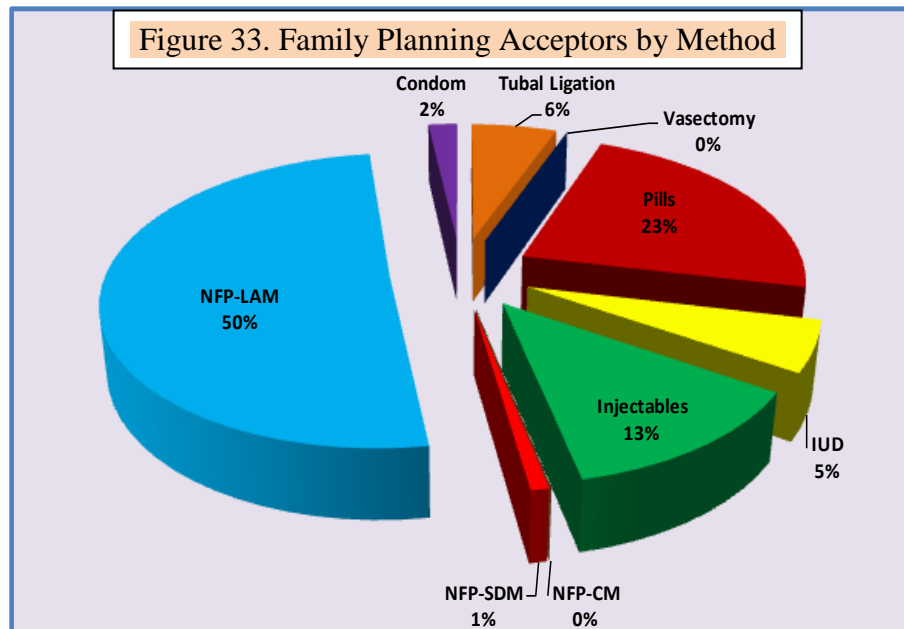
Population Management is an important component of the Province’s integrated public health efforts. In the past years, the increasing trend of family planning current users continued from 52,585 in 2013 to 56,857 in 2014 and 62,709 in 2015. In 2015, District I had higher current prevalence rate of 62.07 percent relative to the other District of 39.28 percent.

Family Planning Program plays a vital role through advocating proper spacing of births, responsible parenthood within a community. Women are given the freedom to pursue her personal opportunities and development. With women’s

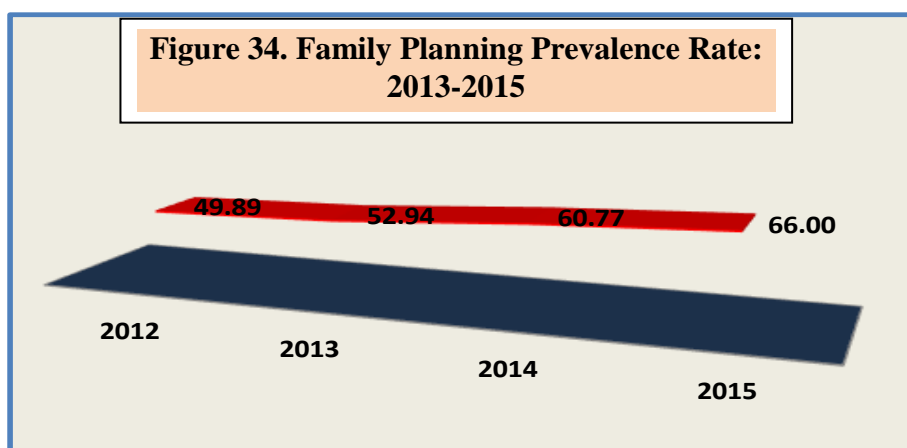
socio-economic status-health, empowered female population, family health care providers should rather be equally addressed. See Table 46 and Figure 33-34.

Table 46. FAMILY PLANNING ACCEPTORS: 2013-2015				
METHODS	2013	2014	2015	TOTAL
Tubal Ligation	134	375	142	651
Vasectomy	0	1	1	2
Pills	772	1,315	485	2,572
IUD	36	572	24	632
Injectables	489	594	346	1,429
NFP-CM	0	0	0	0
NFP-SDM	20	27	50	97
NFP-LAM	1,739	2,045	1,938	5,722
Condom	136	38	45	219
Total Recruited & Referred	3,326	4,967	3,031	11,324

Source of Data: Provincial Health Office



Source of Data: Provincial Health Office



Source of Data: Provincial Health Office

6.3.2 Education

6.3.2.1 Education Indicators

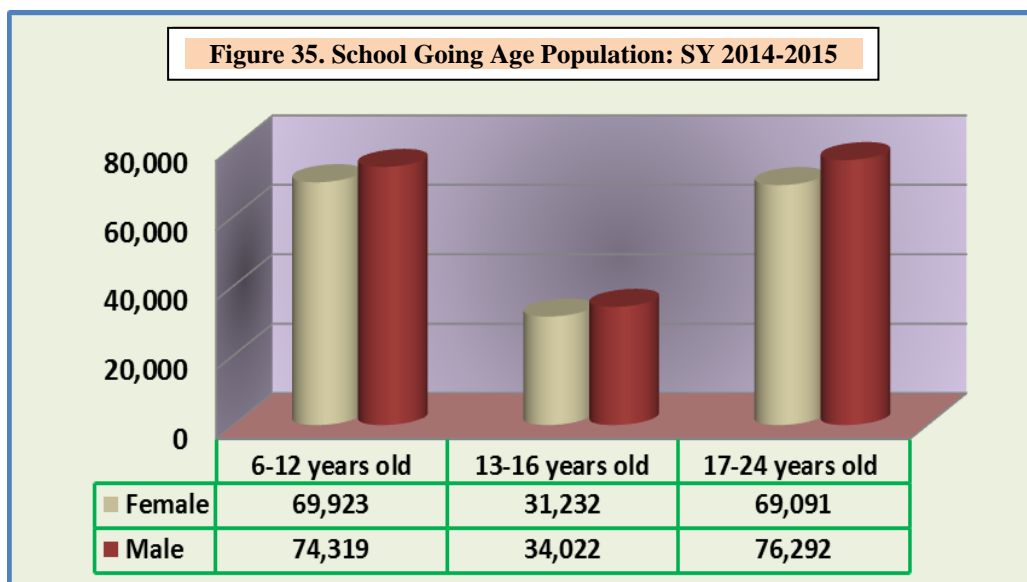
6.3.2.1.1 School Going Age Population

The province had a total projected school going-age population of 336,967 disaggregated to 170,236 females and 184,633 males. As to school level, the elementary (6-12 years old) accounted 144,242 children, while the secondary (13-16 years old) comprised 65,254 students and the tertiary level (17-24 years old) had the highest share at 145,373 students or 41 percent. See Table 47.

Table 47. SCHOOL GOING AGE POPULATION, BY SEX: LA UNION CY *2015			
AGE GROUP	MALE	FEMALE	TOTAL
6 - 12 Years Old	74,319	69,923	144,242
13 - 16 Years Old	34,022	31,232	65,254
17 - 24 Years Old	76,292	69,081	145,373
TOTAL	184,633	170,236	354,869

Note: (*) PPDO Projection Using Geometric Method

Source of Data: Philippine Statistics Authority (1995-2000 POPCEN)



Source of Data: Philippine Statistics Authority (1995-2000 POPCEN)

Table 48. NUMBER OF ENROLMENT, TEACHERS AND CLASSROOM IN PUBLIC SCHOOLS IN LA UNION SY 2013-2014

INDICATORS	ELEMENTARY	SECONDARY
No. of Enrolment	101,487	44,529
No. of Teachers	3,078	1,436
No. of Classroom	3,205	1,061

Source: Department of Education-La Union and City Division Office

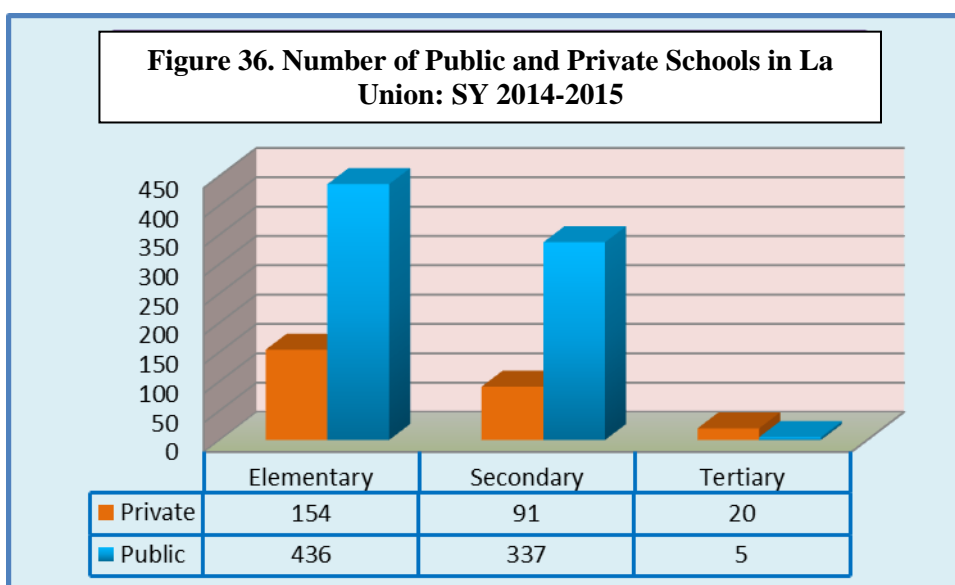
Based on the report of Commission on Higher Education, Tertiary levels both colleges and universities accounted a total enrolment of 36,506 students for the school year 2015-2016.

6.3.2.1.3 Education Manpower

As to manpower, the number of public elementary school teachers totaled to 3,078 or an increase of 3 percent versus 3,002 in CY 2011-2012. A teacher-pupil ratio pictured at 1:33. The secondary level teachers accounted a doubled increase at 6 percent of that of the elementary showing it figure at 1,359 (CY 2011-2012) to 1,436 (CY 2013-2014) or a ratio of 1:30.

6.3.2.1.4 Physical Facilities

In terms of physical facilities, a total number of 590 public and private schools were recorded and distributed as follows: elementary schools accounted 428 or 73 percent; secondary schools 139 or 24 percent and tertiary schools 25 or 4 percent. See Figure 36.



Source of Data: Department of Education-Div. Office/City Division/CHED

The province had adequate classrooms for both elementary and secondary level that evinced by a classroom to pupil ratio of 1:25 and classroom to student ratio at 1:41 showing lower than the planning standard of 1:45.

6.3.2.2 Performance Indicators

6.3.2.2.1 Elementary

Table 49. PERFORMANCE INDICATORS OF PUBLIC ELEMENTARY SCHOOLS				
INDICATORS	CITY DIVISION		LA UNION DIVISION	
	SY 2013-'14	SY 2014-'15	SY 2013-'14	SY 2014-'15
Net Enrolment Ratio	111.95	111.08	103.49	103.93
Net Enrolment Ratio	98.65	98.19	91.79	93.67
Completion Rate	86.24	95.08	87.72	99.17
Cohort Survival Rate	86.24	95.08	87.72	99.41
ES Grade I w/ ECD	90.02	85.42	98.47	86.14
Promotion Rate	100.37	92.52	100.68	94.27
Failure Rate	1.32	1.56	0.6	0.62
Repetition Rate	1.61	0.45	0.77	0.23
Simple Drop Out Rate	0.14	0.71	0.28	0.79
Net Intake Rate	74.84	92.08	75.4	91.75

Source of Data: DepEd Basic Education Information System (DepEd BEIS)

Cohort Survival Rate in the elementary level (City Division) increased from 86.24% to 95.08% while in La Union Division show the same scenario with increasing trend from 87.72% in SY 2013-2014 to 99.41% in SY 2014-2015. Same picture was observed in other indicators such as Completion Rate and Net Intake Rate. Other indicators show an improved performance such as

the Repetition Rate, Promotion Rate, Participation Rate and Completion Rate. See Table 49.

6.3.2.2.2 Secondary

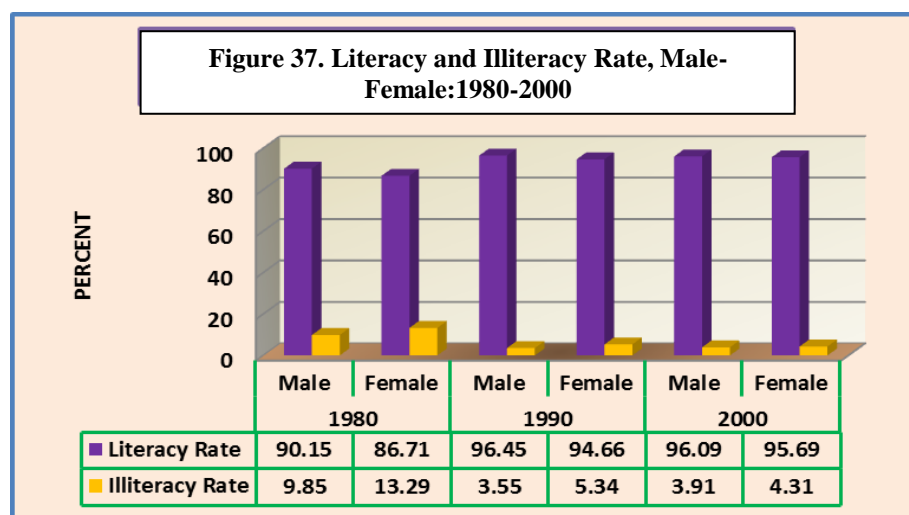
Table 50. PERFORMANCE INDICATORS OF PUBLIC SECONDARY SCHOOLS				
INDICATORS	CITY DIVISION		LA UNION DIVISION	
	SY 2013-'14	SY 2014-'15	SY 2013-'14	SY 2014-'15
Gross Enrolment Ratio	107.21	107.30	88.17	88.28
Net Enrolment Ratio	85.92	87.40	72.18	71.31
Completion Rate	79.21	89.12	81.33	85.15
Cohort Survival Rate	82.47	93.20	84.29	87.61
Promotion Rate	98.11	88.89	95.25	82.99
Failure Rate	3.35	1.00	2.87	1.41
Repetition Rate	1.88	0.59	1.11	0.30
Simple Drop Out Rate	1.40	2.07	2.28	2.49

Source of Data: DepEd Basic Education Information System (DepEd BEIS)

It was noted that there is an improvement in the gross enrolment ratio, completion rate, cohort survival rate, failure rate, repetition rate both in the City and La Union while net enrolment ratio show a good performance in the city vis-a-vis La Union pictured a slight decrease in same years of study. However, in the promotion and simple drop-out rate evinced an increasing trend as details shown on Table 50.

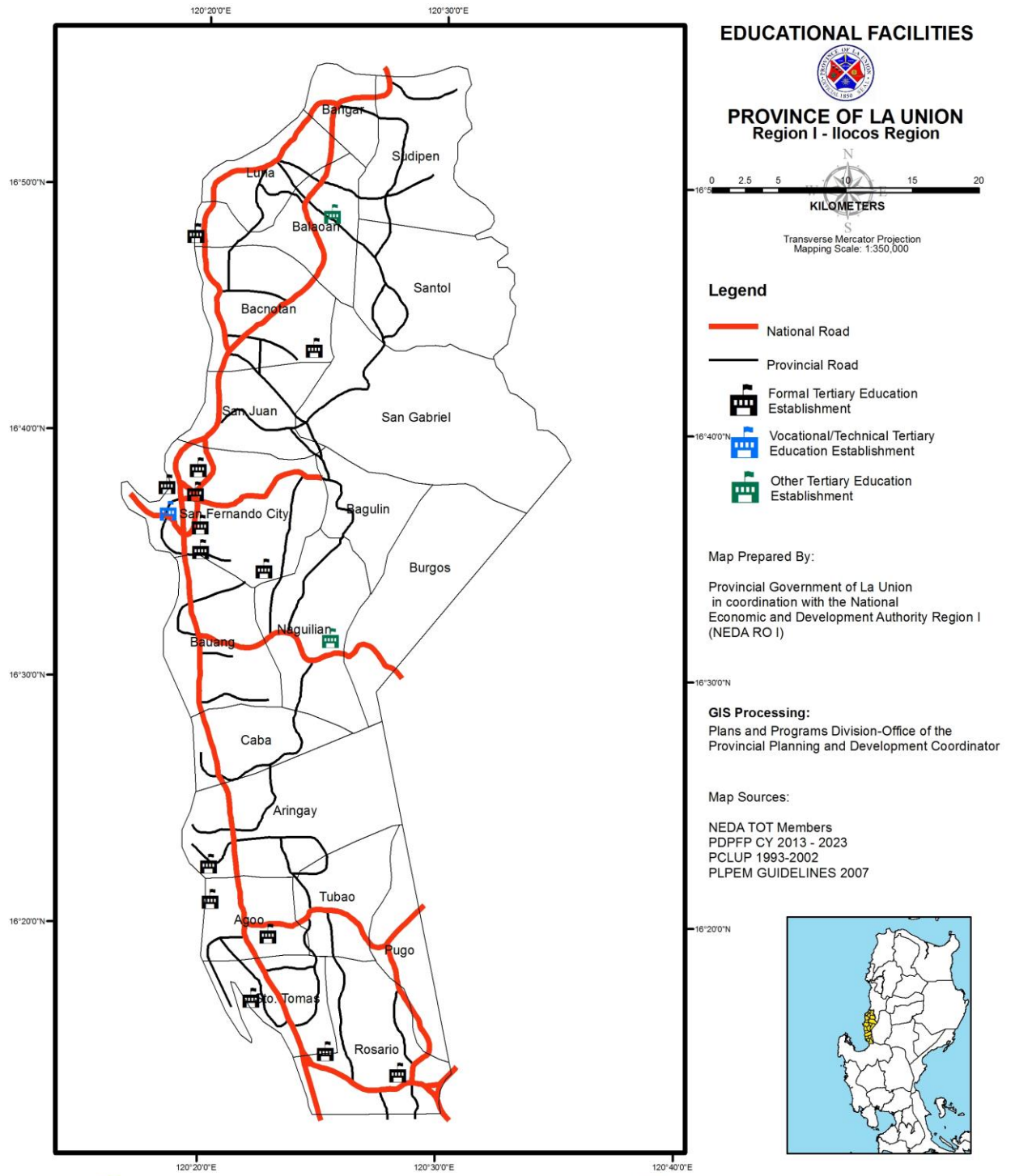
6.3.2.2.3 Literacy Rate

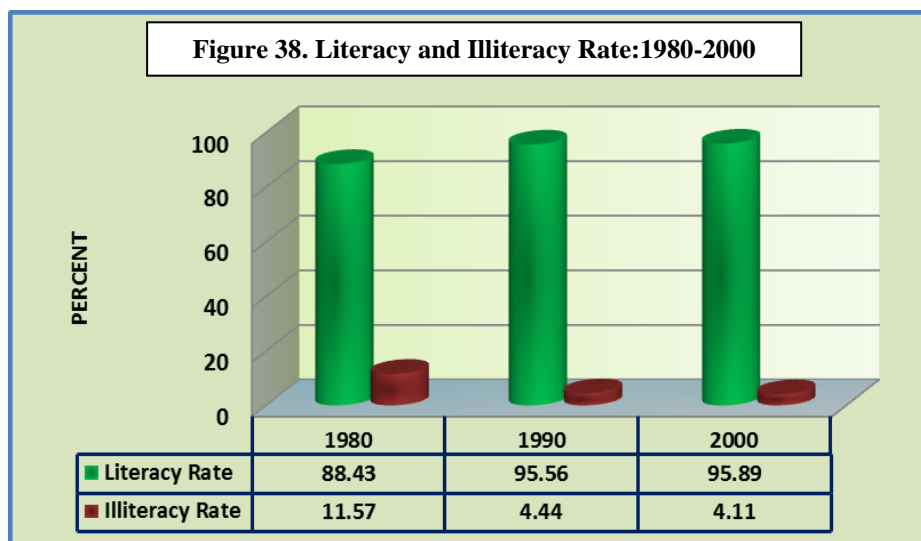
Literacy rate of La Union from CY 1980 to CY 2000 pegged at 88.43 percent to 95.89 percent, with more males gaining high literacy rate than females. See Figure 37 and 38.



Source of Data: Philippine Statistics Authority (1980-2000 POPCEN)

MAP NO. 49: EDUCATIONAL FACILITIES





Source of Data: Philippine Statistics Authority (1980-2000 POPCEN)

6.3.2.2.4 Non Formal Education

Table 51. Non-Formal Education in La Union

PROGRAM	SY 2012-2013	SY 2013-2014
Basic Literacy Program (BLP)	628	448
Accreditation Evaluation Program (AEP)	4,694	5,253

Source: Dep. Ed Division Office

The sector also covered services in Non – Formal Education through Basic Literacy Program (BLP) and Accreditation Evaluation Program (AEP). For the Basic Literacy Program it decreases to almost 30 percent from 628 in SY 2012-2013 to 448 in SY 2013-2014 due to the different programs implemented by the government like the 4Ps and modular program of instruction that address the basic needs of learners. The Accreditation Evaluation Program increase in the number of graduates from 4,694 to 5,253 or 12 percent as shown in Table 51.

6.3.3 Housing

6.3.3.1 Housing, Human Settlements

One of the significant phenomena that have characterized the development process of the province has been the explosive and unabated growing population due to natural birth and rural-urban migration and in-migration. In 2010, the Census of Population has a total population of 741,906 persons. This is 83,961 persons added to the province’s population since the 2000 Census of Population of 657,945 with a 1.21 percent growth.

In 2010, the province has a total of 159,031 occupied dwelling units for 163,820 households giving a ratio of 1.03 households per housing unit compared to 1990 of 89,900 occupied dwelling units or a ratio of 1.14.

Table 52. HOUSEHOLDS, OCCUPIED HOUSING UNITS, LA UNION: 1990-2010			
YEAR	HOUSEHOLDS	OCCUPIED HOUSING UNITS	%
2010	163,820	159,031	97.08
2000	127,579	123,994	97.19
1990	102,139	97,673	95.63

Source of Data: Philippine Statistics Authority (1990-2000-2010 POPCEN)

Of the 163,820 households in the province, 7,702 or 4.70 percent of lots are being rented, 35,016 or 21.38 percent are being occupied for free with consent of the owner and 1,220 or 0.74 percent of lots are being occupied by illegal settlers for free without the consent of the owner or 0.3 percentage points decreased from the CY 2000 data of 1.04. Refer to Table 53.

Table 53. NUMBER OF HOUSEHOLDS, BY TENURE STATUS OF LOT, LA UNION: 1990-2010						
TENURE STATUS OF LOT	1990	%	2000	%	2010	%
Owned/Being Amortized	89,900	88.02	78,613	61.62	119,358	72.86
Rented	3,754	3.67	6,877	5.40	7,702	4.70
Rent-free with consent of owner	8,449	8.27	35,739	28.01	35,016	21.38
Rent-free without consent of owner	36	0.04	1,326	1.04	1,220	0.74
Not Applicable	-	-	2,698	2.11	492	0.30
Not Reported	-	-	2,326	1.82	32	0.02
LA UNION	102,139	100.00	127,579	100.00	163,820	100.00

Source of Data: Philippine Statistics Authority (1990-2000-2010 POPCEN)

In 2000 and 2010 census, still the City of San Fernando, the regional center of Region I has the highest recorded dwelling units followed by Bauang and Agoo which are the two fast growing first class municipalities. In 2010, the census results show that in Bauang, a total of 225 lots are being occupied by illegal settlers the highest among the municipalities, followed by Agoo and the City of San Fernando with 148 lots and 141 lots, respectively. Burgos being an upland municipality has the least occupied housing units at 1,610 or 1.01 percent followed by Bagulin, Santol and San Gabriel with 2,530; 2,661 and 3,433, respectively.

For CY 2010, the City of San Fernando with 26,154 has the highest number of households by type of buildings and tenure status of lots, followed by Bauang and Agoo with 15,920 and 12,619 respectively. Upland municipalities still have the least number of households by type of buildings and tenure status of lots; they are the municipalities of Burgos with only 1,633 and Bagulin with 2,572. Same scenario is seen in CY 1990 and 2000, City of San Fernando is still the highest and Burgos being the lowest. Refer to Table 54.

Chapter VI: Income Employment, Service Access and Poverty

Table 54 . TYPE OF BUILDING, 1990-2010

DISTRICT/ MUNICIPAL ITY/ CITY	SINGLE			DUPLEX			MULTI-UNIT RESIDENTIAL			COMMERCIAL/ INDUSTRIAL/ AGRICULTURAL			INSTITUTIONAL LIVING QUARTER			OTHER HOUSING UNIT			NOT REPORTED		
	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010	1990	2000	2010
DISTRICT I	45,480	56,412	70,420	882	1,644	3,291	768	965	2,447	86	119	225	12	5	10	8	30		1	266	15
Bacnotan	5,312	6,675	8,785	84	117	290	95	89	135	20	12	24	2	4	1		4		1	34	
Balaoan	5,223	6,150	7,935	110	78	133	36	80	49	10	16	12					20			20	
Bangar	4,487	5,443	6,965	65	35	330	25	6	63	4	6	11				1				7	
Luna	5,290	6,111	7,798	56	193	179	8	16	31	1	11	9					1			38	
San Fdo. City	14,281	18,008	22,068	447	965	1,887	594	731	2,062	43	56	127	7		8	7	3			101	2
San Gabriel	2,276	2,745	3,433	3	52	54		2	17	3		8	2		1					7	
San Juan	4,389	5,592	7,311	92	161	317	9	28	83		6	18		1			1			38	8
Santol	1,789	2,953	2,661	3	9	18	1	3		1		2								15	3
Sudipen	2,433	2,735	3,464	22	34	83		10	7	4	12	14	1				1			6	2
DISTRICT II	49,504	62,987	83,448	522	1,418	2,598	348	499	1,149	46	184	187	2	6	10	11	7	6		352	14
Agoo	7,347	9,129	11,785	105	288	550	32	169	235	3	70	45	2		4	1				71	
Aringay	5,880	7,534	9,508	88	56	169	12	14	51	6	3	6			1	1				65	4
Bagulin	1,708	2,081	2,530	7	68	34		1	4	1		1								11	3
Bauang	8,473	11,152	14,817	110	413	672	135	213	401	5	22	29		1	1	3	1			55	
Burgos	920	1,206	1,610	12	11	14	5	3	7		9	2								1	
Caba	2,992	3,620	4,586	11	82	178	15	19	16		11	10		1	2	2	3	2		20	
Naguilian	6,272	8,124	10,146	66	105	358	74	20	222	4	5	24				4	1	3		28	
Pugo	1,909	2,404	3,409	10	49	131		11	45	5	5	28		1				1		6	
Rosario	5,867	7,684	11,418	59	153	319	41	31	129	3	41	26			1		2			34	5
Sto. Tomas	4,623	5,573	7,835	30	116	118	16	8	24	15	2	9		2						42	
Tubao	3,513	4,480	5,804	24	77	55	18	10	15	4	16	7		1	1					19	2
LA UNION	94,984	119,399	153,868	1,404	3,062	5,889	1,116	1,464	3,596	132	303	412	14	11	20	19	37	6	1	618	29

Source of Data: Philippine Statistics Authority (1990-2000-2010 POPCEN)

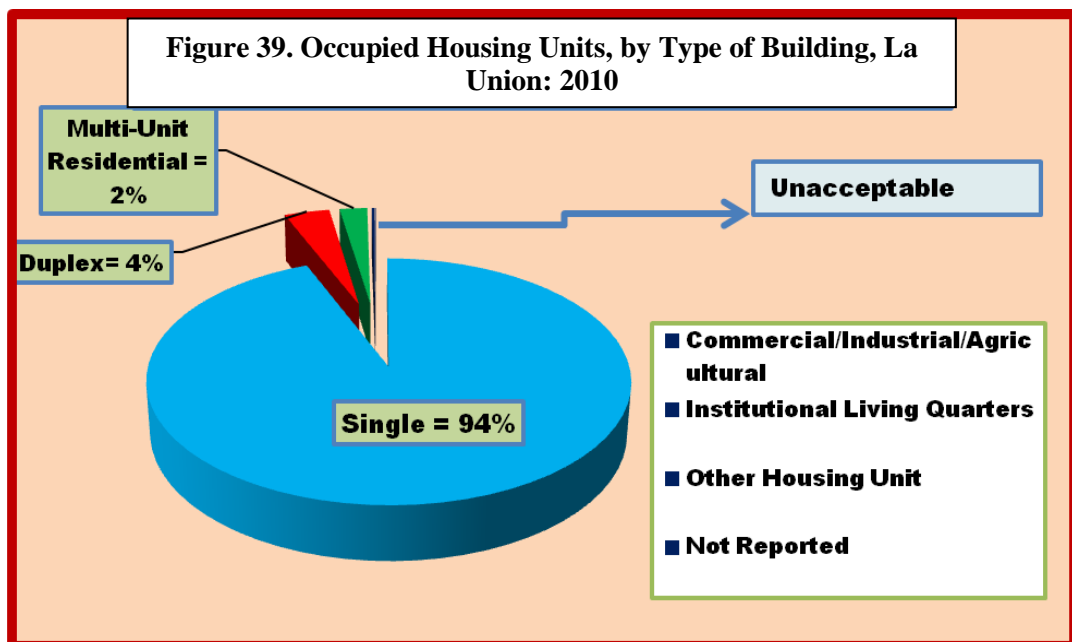
Census results also show that out of the 119,358 households, 72.86 percent own their housing units and lot, 4.70 percent renting, 21.38 percent who occupied housing units and the lot for free with consent of the owner, 0.74 percent occupying housing units and the lot for free without consent of the owner and 0.32 percent not reported. (Refer Table 54).

Squatters' phenomenon in the province is almost located along the coastal areas, Philippine National Railways (PNR) railroad tracks, danger zone and lots without consent of owners. These communities/areas are characterized by unsanitary conditions and health hazards, extreme overcrowding and congestion, and limited or no access to basic urban services, although resettlement and relocation program have been implemented to 210 qualified families displaced due to the construction of the San Fernando Diversion Road. For its expansion, where two-way tricycle lane is being proposed, lot and household survey to almost 347 affected squatters were conducted. Relocation of 80 qualified informal settlers in the municipality of Bangar due to the proposed Integrated Amburayan River Flood Control Project cum Livelihood Project and families affected by typhoon as beneficiaries for the proposed Resettlement Area at Damortis, Sto. Tomas.

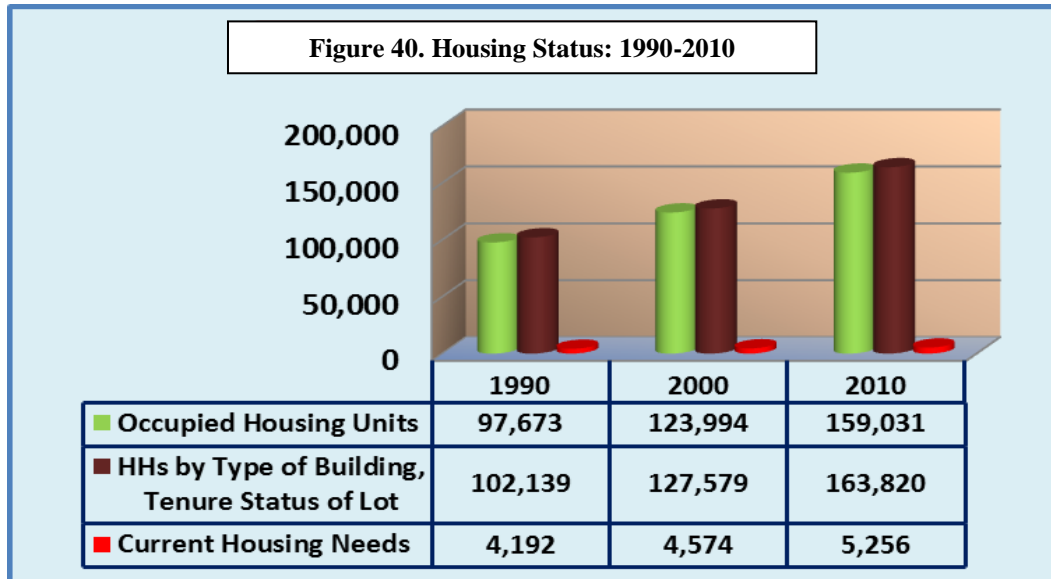
The City of San Fernando, a major urban/regional center, accounted 20 percent of the total urban housing needs in the province.

Total built-up occupies 9,146 hectares which is 6.13 percent of the province's total land area.

In 2010, the province had a housing backlog of 5,256 units.



Source of Data: Philippine Statistics Authority (2010 POPCEN)



Source of Data: Philippine Statistics Authority (2010 POPCEN)

6.3.4 Security

6.3.4.1 Police Force

“Peace is essential for the security, stability and prosperity of a community. Without peace, order and security there can be no socio – economic development progress. It makes the environment good for the people’s health and wellness.”

The La Union Provincial Peace and Order Council continued to serve as the mother unit of the law enforcement bodies within the province. La Union is considered as one of the most peaceful and orderly province nationwide. Looking at the province police force, in CY 2015 there were 1,037 policemen (834) males and (203) females. The current policeman to population ratio is 1:786.

6.3.4.2 Fire Protection

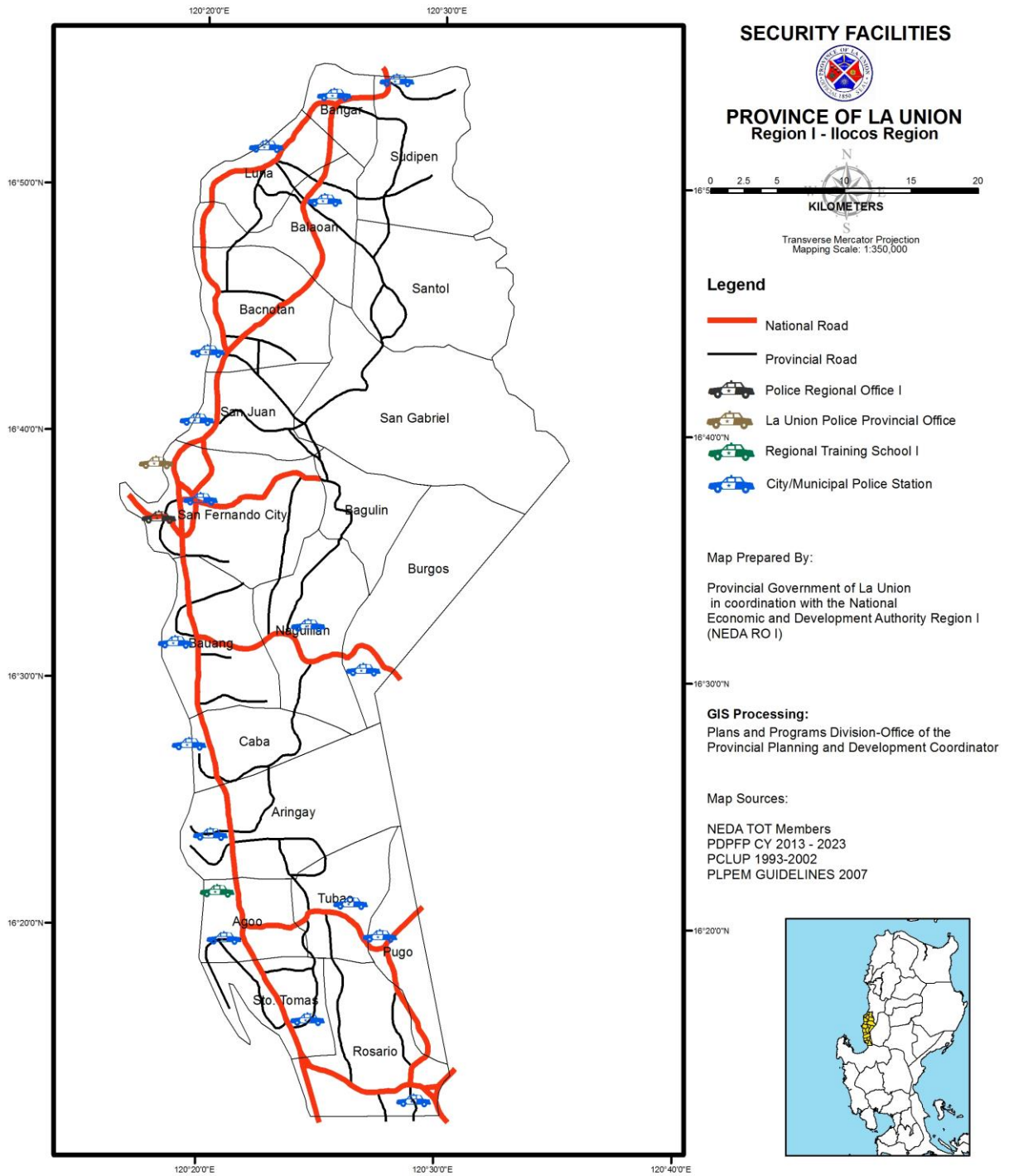
The DILG with its provincial and regional offices supervise the operation of the Bureau of Fire Protection in the province with a total of 13 fire stations, 18 fire trucks with 167 fire personnel. The current ratio to the total number of fire trucks is 1:9. The City of San Fernando had the most number of fire personnel of 27 while Agoo Fire Station follows with 21 personnel.

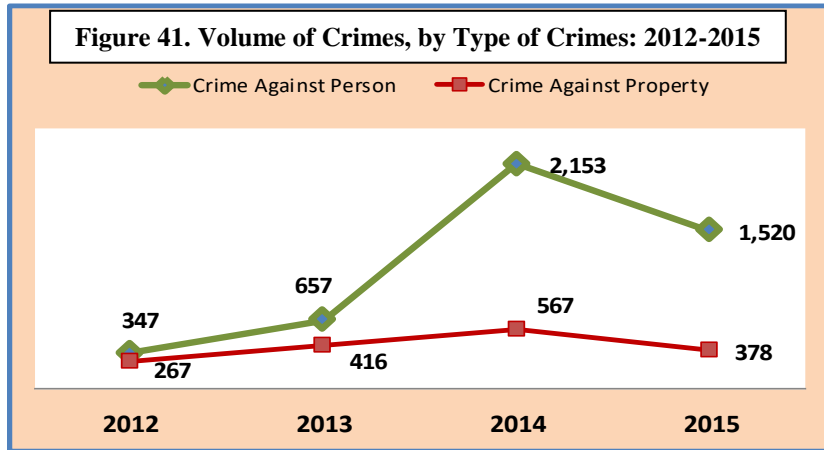
6.3.4.3 Crime Rate

Crime volume for CY 2015 decreased by 6.45 percent (1,898 crimes) versus 2,029 crimes committed in CY 2014. Comparative average

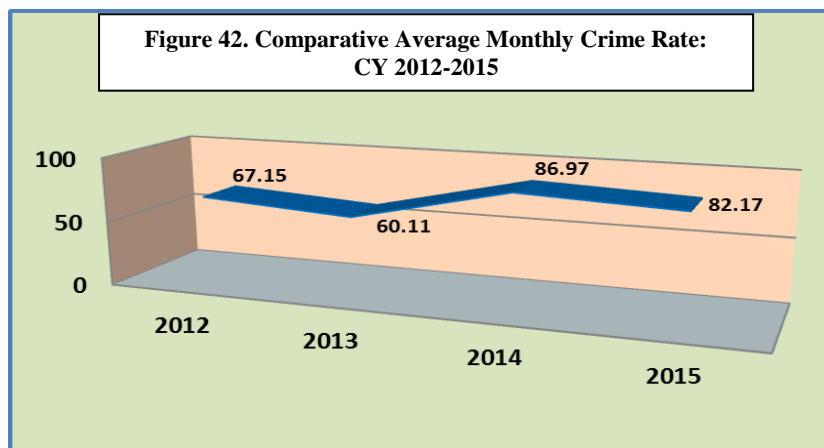
monthly crime rate show a declining trend from 86.97 percent in 2014 to 82.17 percent in 2015). See Figure 41, 42 and 43.

MAP NO. 50: SECURITY FACILITIES

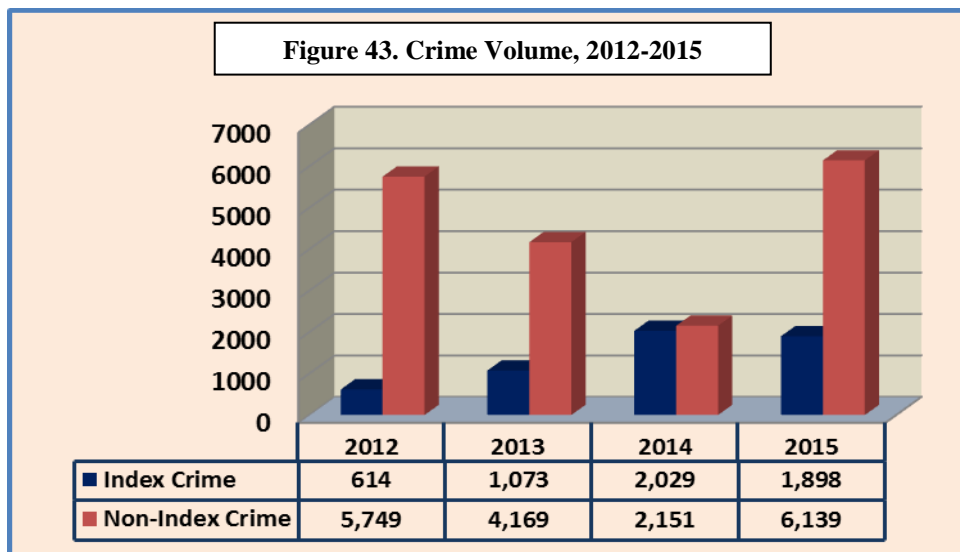




Source of Data: Philippine National Police-LUPPO



Source of Data: Philippine National Police-LUPPO



Source of Data: Philippine National Police-LUP

6.4 Utility and Infrastructure Services

6.4.1 Water and Sanitation

6.4.1.1 Water Systems

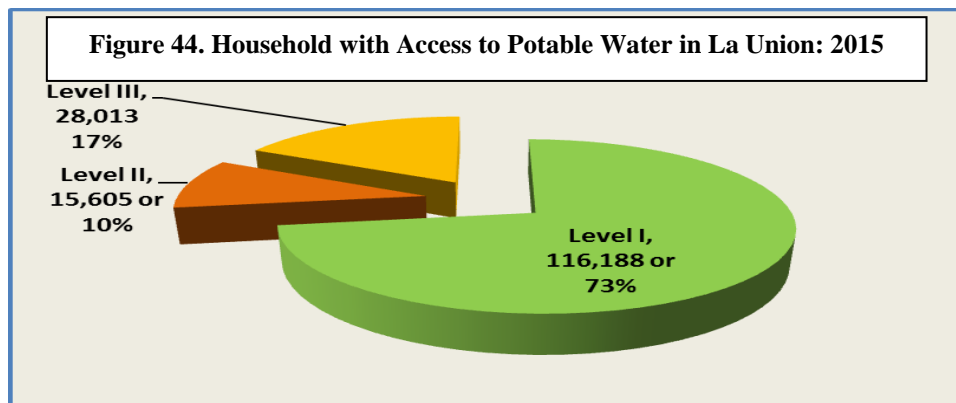
The main sources of water supply of the overall households in the province for drinking, for kitchen use or for washing clothes are: (1) shallow wells, (2) deep wells, (3) Spring Development, (4) Rain Collector.

The waterworks system operating under the Local Water Utilities Administration (LWUA) are the Metro San Fernando Water District, Balaoan Water District, Naguilian Water District, Agoo Water District and the Rosario Water District.

Main source of water distribution for the Metro San Fernando Water District is in Lon-oy, San Gabriel; the secondary source is in Cadaclan, San Fernando City. Its operational expansion includes the urban areas of the municipalities of San Fernando City, Bauang, San Juan, Bacnotan and San Gabriel as its service area. Agoo, Naguilian and Rosario Water Districts serve the urban areas of the municipalities.

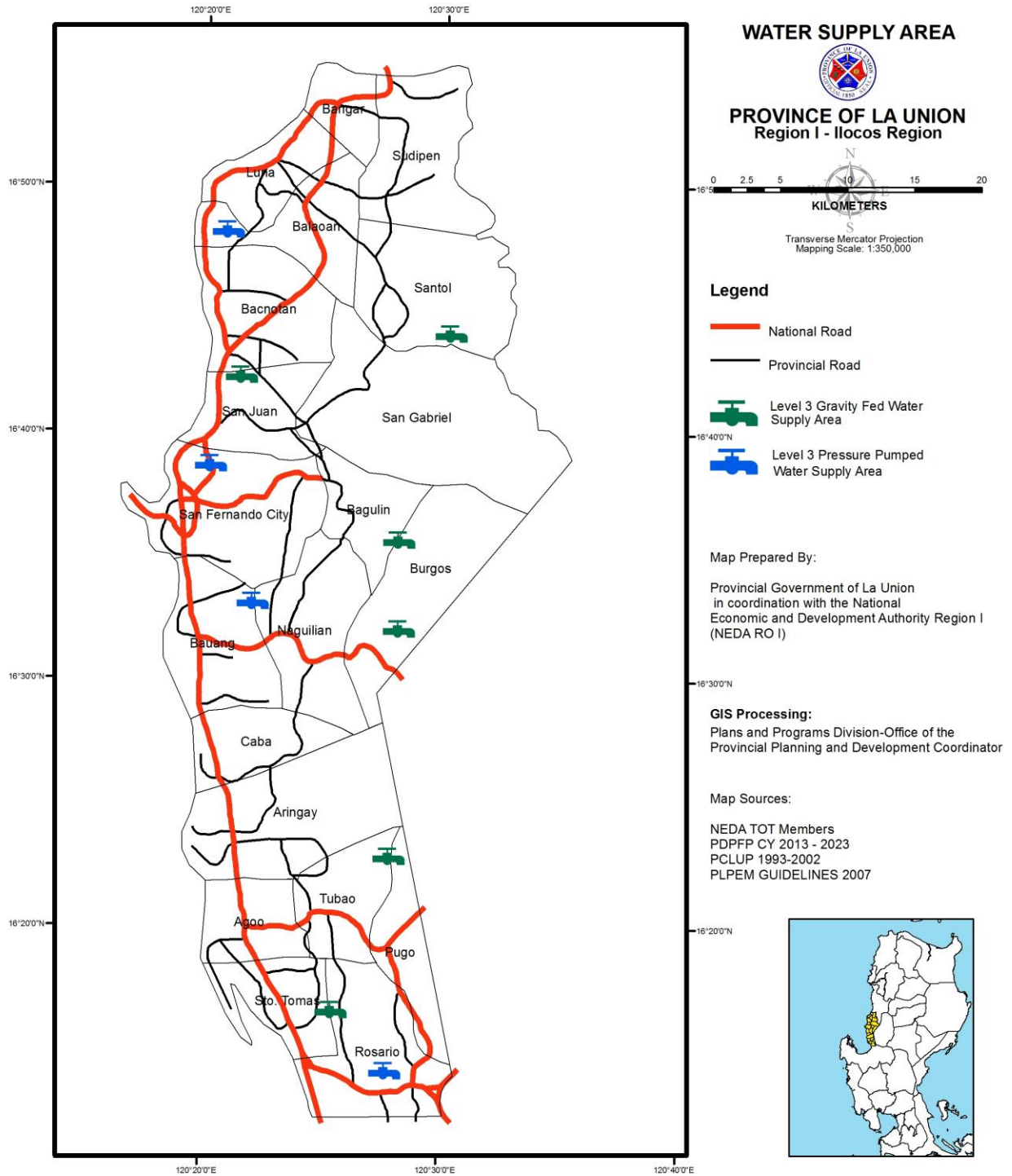
As of 2015, about 159,806 households or 95.05 percent has access to potable water supply in the province. Level I recorded a 72.71 percent or 116,188 households served, Level II at 15,605 households or 9.76 percent and Level III at 28,013 households or 17.53 percent. The municipality of Pugo of the 2nd district shows an excellent performance in the provision of potable water supply to every household with 100 percentage points while in the 1st district, the municipality of San Juan also posted a 100 percent accomplishment in the provision of potable water supply. Refer to Figures 44.

District I exceeded the provincial percentage of 97.19 versus 95.05 percent. However, the province provides jetmatic pumps to various rural areas across municipalities to further disseminate safe water to the populace.



Source of Data: Provincial Health Office

MAP NO. 51: WATER SUPPLY AREA

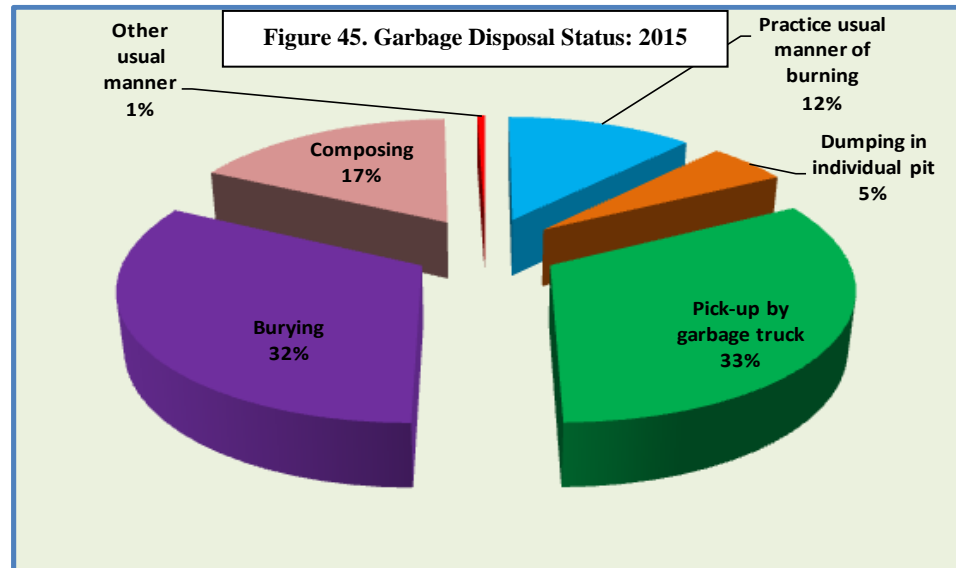


6.4.1.2 Irrigation System

Irrigation systems of the Province had a total service area of 15,090 hectares. National Irrigation System in the province had a total service area of 3,702 hectares while the Communal Irrigation System has 3,789 hectares. The Amburayan River is the main source of water in irrigating the farms in District I while NIA Masalip in Agoo serves the municipalities in the second district. However, the rainfed areas had a total of 14,161 hectares breakdown to 13,782 hectares and 379 hectares for rainfed upland-lowland, respectively. Most of the projects are classified according to their respective areas served: National Irrigation System, Communal Irrigation System, Small Water Impounding Projects Shallow Tube Wells, Small Farm Reservoir, Pumps and others. All these irrigation facilities are funded under RA 7171.

6.4.1.3 Garbage Disposal and Sanitary Toilets

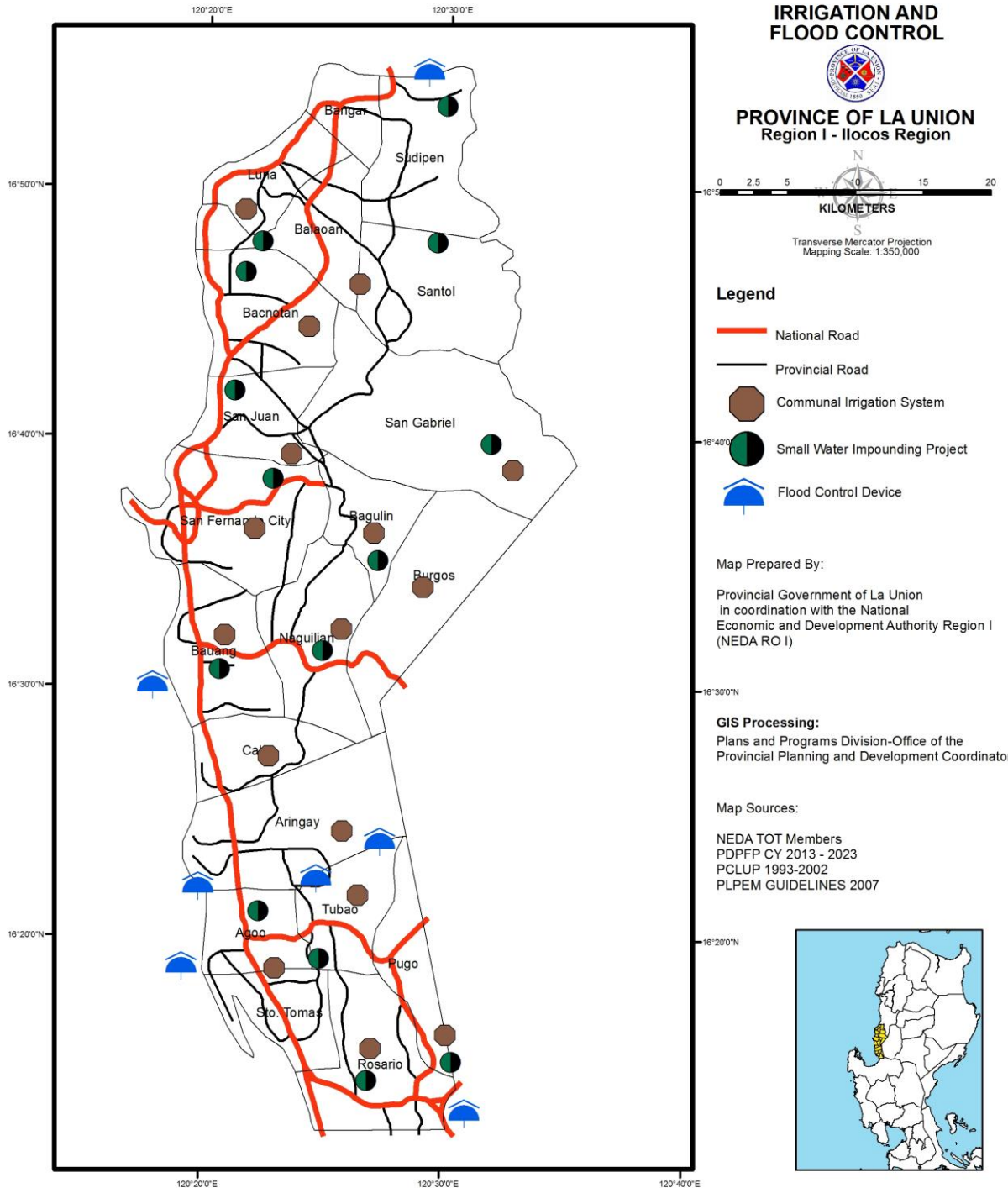
Based on CY 2015 Provincial Health Office Report, there are 168,131 households with sanitary type of garbage disposal. About 12 percent practiced the usual manner of burning, dumping in individual pit (5 percent), picked-up by garbage truck (33 percent), burying (32 percent), composing (17 percent) then later used as fertilizer, and other usual manner (1 percent) as shown in Figure 45.



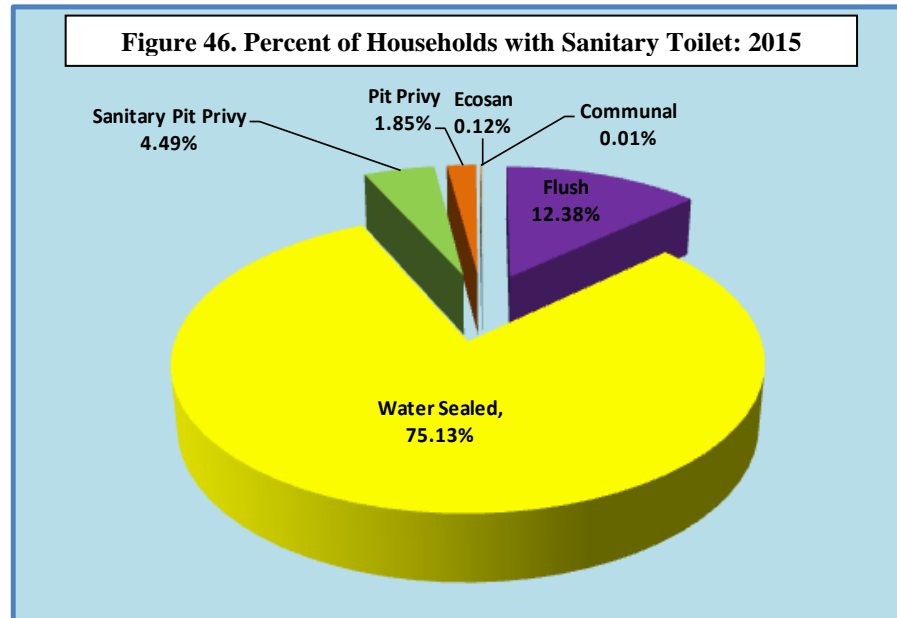
Source of Data: Provincial Health Office

As of 2015, households with satisfactory disposal of solid waste accounted 82.15 percent. District I exceeded the provincial total of 92.71 percent. The municipality of Naguilian of District II had 100 percent households with satisfactory disposal of solid waste followed by the City of San Fernando at 99.92 percent due to the presence of the San Fernando Landfill.

MAP NO. 52: IRRIGATION AND FLOOD CONTROL



Sanitation is very important to every household in the province. As per record, 79.20 percent of the households have complete sanitation facilities and 93.97 percent of the households are having sanitary toilets breakdown into: Flush = 12.38 percent, Water Sealed = 75.13 percent and Sanitary Pit Privy = 4.49 percent; pit privy = 1.85 percent. With this result, the Health in Every Home Program still extends thousands of toilet bowls to far-flung barangays to eventually observe sanitary environment as figured out below.



Source of Data: Provincial Health Office

6.4.2 Power

The province of La Union is 100% energized courtesy of LUECO and LUELCO having GRID as their main source of power.

TABLE 55. STATUS OF ELECTRIFICATION UNDER LUELCO AND LUECO, BY MUNICIPALITY/CITY: 2015						
DISTRICT/ MUNICIPALITY/ CITY	NUMBER OF BARANGAYS			HOUSEHOLD CONNECTIONS		
	NUMBER OF BARANGAYS	NUMBER OF BARANGAYS ENERGIZED/ COVERED		POTENTIAL	ACTUAL	%
		LUECO	LUELCO			
DISTRICT I	299	56	252	88,894	74,682	84
BACNOTAN	47		47	9,769	9,886	101
BALAOAN	36		36	8,488	7,453	88
BANGAR	33		33	8,565	7,197	84
LUNA	40		40	8,781	7,564	86
SAN FERNANDO CITY	59	45	15	30,588	26,676	87
SAN GABRIEL	15		15	3,127	2,792	89
SAN JUAN /2	41	11	38	13,691	7,645	56
SANTOL	11		11	2,040	2,001	98
SUDIPEN	17		17	3,845	3,468	90
DISTRICT II	277	33	254	95,461	83,481	87
AGOO	49		49	14,468	14,423	100
ARINGAY	24		24	10,717	10,038	94
BAGULIN	10		10	2,094	1,743	83
BAUANG /1	39	33	16	21,461	14,423	67
BURGOS	12		12	1,468	1,403	96
CABA	17		17	5,170	4,984	96
NAGUILIAN	37		37	11,287	10,210	90
PUGO	14		14	3,693	3,599	98
ROSARIO	33		33	11,552	9,767	85
STO. TOMAS	24		24	7,478	7,175	96
TUBAO	18		18	6,073	5,716	94
LA UNION	576	89	506	184,355	158,163	86

NOTE: 1/ There are 11 barangays which are covered both by LUECO and LUELCO

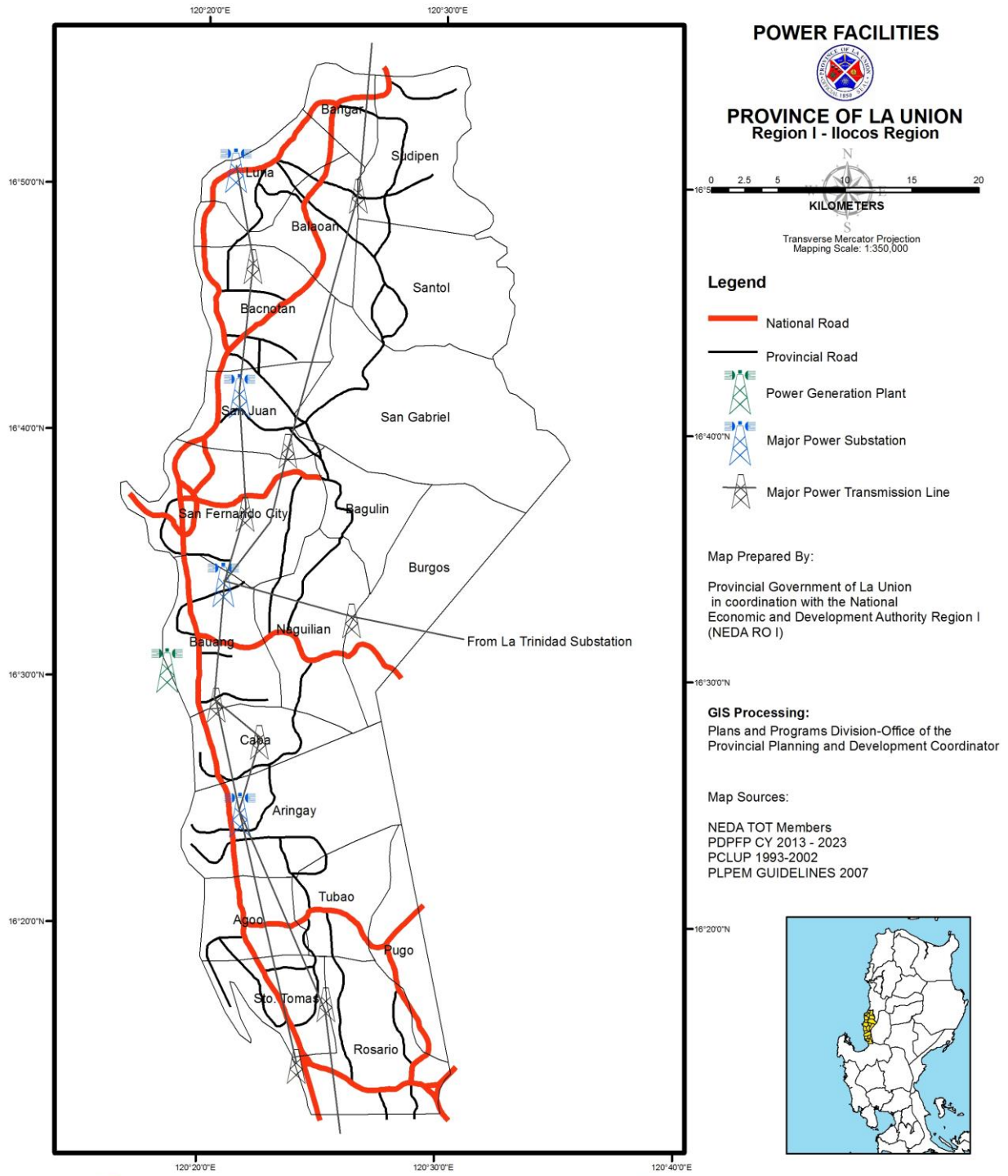
2/ There are 7 barangays which are covered both by LUECO and LUELCO

Source of Data: La Union Electric Company and La Union Electric Cooperative

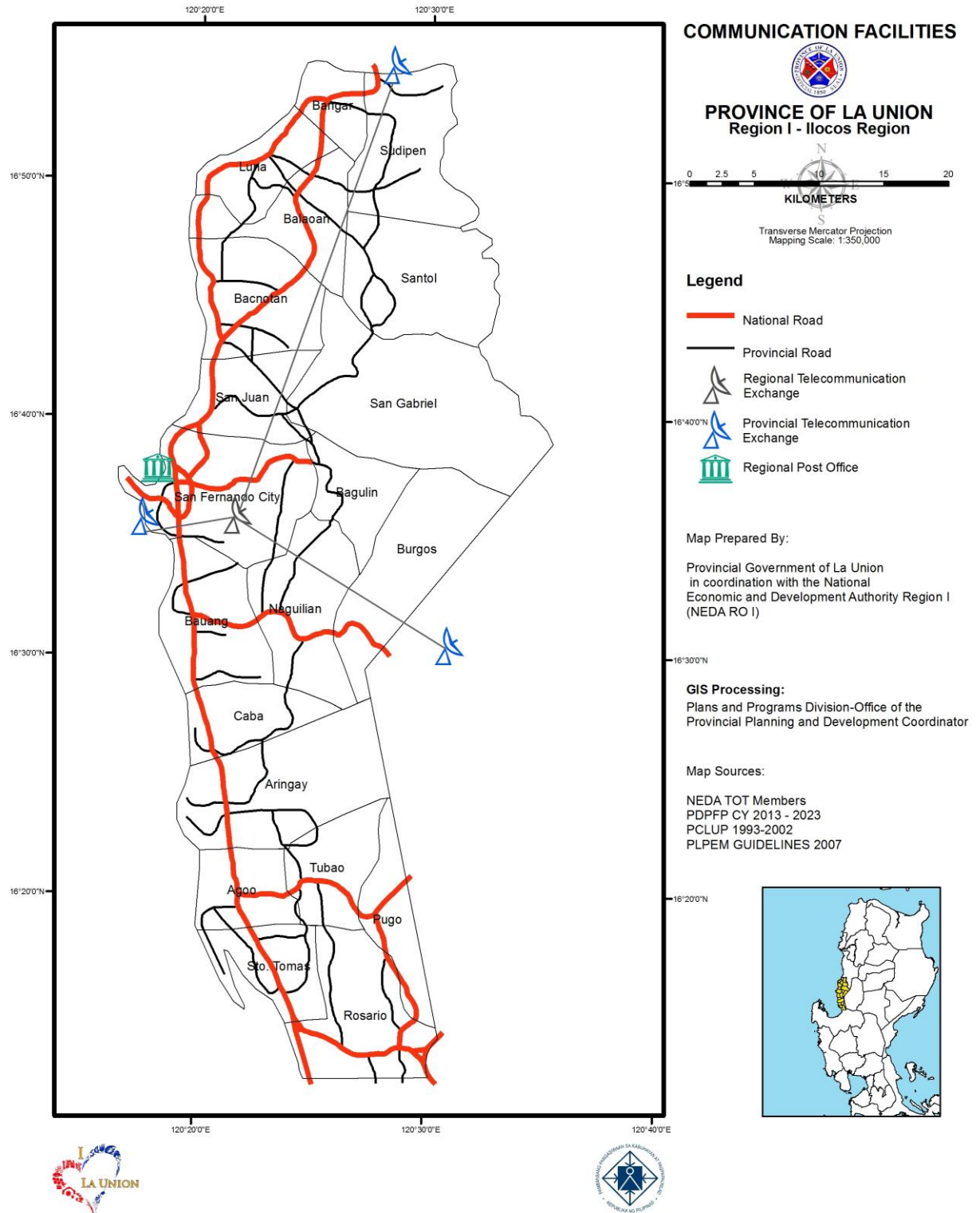
6.4.3 Communication Facilities

Telecommunications were provided largely by the private sectors such as telephone, telegraph and radios, etc. Eight municipalities from District I were covered by PLDT (Bacnotan, Balaoan, Bangar, Luna, City of San Fernando, San Gabriel, San Juan and Sudipen) while seven (7) from District II (Agoon, Aringay, Bauang, Caba, Naguilian, Rosario and Tubao) and the rest of the same district were covered by NOTELCO, others are supported by cellphone companies like SMART, GLOBE, and SUN CELLULAR.

MAP NO. 54: POWER FACILITIES



MAP NO. 55: COMMUNICATION FACILITIES



There are 24,127 telephone connections in almost all of the municipalities of La Union except those upland areas such as Santol, Burgos, Bagulin and Pugo along with coastal municipality of Sto. Tomas.

Postal Communication mail volume increases to 51 percent from 1,075,099 in 2013 to 1,621,964 in 2015 with a monthly average volume of 89,592 to 135,164, respectively even though the presence of information communication technology worldwide.

The province has ten (10) radio stations including the Voice of America (VOA) relay station. These are located in Agoos and the City of San Fernando.

Local community papers in the province are the Ilocos Herald, Ilocandia Express, North Tribune, Norluzonian Courier, Ilocandia Inquirer, Diaryo, etc. These newspapers, foreign periodicals and magazines are also available in the province daily. The provincial government has its own official publishers called the “Baro a TIMEK ITI KAPITOLYO” comes out quarterly for the general circulation to the public.

6.4.4 Other Utilities

a. Machineries and Equipment’s

The province has an existing milling equipment facility of 439 and 3,650 threshers of which District I had more than one-half or 57 percent of the provincial agri-machineries and facilities versus 44 percent from District II. These numerous milling equipment’s were scattered in all barangays. Other agri-machineries and facilities are 491 Multi-Purpose Drying Pavement (MPDP), 1 Flash Dryer located in Rosario, six (6) Palayshed, 6 Bagsakan Center, 13 Fits Center, 15 Vermicomposting facilities and 24 Warehouse/store for crops. Payloaders, Graders, Haulers, Dump Trucks and Flat Bed are available equipment’s at the provincial motorpool.

b. Store and Warehousing Facilities

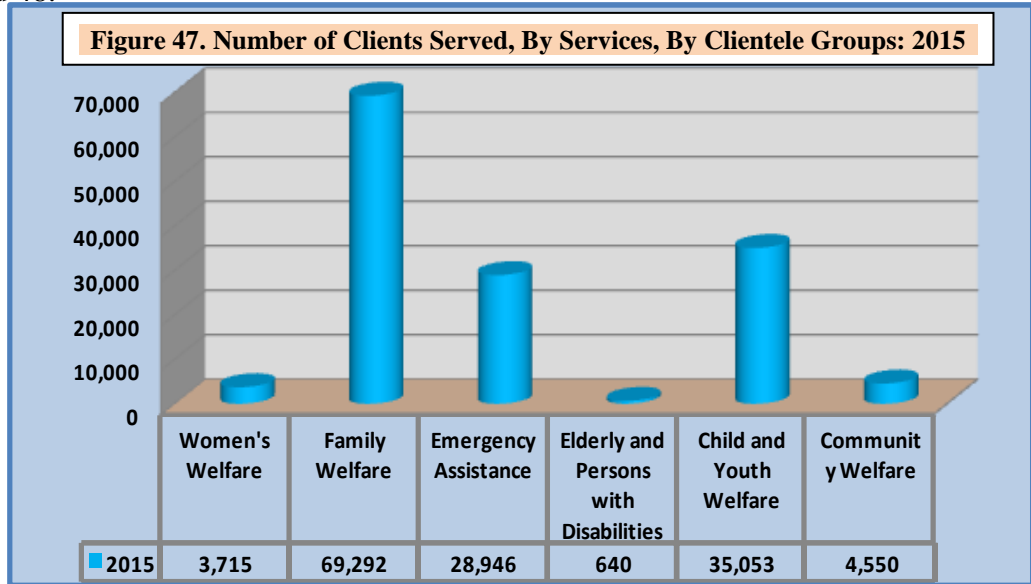
There are more stores/warehouses for crops that exist in District II with 17 compared to District I with only 7. Post Production and Processing Facilities also found in the province. Almost of these facilities are privately owned (6), government owned (1).

6.5 Other Services and Facilities

6.5.1 Services Rendered, By Kind of Services and Clients

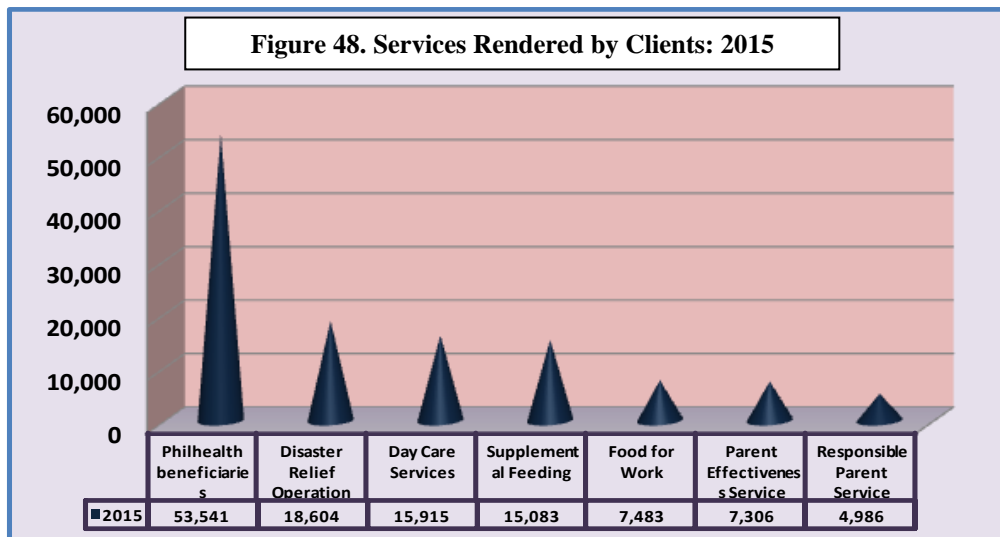
The most accessed services rendered by the province were Family Welfare to 69,272 families that include the Philhealth Insurance, followed by Child and Youth Welfare at 35,053, Emergency Assistance at 28,946, Community Welfare at 4,550, Women’s Welfare at 3,715 and the least is the Elderly and Persons with

Disabilities at 640. The same picture holds true for both districts. See Figure 47 and 48.



Source of Data: Provincial Social Welfare and Development Office

Majority of the clients assisted are Philhealth Insurance beneficiaries 53,541 followed by Disaster Relief Operation at 18,604, Day Care Services at 15,915, Supplemental Feeding at 15,083, Food for Work at 7,483, Parents Effectiveness Service at 7,306 and Responsible Parent Services at 4,986 as pictured in Figure 48.



Source of Data: Provincial Social Welfare and Development Office

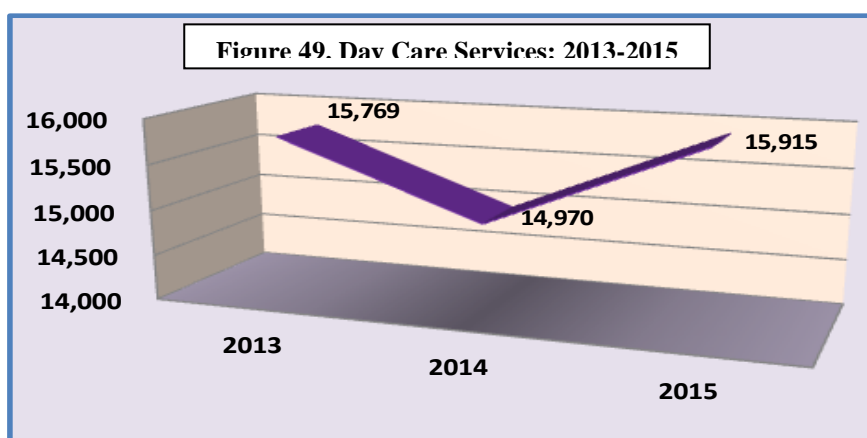
6.5.2 Day Care Services

As of 2015, a total of 598 Day Care Centers actively operates in the province compared to 569 in CY 2013 or an increase of 5 percent.

District II shared more than one-half (51 percent) of the total number of Day Care Centers versus District I at 49 percent. There are 584 day care workers (3 males and 581 females) catering 16,688 children with a ratio of 1:29. Refer to Table 56 and Figure 49.

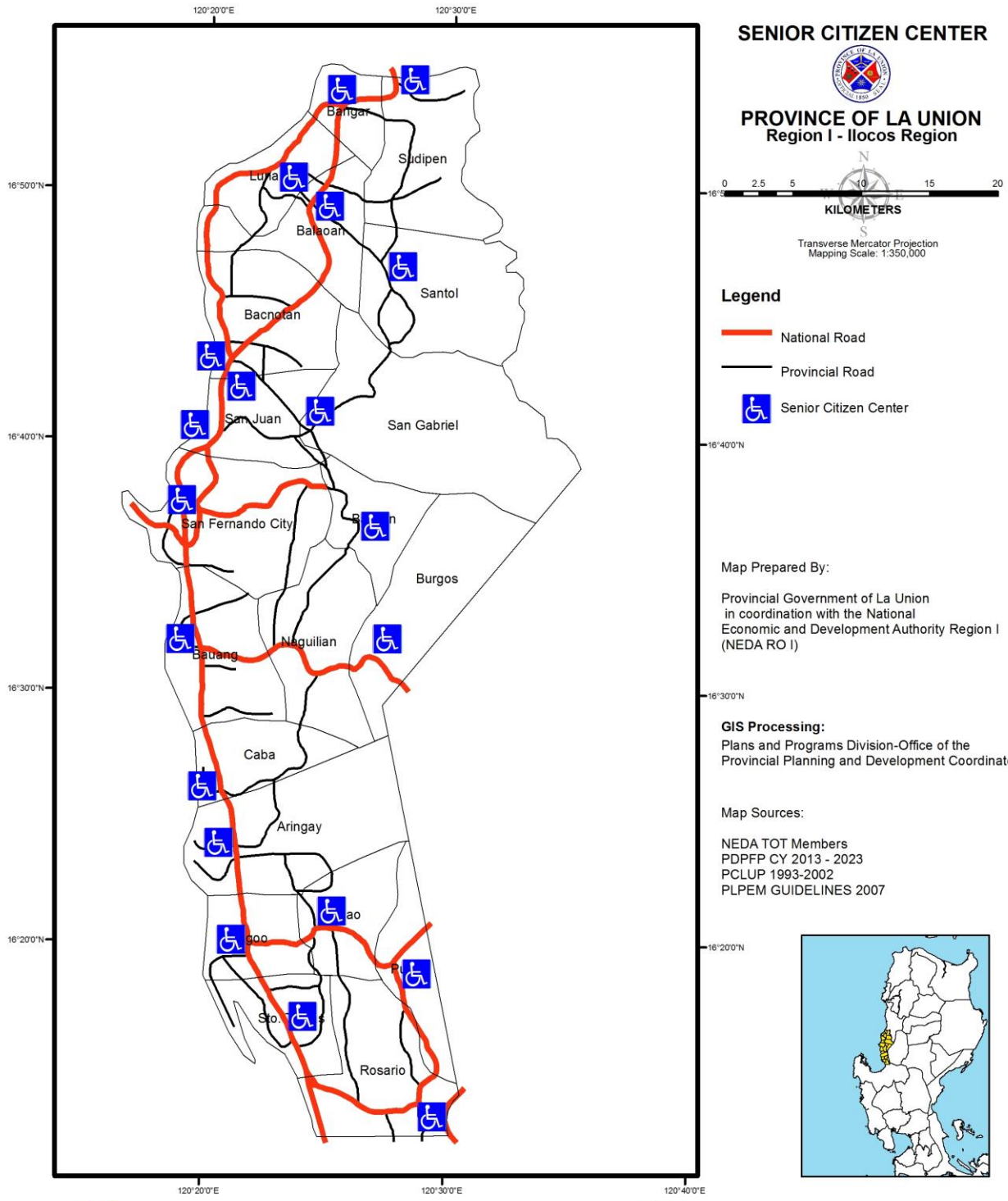
Table 56. Number of Day Care Centers, Workers and Children, By Municipality: 2015				
District/Municipality/City	No. of Barangays	No. of Day Care Center	No. of Day Care Workers	No. of Day Care Children
District I	299	296	286	7,961
Bacnotan	47	38	32	264
Balaoan	36	38	38	917
Bangar	33	28	27	750
Luna	40	30	28	726
City of San Fernando	59	67	68	2,003
San Gabriel	15	22	22	335
San Juan	41	35	36	1,599
Santol	11	20	19	427
Sudipen	17	18	18	340
District II	277	302	298	8,727
Agoo	49	53	52	1,620
Aringay	24	28	29	1,031
Bagulin	10	20	20	430
Bauang	39	40	37	1,192
Burgos	12	13	13	257
Caba	17	17	17	335
Naguilian	37	38	39	1,032
Pugo	14	20	20	416
Rosario	33	32	33	1,015
Sto. Tomas	24	19	15	622
Tubao	18	22	23	777
La Union	576	598	584	16,688

Source of Data: Provincial Social Welfare and Development Office



Source of Data: Provincial Social Welfare and Development Office

MAP NO. 56: SENIOR CITIZEN CENTER/CENTERS FOR ELDERLY



6.5.3 Disabled and Elderly Welfare Services

As of CY 2015, a total of 640 elderly and persons with disabilities were assisted by various services.

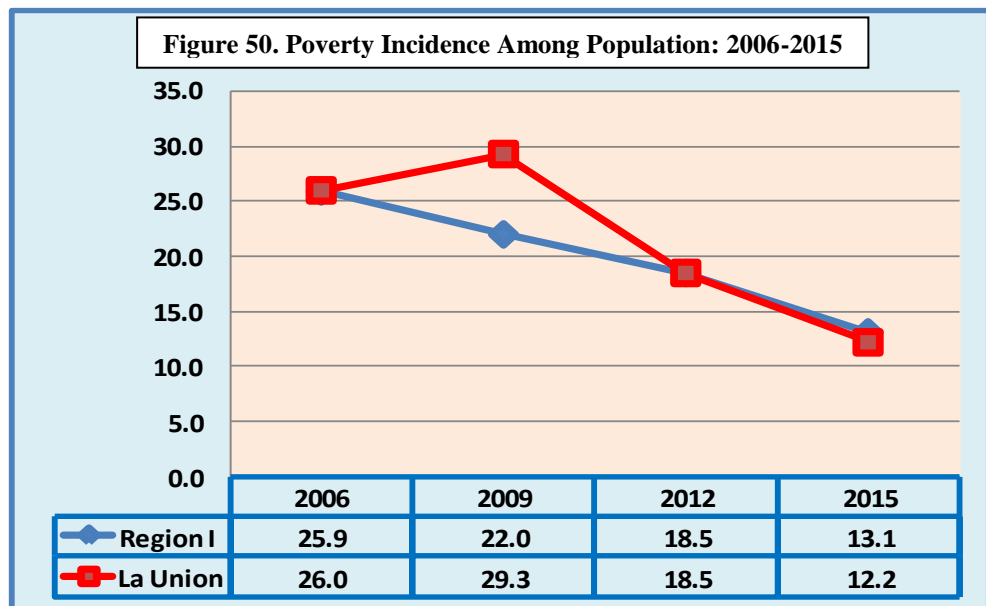
Disabled persons were also served by way of assisting them in acquiring technical aids and prophylactic services such as the operation of the stimulation and therapeutic activity center and rehabilitation centers that are strategically situated provincewide. For individual at risk, information dissemination on disability prevention was conducted. Financial assistance was awarded to handicapped/disabled groups/organizations to develop their skills and be able to participate in development.

6.6 Poverty

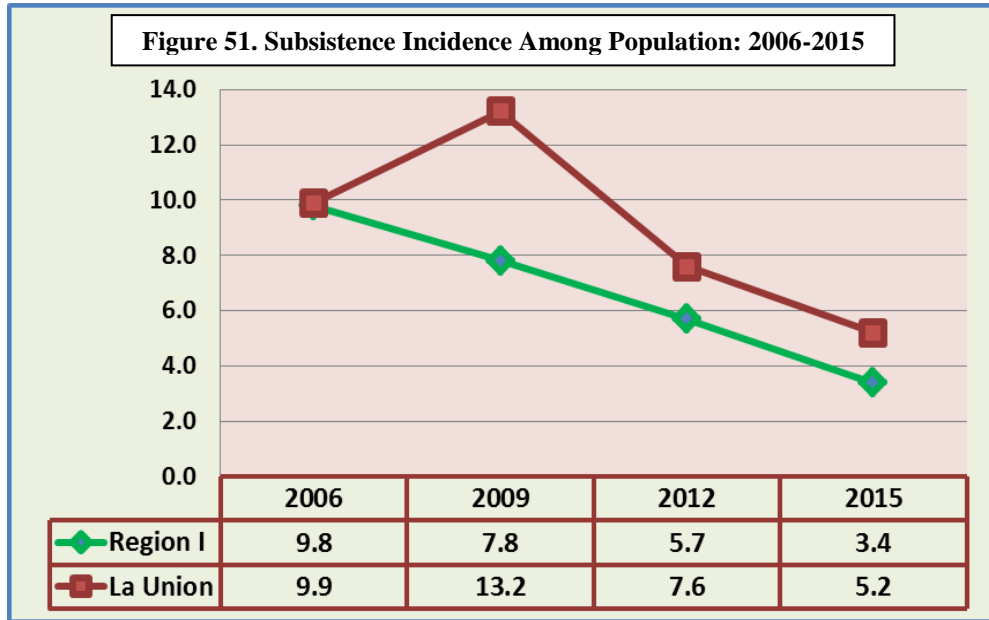
6.6.1 Poverty Incidence and Subsistence among Population

Based on the official release on poverty statistics by the Philippine Statistics Authority, the poverty incidence among population in La Union was 12.2 percent in 2015 which is lower by 0.90 percent of Region I's data of 13.1 percent. Looking on the trends of the poverty incidence among population since 2006 to 2015, result shows that in 2009 it reaches to a peak of 29.3 percent from that of the 2006 data of 26 percent, this suddenly and significantly decline to 18.5 percent or 6.30 percentage point drop from the 2012 data. Refer to Figure 50.

Subsistence incidence among population in La Union whose income fall below the food threshold was estimated at 5.2 percent in 2015. During the same period in 2006 to 2015, same scenario was noticed as shown in figure 51.



Source of Data: Philippine Statistics Authority

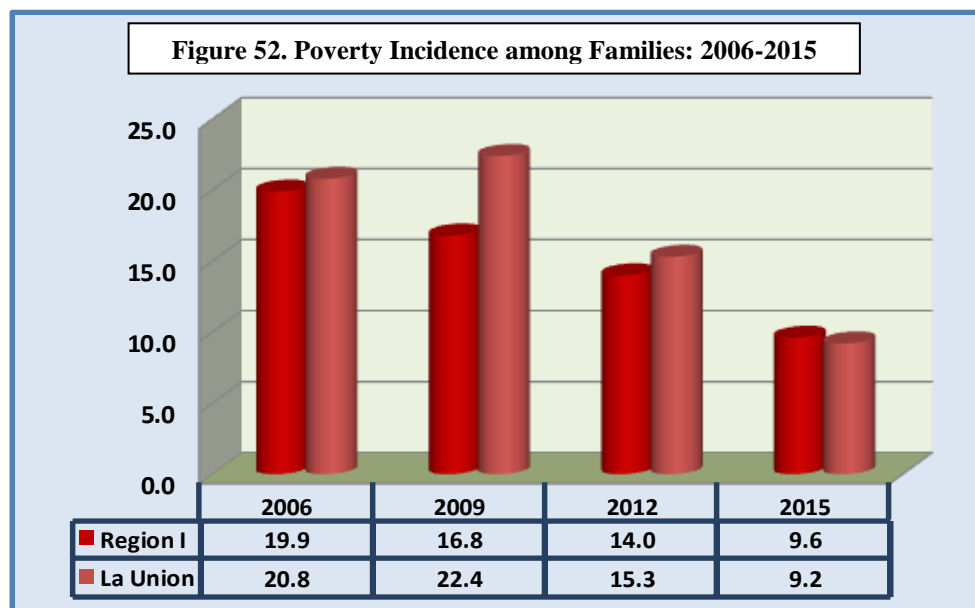


Note: Coefficient of variation of 2015 poverty incidence among families is greater than 20%

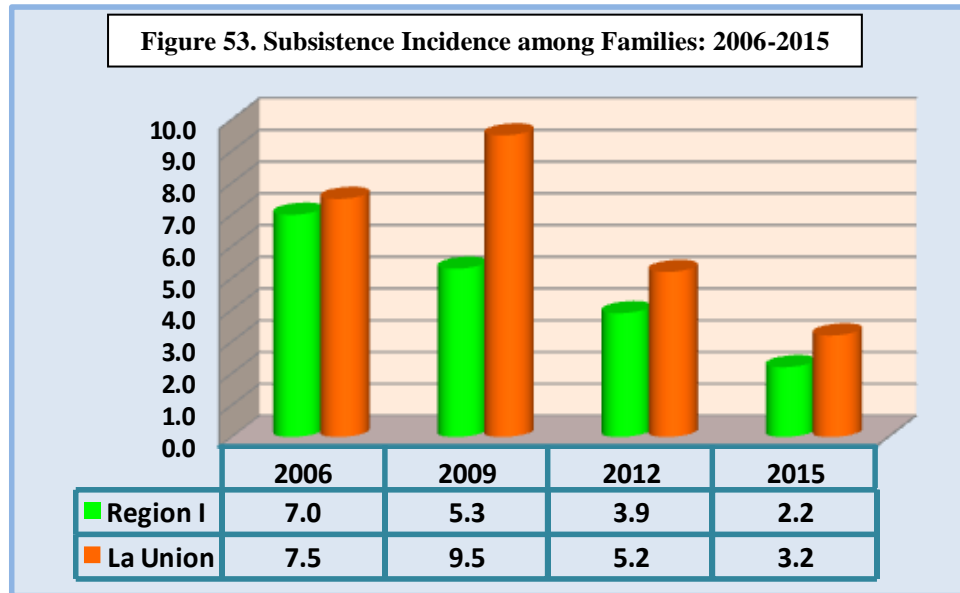
Source of Data: Philippine Statistics Authority

6.6.2 Poverty Incidence and Subsistence among Families

Between CYs 2006 and 2015, poverty incidence of families in La Union climbs in CY 2009 at 22.4 percent or close to 35,938 families and then decline to 15.3 percent in 2012 until it reaches to 9.2 percentage point drop in 2015. (See Figure 52).



Source of Data: Philippine Statistics Authority

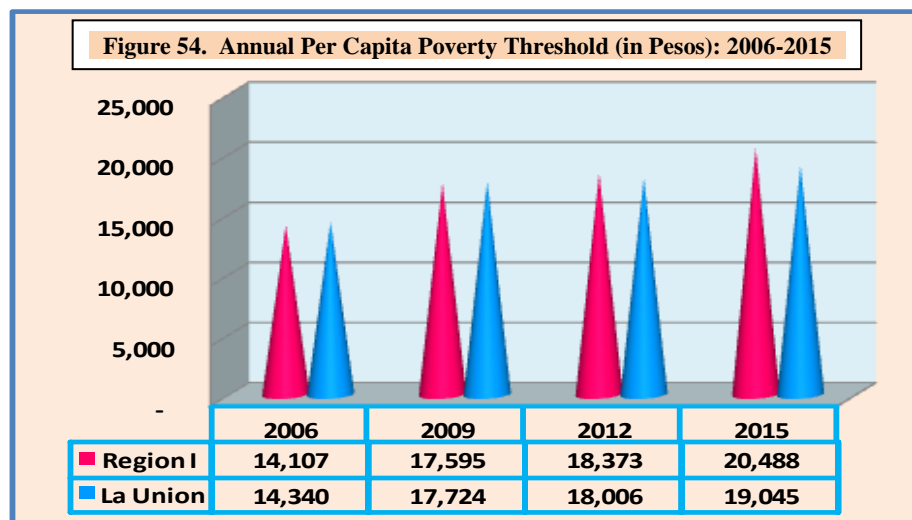


Source of Data: Philippine Statistics Authority

In terms of the subsistence incidence of families between periods 2009 to 2015, a reduction was made from 9.50 percent (15,213 families) in 2009 to 5.2 percent (8,933 families) in 2012 to 3.2 percent (7,221 families) in 2015. (See Figure 53)

6.6.3 Food and Poverty Thresholds

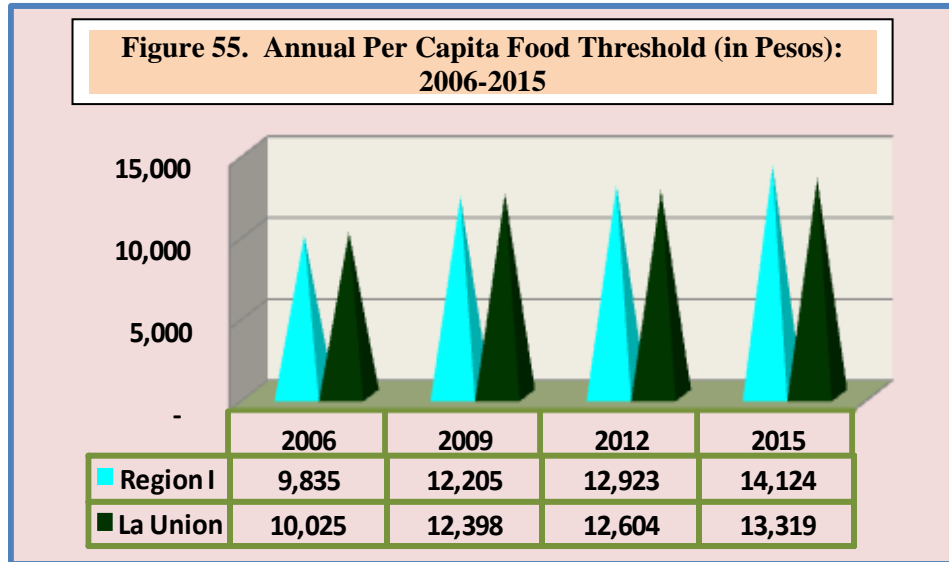
The *poverty threshold*, or *poverty line*, is the minimum level of income deemed necessary for an individual to meet its basic food and non-food requirements for an adequate standard of living. The poor are considered as those individuals or families whose incomes fall below the official poverty threshold and cannot afford to provide in a sustained manner for their minimum basic requirements. Meanwhile, the annual per capita poverty threshold, or the amount needed to meet both basic food and non-food needs of a person in La Union in 2015 was PhP 19,045.00.



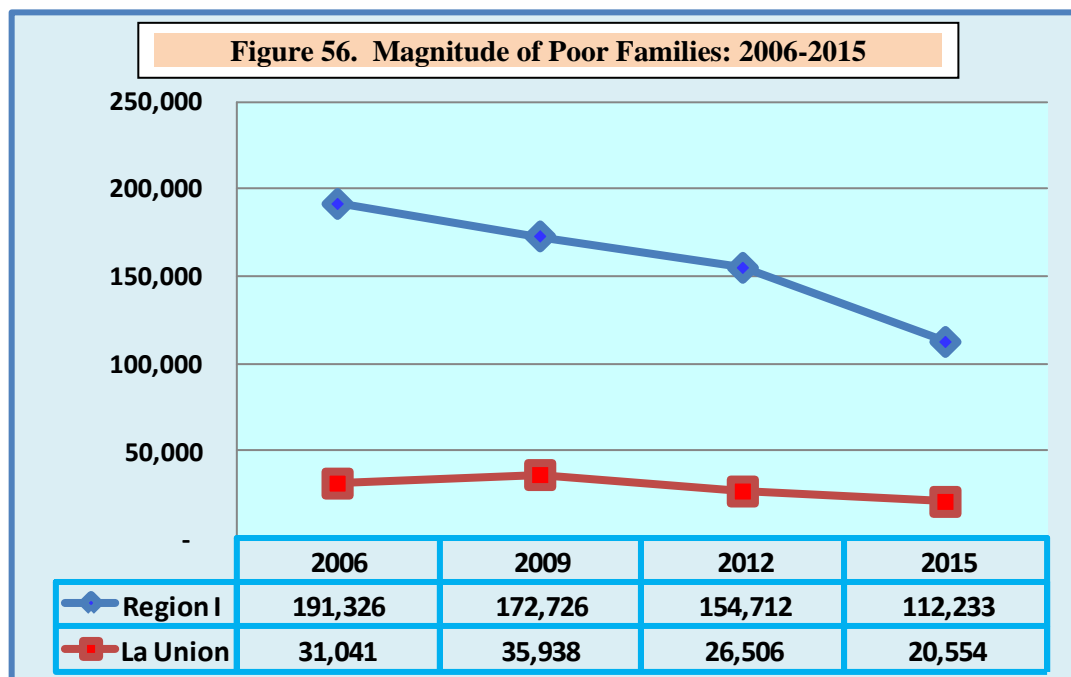
Source of Data: Philippine Statistics Authority

MAP NO. 57: POVERTY MAP

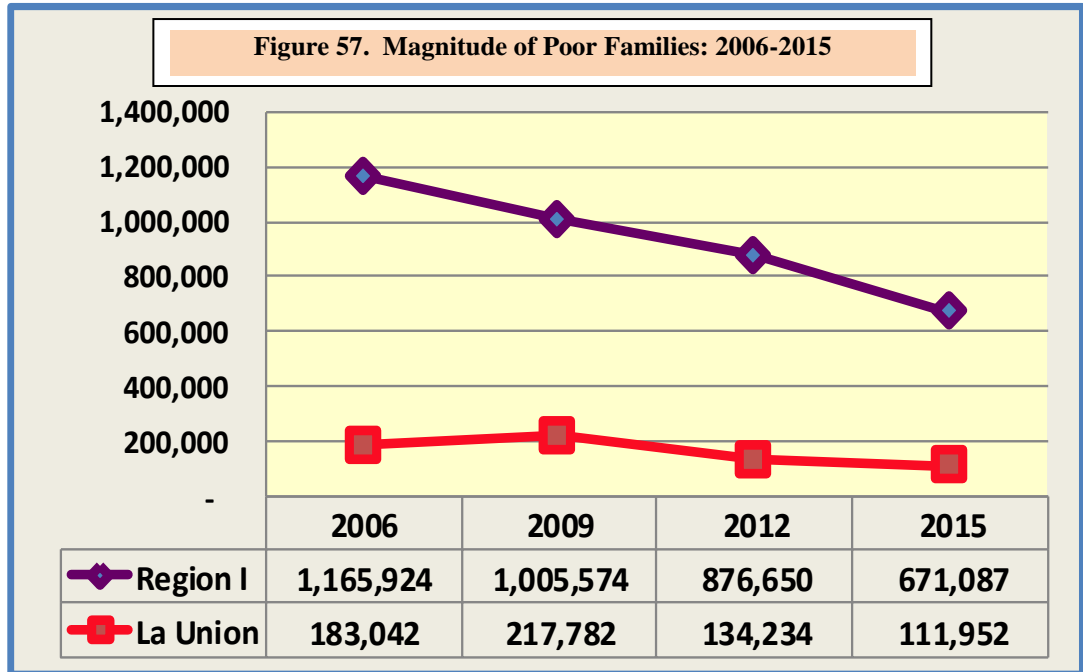
For CY 2015, a family of five (national average) needed at least PhP 5,549.60 every month to meet the family’s basic food needs or PhP 185.00 per day and at least PhP 7,935.40 every month or PhP 265.00 daily equivalence to meet both basic food and non-food needs in the province as reflected in Figure 55 and 56).



Source of Data: Philippine Statistics Authority

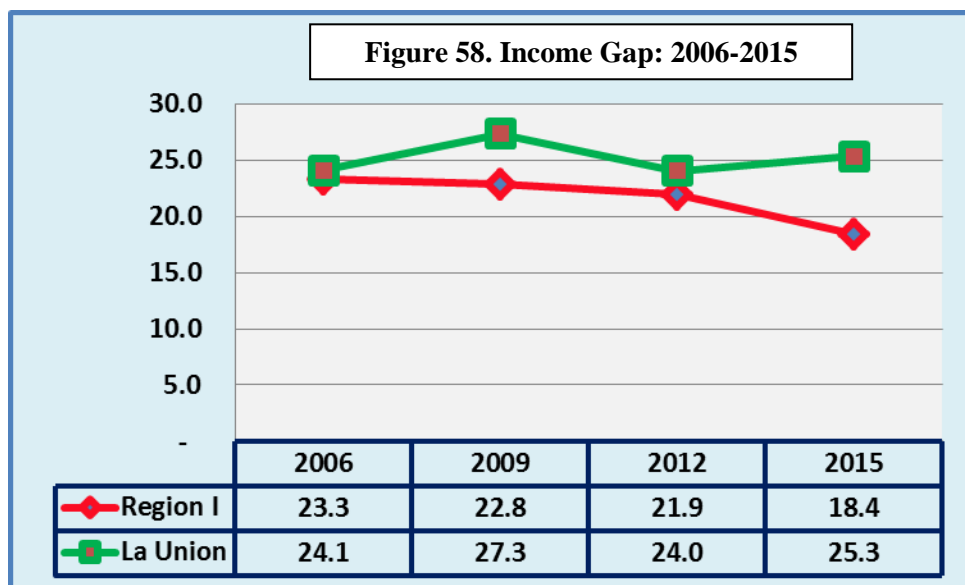


Source of Data: Philippine Statistics Authority

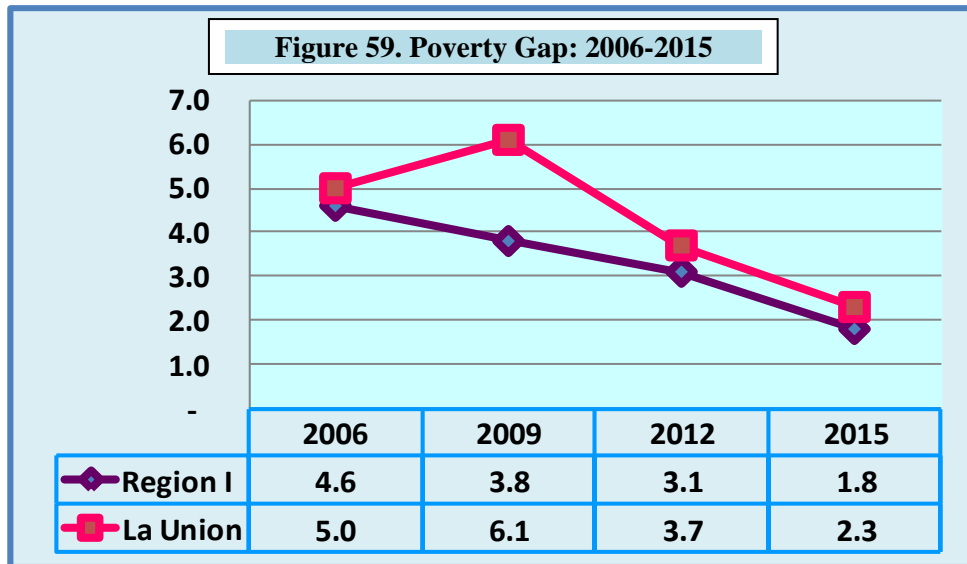


6.6.4 Income Gap, Poverty Gap and Severity of Poverty

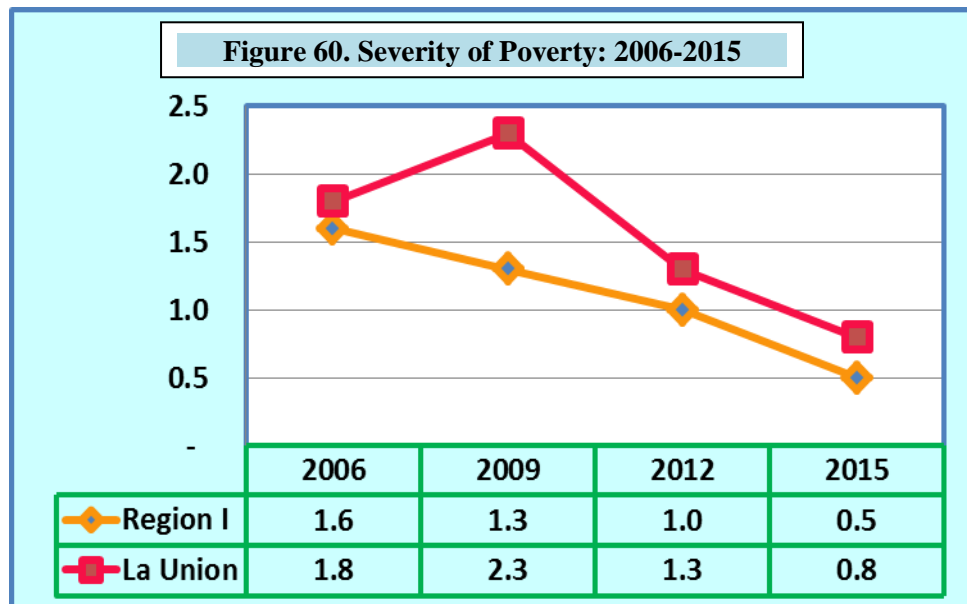
As of CY 2015, La Union has an Income Gap of 25.3 percent which is higher than the Region’s income gap of 18.4 percent as well as the Philippines data of 24.6 and the highest among the provinces. Thus, income gap refers to the average income shortfall (expressed in proportion to the poverty line) of families with income below the poverty threshold. Poverty Gap of the province shows same scenario as illustrated in figure 58, 59 and 60. However, the poverty gap of the province resulted at 2.3 percentage points which is 0.50 percent higher than the region and a greater total income shortfall of families with income below the poverty threshold among the provinces.



Source of Data: Philippine Statistics Authority



Poverty Gap is the total income shortfall (expressed in proportion to the poverty line) of families with income below the poverty threshold divided by the total number of families.



Source of Data: Philippine Statistics Authority

Severity of poverty is the total of the squared income shortfall (expressed in proportion to the poverty line) of families with income below the poverty threshold, divided by the total number of families. This is equal to the Foster-Greer-Thorbecke (FGT) family of measures with $a=2$. It is a poverty measure which is sensitive to the income distribution among the poor- the worse this distribution is the more severe poverty is.

7. LAND USE OF PHYSICAL FRAMEWORK

7.1 Existing Land Use, Trends and Potential Expansion

7.1.1 Existing Land Use

7.1.1.1 Agricultural Areas

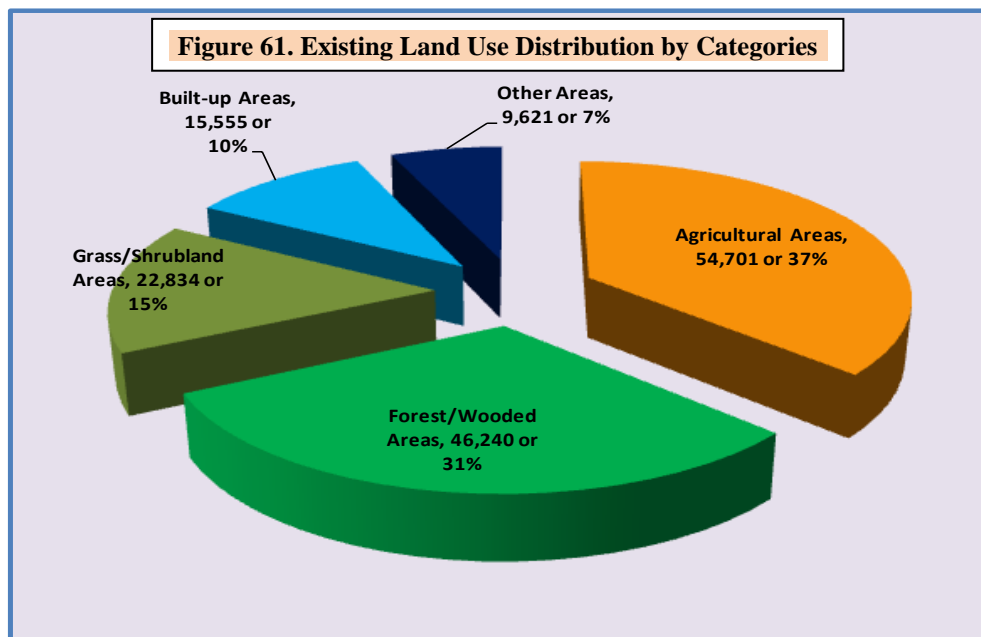
Agricultural areas cover 54,701 hectares or 36.64 percent of the total area. The western side under broad alluvial plains, valleys and along the hills and mountains under this category. The eastern part covering the municipalities of Bagulin, Naguilian and Rosario are rice terraces. Irrigated Riceland exist on the low lying areas of Bangar, Balaoan, Agoo and Rosario while non-irrigated ricelands are seen on the flat alluvial plain, valley and river terrain within the different municipalities.

7.1.1.2 Grassland/Shrubland Areas

This category is predominantly covered with cogon and different species of shrubs within an area of 22,834 hectares or 15.59 percent of the total land area. Grasses and shrubs cover mostly the sedimentary hills and mountains except on higher elevation having steep to very steep slopes.

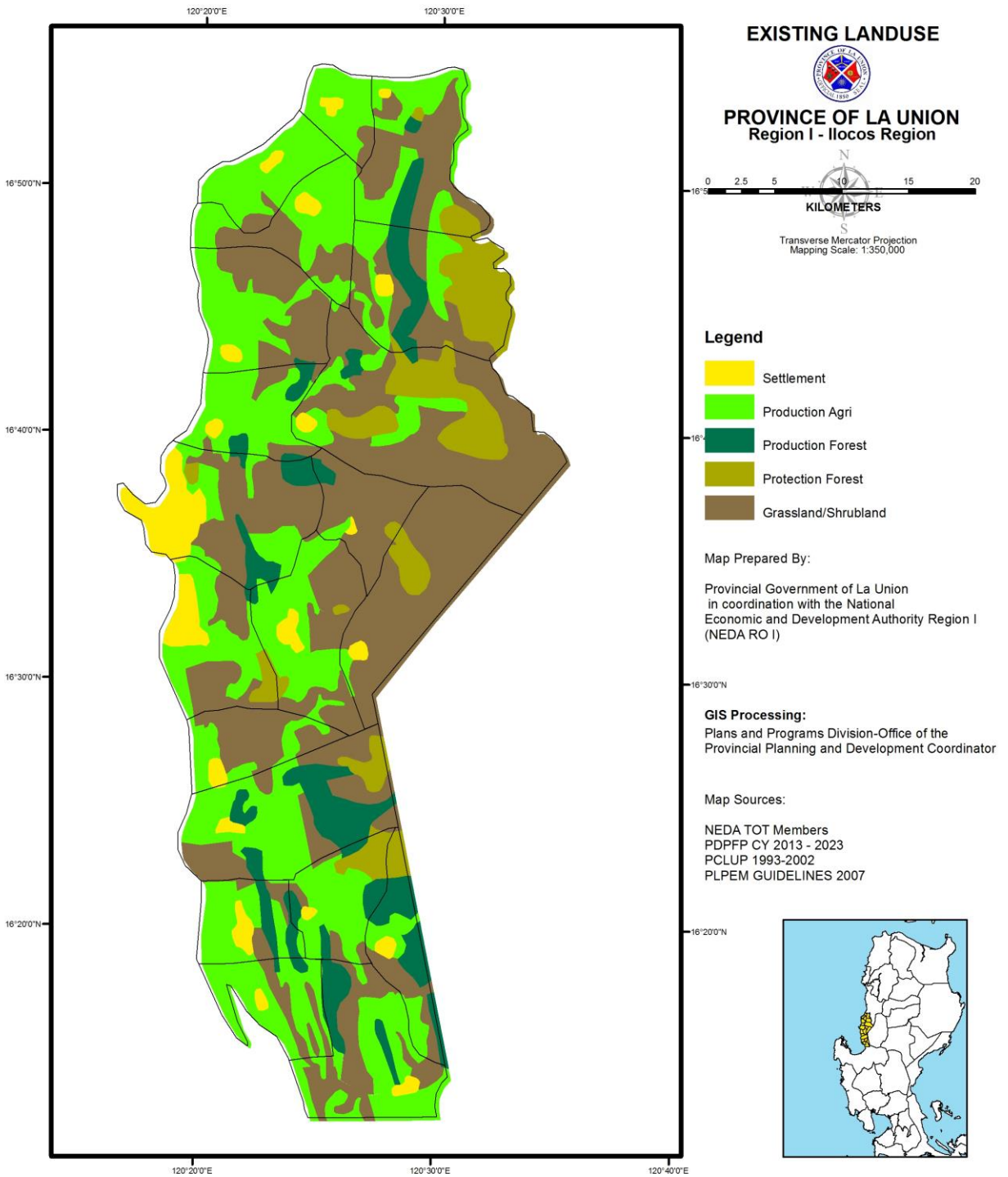
7.1.1.3 Forest/Wooded Areas

This area occupies 46,598 hectares or 31.21 percent of the total land area. This area is covered with different forest species at the highest portion of mountain ranges near the boundary of Ilocos Sur and Benguet province.

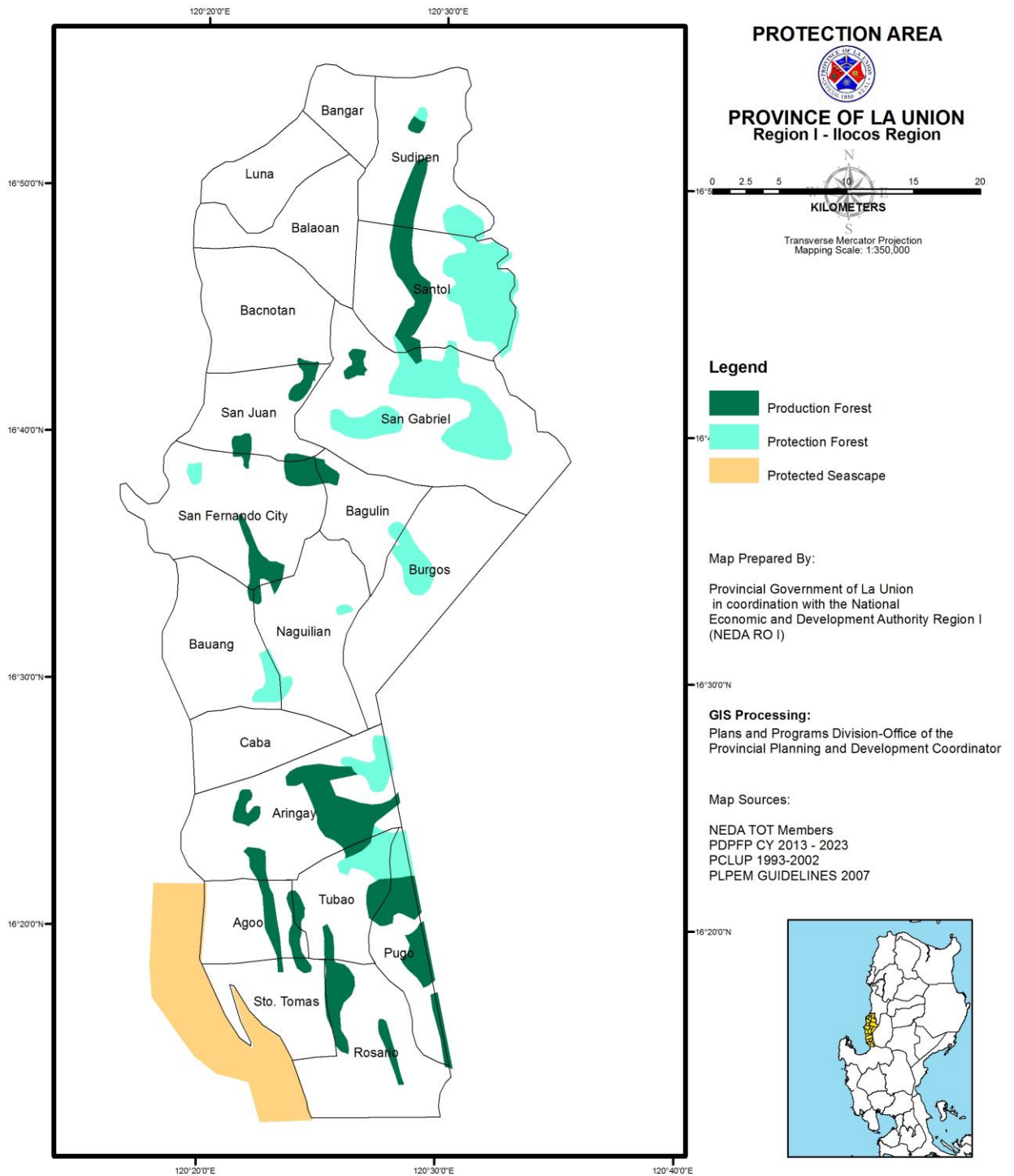


Source of Data: DENR RO-I

MAP NO. 58: EXISTING LAND USE



MAP NO. 59: PROTECTION AREA



7.1.1.4 Other Areas

These areas are purposely for beach sand, river wash of prominent rivers and for aqua-culture either brackish or fresh water. It covers an area of 9,621 hectares or 6.44 percent of the total area.

7.1.1.5 Built-up Areas

These areas are those classified as residential, commercial, institutional and industrial parks and recreation centers. These areas occupy 15,555 hectares or 10.42 percent of the total area. It is observed that built-up areas are located mostly along the province road network. Settlement continued to arise in patches within protected areas. The increase in population and the proposed development in the area attributed to the expansion of settlement, industrial and commercial activities in the province (See Map No. 58: Existing Land Use and Map No. 59: Protection Area Map).

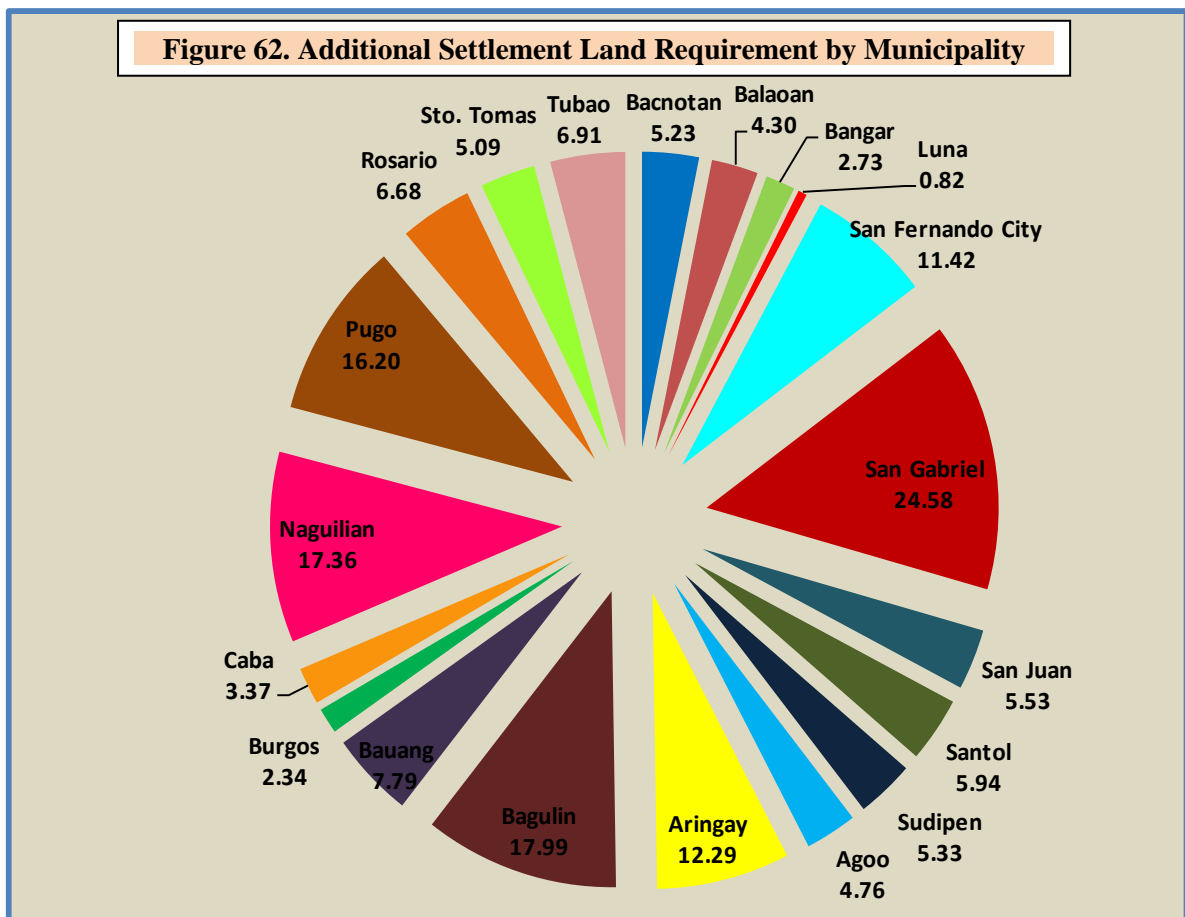
District/ Municipality/ City	Population							Additional Settlement Land Requirement (S) sq.km.	
	2010	2015	2020	Increase 2015-2020 (P 2010)	Increase 2020-2010 (P2020)	Density 2015 (D)	Density 2020 (D)	P/D=S	
								CY 2015	CY 2020
District I	343,346	359,719	376,127	16,373	32,781	513	537	31.92	61.04
Bacnotan	40,307	42,078	43,835	1,771	3,528	647	674	2.74	5.23
Balaoan	37,910	39,188	40,444	1,278	2,534	570	589	2.24	4.30
Bangar	34,522	35,947	37,357	1,425	2,835	997	1,037	1.43	2.73
Luna	35,380	35,802	36,208	422	828	798	1,005	0.42	0.82
San Fdo City	114,963	121,812	128,707	6,849	13,744	1,140	1,204	6.01	11.42
San Gabriel	16,628	18,172	19,774	1,544	3,146	117	128	13.20	24.58
San Juan	35,098	37,188	39,292	2,090	4,194	717	758	2.91	5.53
Santol	12,007	12,476	12,939	469	932	151	157	3.11	5.94
Sudipen	16,531	17,056	17,571	525	1,040	190	195	2.76	5.33
District II	398,560	426,934	456,235	28,374	57,675	539	576	52.64	100.13
Agoo	60,596	63,692	66,785	3,096	6,189	1,240	1,301	2.50	4.76
Aringay	44,949	47,458	49,975	2,509	5,026	389	409	6.45	12.29
Bagulin	12,590	13,456	14,335	866	1,745	91	97	9.52	17.99
Bauang	70,735	75,032	79,363	4,297	8,628	1,048	1,108	4.10	7.79
Burgos	7,850	8,067	8,279	217	429	179	183	1.21	2.34
Caba	21,244	22,039	22,823	795	1,579	453	469	1.75	3.37
Naguilian	48,407	54,221	60,400	5,814	11,993	620	691	9.38	17.36
Pugo	16,518	19,690	23,272	3,172	6,754	353	417	8.99	16.20
Rosario	52,679	55,958	58,238	3,279	5,559	792	832	4.14	6.68
Sto. Tomas	35,999	39,092	42,281	3,093	6,282	1,206	1,235	2.56	5.09
Tubao	26,993	28,729	30,484	1,736	3,491	476	505	3.65	6.91
La Union	741,906	786,653	832,362	44,747	90,456	527	557	84.91	162.40

7.2 Demands for Expansion Area

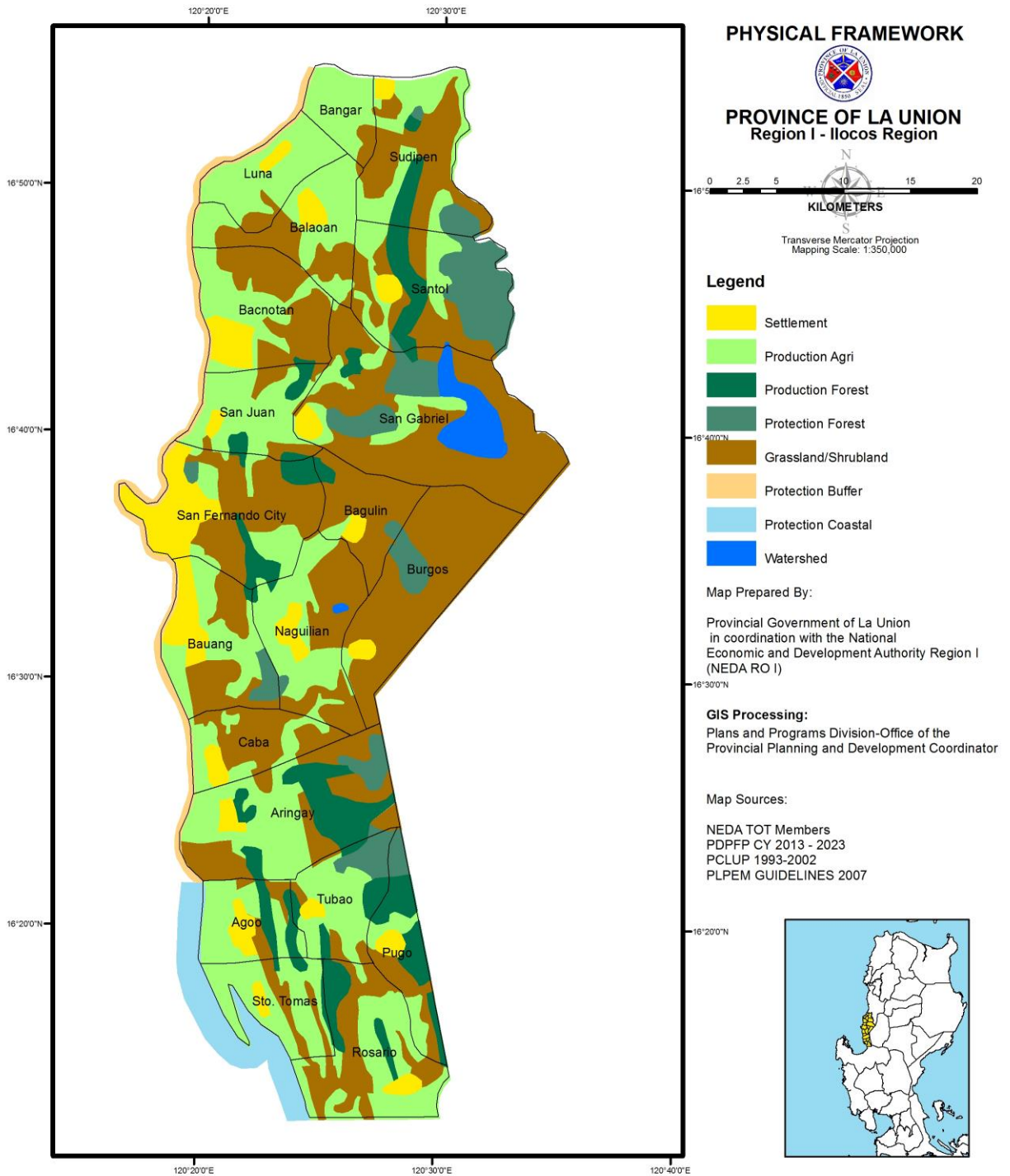
Projected demand on land requirement is based on the population growth and the area's population density. In highly urbanized areas like the City of San Fernando, the municipalities of Bauang and Luna have low demand owing to its high density (number of persons per unit area).

For municipalities with lower population density and with a wide area, would need a wider area for every population increase as in the case of Bagulin.

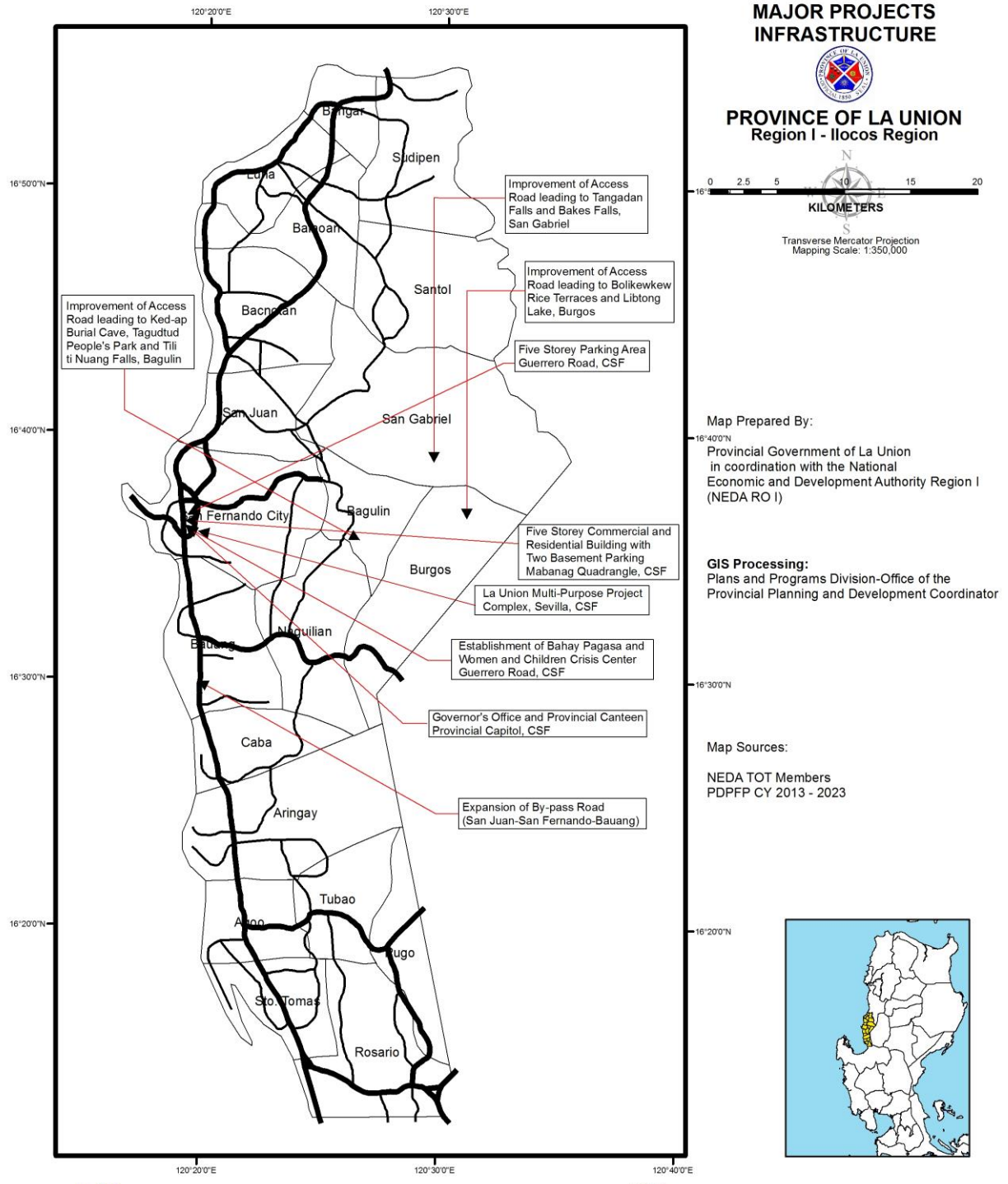
The total expansion area for the year 2015 is 84.91 square kilometers and almost double by the year 2020 and is 162.40 square kilometers. (Please see Table 59 and Map 60: Physical Framework Map.)



MAP NO. 60: PHYSICAL FRAMEWORK



MAP NO. 61: MAJOR PROJECTS



8.2 DEVELOPMENT GOALS, ISSUES & CONCERNS, PROGRAMS AND PROJECTS

8.2.1 FINANCIAL ADMINISTRATION OR GOOD FINANCIAL HOUSEKEEPING

Office/Department: Office of the Provincial Administrator

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
1. Need to expand Voc-Tech Training for Jobs Program at Barangay Levels	PGLU Technology & Customized Livelihood Development Mobile Truck Training Equipment and Facility in partnership with TESDA and private proponent.
2. Need to reduce/save electric expenses.	PGLU Buildings-Rooftops Solar Power System Project of 7,950 sq. meters or 2,800 solar panels for 700 KW via PPP
3. Capacitation of Planning Officers on Program/Project Management	Tasking/creation of TWG or Ad-Hoc Committee and feedback mechanisms system as needed
4. Peace and Order	Search for Drug-free City/Municipality

Office/Department: OPG – Management Information Systems Division

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Need to connect with offsite offices, district/provincial hospitals and component LGUs	Installation Wide Area Network (WAN) covering the 19 municipalities and 1 city of the province.
MISD lack of technical positions to handle technical functions	Creation of technical positions suited for MISD personnel's job descriptions.
Staffs lack technical trainings	Technical training courses for MISD personnel.
Provincial Capitol prone to lightning strikes	Intensifying the lightning protection system of Provincial Capitol and other lightning prone areas. Procurement of surge suppressors.
Poor AVP equipment for outdoor events and areas not suited for the use of projectors.	Procurement of LED monitor and LED truck
Inadequate and outdated IT equipment	Procurement of new and modernizing of obsolete IT equipment
Unlicensed software being utilized PGLU wide	Software Licensing and registration
Slow internet connectivity	Subscribing to a dedicated internet connection
Poor back-up facility	Subscription to cloud service for the offsite back-up
Poor Citizens' Charter Information System	Modernize the Information system to not only cater the Citizens' Charter but also important issues like disaster risk management.
Some AIP projects are not supportive of the New Administration's Vision.	Launching/ promotion of Online Job Application to colleges and universities
MISD lack of technical positions to handle technical functions	Ordinance preparation Budget Proposal Preparation Hiring of Staffs involved
Lacks of information and proper training to handle knowledge management	Training on KM Training on Records Management
Staffs lack technical training	Passing an Ordinance for the partnership MOA Signing Setting-up of training courses Attendance to trainings

Institutionalize a robust provincial knowledge management system	A Provincial knowledge system shall be installed in the province to ensure efficient and effective data 2019: Establish KM system and organizational structure plan 2022: Cascade agri-tourism data integration among LGUs 2025: Enable best practice sharing and data integration on the other aspects of government on LGUs
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Office/Department: Office of the Provincial Accountant

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
1. Electronic Philippine Public Sector Accounting Standards (e-PPSAS) Accounting System	a) Take charge of both the accounting and internal audit services of the local government unit b) To install, discharge and maintain an effective accounting and internal control system in the Provincial Government ensuring all resources are utilized in conformity with laws, policies, e-NGAS, and are safeguard against loss, wastage and misuse. c) To report on the financial position and the results of operation of the Provincial Government for the information of all agencies, officials and officers concerned.
	d) To establish financial data concerning past operations and present condition as managerial guide for future operations

	<p>e) To regulate the process of bookkeeping undertaking analysis of accounts, recording, classifying , summarizing and interpreting the results thereof for all transactions involving receipt and disposition of public funds and properties</p> <p>f) Seal of Good Local Governance</p>
2. Slow response of database payroll system	<p>Prepare statements of cash advances , liquidation, salaries, allowances , reimbursements and remittances pertaining to the local government unit</p>
Electronic Philippine Public Sector Accounting Standards (e-PPSAS) Accounting System	<p>Conduct trainings by COA on Electronic Philippine Public Sector Accounting Standards (e-PPSAS)</p>
Slow response of database	<p>Migration of existing database to more stable database system</p>

Office/Department: Office of the Provincial Budget

Priority Issues	Programs/Plans/Activities
Lengthy period of preparation of budget	adoption of the E-budget system for LGUs
Still using the old version of the Budget System	Update of the Budget system
Align Annual Investment Plans (AIP) with the tourism master plans at the provincial and component levels	Technical Assistance to the LGUs 2019: Complete number of component LGUs allocating strategic expenditure in their AIP : 100% of strategic initiatives with STRATEX funding 2022: Complete number of component LGUs allocating strategic expenditure in their AIP : 100% of strategic initiatives with STRATEX funding 2025: Complete number of component LGUs allocating strategic expenditure in their AIP : 100% of strategic initiatives with STRATEX funding

8.2.2 DISASTER PREPAREDNESS

Office/Department: Provincial Disaster Risk Reduction Management Office

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Disaster Risk Reduction and Management	Observance of National Disaster Consciousness Month Celebration Conduct of La Union DRRM Environment Scanning Conduct of La Union DRRM Congress Summit Conduct of La Union DRRM Camp Conduct of La Union First Aid Olympics Conduct of Fire Prevention and Prevention and Awareness Program Conduct of Rescue Olympics Improvement of Office/Operation Center, its Equipment and Facilities
Disaster Mitigation	Procurement of DRRM Rescue vehicles and equipment Repair /maintenance of all rescue equipment and vehicles and facilities Repair and Maintenance of PDRRMO Operation Center
Disaster Preparedness	Repair and Maintenance of Storage of Rescue Equipment (and facilities) Improvement of evacuation centers Stockpiling of relief goods Conduct drills on the following: Flood Storm Surge Tsunami Earthquake Medical Response

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
	Conduct of Simulation Exercises and Training on: Water Search and Rescue WASAR High Angle Search HASAR Underground Search and Rescue Stockpiling of Medical Supplies
	Conduct of Trainings/Seminars on the following: First Aid and Ambulance Operation Swift Water Search and Rescue Fire Fighting Tactical Care Vehicular Extraction Advance Cardiac Life Support Urban Search and Rescue Disaster Risk Reduction Course Community based DRRM
	Awareness Program Training of Trainer's RDNA and Reporting
Disaster Response	Development and Printing of Advocacy and IEC Materials Procurement of Relief Goods Food Provision Procurement of Medical Supplies Emergency Shelter Asst.



ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Disaster Relief and Rehabilitation	Financial Assistance to victims Reparation Purchase of Seeds for victims
PDRRM Operations and other programs	Purchase of the Following: Gasoline Oil Lubricants Provisions of Life Saving Products Conduct of Quarterly Rescue Olympics Climate Change Adaption Disaster Resiliency Safety Services OPLAN Sumvac, Semana Santa, OPLAN Iwas paputok Meetings/Seminars
Proposed Departmentalization of the PDRRMO	Creation of plantilla positions for PDRRM Personnel: Assistant Department Head PDRR Officer IV PDRRM Officer III Administrative Officer I Administrative Assistant III Administrative Aide III Driver Administrative Aide II Administrative Aide I

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
	Nurse I Operations & Warning Aide II
Environmental Governance	Creation of Provincial Incident Management Team Installation of the Ideal PDRRM Data monitoring SitReP Installation of CCTV Camera at the Mabanaga Justice Hall and Antonino Building Creation and building of the PDRReaM Academy Creation of the Provincial Rapid Damage and Needs Assessment Team Creation of Response Cluster Team Review the present 2013-2018 PDRRM Plan

8.2.3 SOCIAL PROTECTION

PUBLIC HEALTH

ISSUES/CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
Maternal Health		
Increasing trend of Maternal Mortality Ratio from 49/100,000LB in 2014 to 66.98/100,000LB in 2015	Implementation of Maternal, Newborn and Child Health and Nutrition Program <ul style="list-style-type: none"> • Strengthen Service Delivery Network and Referral System 	Creation of SDN Technical Working Group <ul style="list-style-type: none"> • Draft Manual of Procedures on SDN • Dissemination of SDN • Memorandum of Agreement among partners (Partnership Agreement)
	<ul style="list-style-type: none"> • Enforcement of the MNCHN Ordinance 	Implementing Rules and Regulations <ul style="list-style-type: none"> • Dissemination of the MNCHN Ordinance
	<ul style="list-style-type: none"> • Strengthen health promotion activities 	Health Promotion activities <ul style="list-style-type: none"> • Talakayan/Usapan Sessions • Buntis Congress • Inform Choice Volunteerism on Family Planning

ISSUES/CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
	<ul style="list-style-type: none"> Nutrition Program 	<ul style="list-style-type: none"> Nourishing the underweight and undernourished pregnant women. An egg and cup of milk a day Project for undernourished pregnant women Iron and Vitamin A Supplementation
	<ul style="list-style-type: none"> Capability Building of Rural Health Midwives 	Training on Harmonized Basic Emergency Obstetrics and Newborn Care <ul style="list-style-type: none"> Training Needs Analysis Submission of Training Proposal to DOH
Excreta Disposal		
<ul style="list-style-type: none"> Inadequate sanitary toilets in coastal barangays, flood-prone areas and barangays along the riverbanks 	Implementation of community and school -based sanitation projects	Construction of communal toilets with DEWATS in coastal area and GIDA
<ul style="list-style-type: none"> Schools often have toilets but no sufficient wastewater treatment 		
<ul style="list-style-type: none"> The National Policy on Sustainable Sanitation states that about 60% of all barangays be declared ZOD as of 2016; only one barangay has been declared ZOD Status as of now 	Zero Open Defecation (ZOD) Certification of all Barangays	Pass Ordinance on Zero Open Defecation (ZOD) Creation of Municipal Evaluation Team, Give incentives to declared ZOD barangays
Regulation of establishments (water refilling stations, hotels and restaurants) on water quality monitoring	Strict compliance to Water Quality Standards	
<ul style="list-style-type: none"> PD 856 not fully implemented in WRS, hotels and restaurants 	capacitate implementers	Training of MHOs and RSIs on PD 856

ISSUES/CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
<ul style="list-style-type: none"> Non-uniformity of implementation of standards especially on water testing 		Passing of Ordinance on Water Quality Standard
<ul style="list-style-type: none"> Lack of Functional Local Drinking Water Quality Monitoring Committee (LDWQMC) 		Creation of LDWQMC
<ul style="list-style-type: none"> Lack of Provincial Water Testing Laboratory 		benchmarking, conduct feasibility study in collaboration with concerned agencies
Malaria Free Province Certification	Malaria Elimination and sustainability sec. to creation of MH by virtue of a resolution	Malaria Boarder Operation
Increasing number of Animal bites from 2014 to 2016 with more reported animal bites in the <15 age group	Establishment of Animal Pound and Rehabilitation to home stray animals and rehabilitate for future adoption	Consultative meeting with OPVet, DOH and DA Draft Ordinance on the establishment of animal pound and rehabilitation
High incidence of Human Rabies Cases in 2014-2015, with reported 6 deaths for each year	Establishment of Rabies-free zones in the province Increase budget for Anti-Rabies Vaccines and Immunoglobulin	Monitoring and evaluation of rabies-free zones Submission of Project Proposal / PR for more anti-rabies vaccines and immunoglobulin
Establish Surveillance & Epidemic Management System within the agri- tourism circuit	Strengthening the Surveillance & Epidemic Management System within the agri- tourism circuit	
<ul style="list-style-type: none"> BHWs ,BSIs RHM and RSIs are not trained on Disease Surveillance and Epidemic Response and Management System 	<ul style="list-style-type: none"> Capability Building and skills training 	Training of BHWs,BSIs and RHU stff on Disease Surveillance & Epidemic Management System Request vehicle for monitoring Request computers to monitoring daily and weekly reporting of diseases

Office/Department: Provincial Population Office

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Unorganized process of service due to flock of Barangays in one day ORB conduct	“I LOVE LA UNION, I LOVE MY BARANGAY: A PROVINCIAL RURAL DEVELOPMENT PROGRAM (PRDP) FOR POVERTY ALLEVIATION” (An Enhanced Program of the La Union “Operation Rang-ay ti Barangay (ORB)” and Health In Every Home)
Lack of knowledge on Population Awareness and Sex Education	ADOLESCENT HEALTH AND YOUTH DEVELOPMENT PROGRAM (ADHYDP)
Subsidy of Free Pills and Condoms	MOTHER’S CLASSES
Recognition/ Organization of all Twins & Multi-births in the province	TWINS AND OTHER MULTIPLE BIRTHSDAY CELEBRATION IN THE PROVINCE OF LA UNION
High proportion of the young population and dependents	Symposium on Adolescent, Health and Youth Development
Lack of knowledge/ information on risks of teenage pregnancy and reproductive health	U for U Teen Trail Activity
Lack of accessibility on information regarding the FP Methods	TRAINING OF THE PRE-MARRIAGE COUNSELING (PMC) TEAM ON THE REVISED PMC CONTENT AND PROCESS GUIDE FOR PMC ACCREDITATION
Lack of Sensitivity and awareness of men and women to their own gender roles in the family	MEN’S RESPONSIBILITIES ON GENDER AND DEVELOPMENT (GAD) TRAINING MEN
Poor adoption of modern Family Planning Methods	Provisions for the Free Bilateral Tubal Ligation (BTL)

Office/Department: District Hospitals

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Lack manpower and increasing budgetary requirements for maintenance and overhead expenses	Additional manpower and filling up of vacant positions
Low percentage of poor families enrolled in the Philhealth Insurance and uncertainty of continuity of Philhealth coverage	Point of Care - Online Registration Enrollment (POC-ORE)
Need to construct/renovate hospital buildings, facilities and equipments	Infrastructure Development Equipment Upgrading and Modernization
Brain drain of health personnel or doctors and nurses and medical technologist going abroad	Full implementation of the Magna Carta Benefits for Health Workers
Health services lack provision for disaster relief and response	Creation of Hospital Emergency Response Team
Need to reach out Barangays directly, especially the far-flung areas of the Province of La Union which needs developments (in terms of personal like hygiene kits dental, medical etc.) (in terms of legal assistance, for our friends who didn't have budget to support the process) (Addition of knowledge, some have limited strategies to earn money); and help to keep up with other Barangays events to contribute individually in making their Barangay competitive in terms of Agri-Tourism.	"I LOVE LA UNION, I LOVE MY BARANGAY: A PROVINCIAL RURAL DEVELOPMENT PROGRAM (PRDP) FOR POVERTY ALLEVIATION" (An Enhanced Program of the La Union "Operation Rang-ay ti Barangay (ORB)" and Health In Every Home)

Office/Department: Provincial Social Welfare and Development Office

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Inadequate Day Care Centers (DCC) in Strategic Sites for Easy Access of Pre-schoolers.	Construction of additional & Improvement of DCC in Strategic Sites for easy access of Pre-schoolers
Inadequacy of Alternative Early Childhood Care & Development (ECCD) Programs	<ul style="list-style-type: none"> -Continuation and expansion of ECCD program. -Provision of ECCD Learning materials. -Children's Month Celebration
Prevention of youth from engaging detrimental activities like petty crimes, drugs, etc.	<ul style="list-style-type: none"> -Federation of youth (OSY/IS) organizations. -Youth Congress/Encampment -Skills Development Trainings
Increasing incidence of violence against women and children	<ul style="list-style-type: none"> -Advocacy on RA 9262/Violence against Women & Children -Organization of the Barangay Council for the protection of women & their children (BCPC) -Women's Month Celebration
Insufficient capital for the livelihood/income generating projects for women.	<ul style="list-style-type: none"> -Conduct of skills development training for women -Provision of financial assistance for livelihood/income generating projects for women
Absence of Senior Citizens' Center and Office of Persons with Disability Affairs (OPDA) in strategic municipalities/areas of the province.	<ul style="list-style-type: none"> -Construction of Senior Citizens' Center (RA7876) as venue for socialization & other meaningful activities/meetings of elderly. -Lobby for the creation of the OPDA for PWDs to mainstream them to society as per PWD Magna Carta.

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
Non-compliance to some provisions of RA 7432 or the Senior Citizens' Act.	Continuous advocacy on the Rights & Privileges of the Senior Citizens. -Sustainability of the Enhanced Access to Golden Existence (AGE) Program. -Implementation of the Centenarian Act.
Insufficient employment opportunities for the Persons with Disabilities (PWDs)	-Continuous advocacy on the Rights & Privileges of PWDs including the 5% employment of the sector of every agency. -Establishment of a Shelter Workshop for PWDs as Training Center & the Assistive Technology Computer Center - Observance of the National Disability and Prevention Week Celebration and other PWD related activities.
Most vulnerable sector in the society (elderly, young population, PWD, etc.)	-Establishment of Halfway-home for the most vulnerable sector (unattached PWDS & elderly, Children in conflict with the law (CICL), Children and women that are victims of violence). -Evacuation Centers for the victims of natural and man-made calamities.
Rehabilitation and Caring for the Surrendered Drug Users and Dependents	-Media Advocacy -Capacity building to Case managers -Skills training - Financial assistance for livelihood proj

Office/Department: PSWDO- PESO

ISSUES/CONCERNS	PROGRAM/PROJECT/ACTIVITY
1. Reduce cost, time and effort of applicants in applying for jobs.	Conduct of Jobs Fair
2. Provide/augment income to finance the studies of deserving students through their employment during summer/christmas vacation.	Special Program for the Employment of Students (SPES)
3. Prevent/lessen victims of illegal recruitment. Enhancement of Social and Economic Reintegration of OFWs and their families. Enhancement of Reintegration	OFW Desk Activities 1. OFW Leadership Summit 2. Organization of Provincial Migrant & Development Council 3. Strengthen the Migrant Desks in the municipal level
4. Better and speedy job matching of applicants and employers	Phil-Job.Net Implementation
5. Limited skills/ knowledge of job seekers for employment	Skills/Livelihood Training for jobseekers
6. Address workforce requirements and harmonize service standards of the tourism industry	Capacitate tourism workforce to new jobs generated given the anticipated surge of tourist arrivals. 2019: 100% growth in new jobs that is related to tourism 100% compliance of Central circuit 2022: 200% growth in new jobs related to tourism 100% compliance in South circuit 2025: 300% growth in new jobs related to tourism 100% compliance in North circuit

8.2.4 BUSINESS FRIENDLINESS AND COMPETITIVENESS

Office/ Department: Office of the Provincial Agriculturist

ISSUES/CONCERNS	PROGRAMS/PROJECTS/ACTIVITIES
<p>Attainment/sustained food security and increased income of farmers & fisherfolks.</p>	<p>Production, Procurement of and distribution of quality seeds and planting material Hybrid/Certified seed subsidy. Soil analysis/Vermicomposting/Trichoderma Production/Distribution Crop Protection and disease prevention Seedling production and distribution Fingerling production and distribution. Upgrading of provincial nurseries/hatcheries and demo farm Procurement/Distribution of fishing gears paraphernalia. Deputization of fisherfolks and sthrengthening of FARMCs’’ Strenthening of the LU Baywatch network. Conduct of trainings, technodemos, meetings IECs, Harvest festivals, Fishery Summit, Farmers &Fisherfolks Congress.</p>

Office/ Department: Office of the Provincial Agriculturist

ISSUES/CONCERNS	PROGRAMS/PROJECTS/ACTIVITIES
Rehabilitation and expansion of irrigable areas and increase irrigation efficiency	Organic Agriculture Program Assistance in GAP and OA Certification Irrigation Development Program - Construction of new system. - Rehabilitation of existing facilities - Provision of solar powered pumps
Modernize agriculture in support to Agri-tourism.	Construction of accessible all- weather FMRs, And Post Harvest Facilities. Provision of farm machineries and equipments. Geotagging of agri-infra projects. Rehabilitation of existing Flatbed Dryers
Weak marketing linkages and facilities	Conduct/Participation to Trade fairs Market Matching/Linkage Operationalize bagsakan Centers. OTOP promotion in partnership with LGUs' and concerned agencies.
Development of community based agri-tourism sites.	Capacity Building Program for farmers and implementers. Capacity building program for agripreneurs, cooperatives and RBOs'. Financial Soft Loan Assistance to RBOs/SMEs/Coops Commodity Profiling of high value crops
	2019: There should be a fully functional Central circuit with atleast 1 nationally accredited community-based agri-tourism

	<p>circuits</p> <p>2022: Fully functional Southern Circuit with atleast 2 accredited community-based agri-tourism sites</p> <p>2015: Fully functional Northern circuit with atleast 3 accredited community bases agri-tourism sites</p>
Increase in household income	<p>Production, procurement and distribution of quality seeds</p> <p>Preservation and maintenance of soil fertility</p> <p>Crop protection and disease prevention</p> <p>Establishment and maintenance of facilities</p>
Low Fish Production Low Fish Catch	<p>Establishment of additional tilapia hatcheries and upgrade existing hatcheries and provision of tilapia fingerlings</p> <p>- Coastal Resource Management with ENRO</p> <p>Provision of fishing gears paraphernalia's and land based livelihood projects</p>
Capacitate Farmers' Associations (FAs) and other farmers to practice OA and GAP	<p>Conduct trainings on OA and GAP for all interested farmers</p> <p>Conduct of Farmers' Field and Business School on OA, GAP and IPM of crops</p>
Installation of irrigation/water systems of Provincial Nurseries specifically at Bungol Demo Farm	Establishment of the Papaya, Malunggay and Dragon Fruit Farm
Farm Mechanization	Farm Mechanization Utilization
Irrigation	<p>Reforestation</p> <p>a. Production of seedlings</p> <p>b. Identification of sites/geo-tagged</p> <p>c. Conduct of meetings/</p> <p>d. Distribution/Planting</p> <p>e. Supervision/Monitoring</p>
Farm to Market Roads	<p>Opening and Upgrading of Farm to Market Roads</p> <p>a. Dialogues/Meetings</p> <p>b. Validation/Evaluation</p> <p>c. Coordination with other funding agencies</p> <p>d. Submission/endorsement of FMR for upgrading, improvement and opening</p>
Low Submission of Mandatory Reports to CDA, BIR, SEC Online Ontime. (Coop,SWISA,P4MP, TODA	<p>Conduct of Seminar/ Training in preparation of various reports</p> <p>Simplified Bookkeeping Seminar</p>

Office/ Department: Office of the Provincial Veterinarian

ISSUES/CONCERNS	PROGRAMS/PROJECTS/ACTIVITIES
1. No veterinary officer in the municipality	A. <u>MANPOWER SERVICES</u>
2. Selling of hot meat in the market which is a public health concern and to monitor the slaughterhouses in the province.	B. <u>ACTIVITIES</u> 1. Responsible on the Performance of Veterinary Functions for the Provincial Government as Mandated in the 1991 Local Government Code a. Animal Diseases of Public Health Importance b. Animal Diseases of Economic Importance c. Regulatory d. Animal Production e. Extension
3. Low inputs of artificial insemination.	
4. Low capability of field veterinary service providers in promoting and protecting the food animal industry and public health in their communities and the province as well.	C. <u>ANIMAL DISEASES OF PUBLIC HEALTH IMPORTANCE</u> A. Rabies Prevention and Control 1. Surveillance and Vaccination 1.1 Investigation & validation of Rabies incidence - No. of Rabies Positive Barangay investigated and validated - No. of Laboratory Report (+/-) cases monitored - No. of Human Rabies cases reported 1.2 Conduct of massive vaccination - No. of Dogs/Cats vaccinated - No. of Barangays covered - No. of Pet Owners served - No. of reading materials distributed 2. Rabies Campaign Information Drive
5. The office needs more veterinarians.	
6. Devolution of programs from national level to provincial level	

Office/ Department: Office of the Provincial Veterinarian

ISSUES/CONCERNS	PROGRAMS/PROJECTS/ACTIVITIES
7. Low enforcement of national laws in the municipal level.	2.1 Celebration of Rabies Awareness Month 2.1.1 Information Education Campaign (IEC) - No. of Rabies IEC's conducted - No. of Barangays covered - No. of Pet Owners served
8. Livestock sector in the municipal level is least priority.	2.1.2 Distribution of flyers, posters and tarpaulins - No. of reading materials distributed 2.2 Celebration of World Rabies Day
9. Insufficient funds for livestock programs.	2.2.1 Conduct of La Union Pet's Day as part of the yearly celebration of Civil Service Month - No. of Dogs/Cats groomed - No. of Dogs/Cats treated - No. of Dogs/Cats dewormed - No. of Dogs/Cats vaccinated - No. of Pet Owners served 3. Dog Population Control 3.1 La Union Rabies Examination Center 3.1.1 Collection of samples for examination - No. of Specimen submitted 3.2 Performance of Laboratory Services - No. of Laboratory Results released - No. of Specimen positive - No. of Specimen negative - No. of Specimen unfit - No. of Specimen examined

Office/ Department: Office of the Provincial Engineering

ISSUES/CONCERNS	PROGRAMS/PROJECTS/ACTIVITIES
Provide infrastructure support critical to the tourism circuit and the agricultural castor	Tourism Circuit infrastructure project and Agriculture Infrastructure Project 2019: 100% of infrastructure gaps in the central circuit : 50% of agriculture infrastructure gaps 2022: 100% of infrastructure gaps in the south circuit : 75% of agriculture infrastructure gaps 2025: 100% of infrastructure gaps in the north circuit : 100% of agriculture infrastructure gaps

8.2.5 TRADE AND INVESTMENT PROMOTION

GOAL : To generate investments, employment and exports and to make La Union as the investment destination in the Region

OBJECTIVES :

- Promote investment opportunities in the tourism circuits to the private sector
 - 2019: 100% reduction of investments gaps in the Central circuit
 - : 20% of total contribution of private investments in the circuits to the total investments in the province
 - 2022: 100% reduction of investments gaps in the South circuit
 - : 40% of total contribution of private investments in the circuits to the total investments in the province
 - 2025: 100% reduction of investments gaps in the Northern circuit
 - : 60% of total contribution of private investments in the circuits to the total investments in the
- Capacitate community to develop entrepreneurial skills and develop agripreneurs
- Develop and Capacitate MSMEs
 - 2019: 30% of farmer's cooperatives and associations with at least 10% annual increase in net income
 - : Increase of number of tourism at Central circuit that are self-sufficient in major commodities
 - : 50% growth in the number of new non-agri MSMEs
 - 2022: 60% of farmer's cooperatives and associations with at least 10% annual increase in net income
 - : Increase of number of tourism at Southern circuit that are self-sufficient in major commodities
 - : 75% growth in the number of new non-agri MSMEs
 - 2025: 90% of farmer's cooperatives and associations with at least 10% annual increase in net income
 - : Increase of number of tourism at Northern circuit that are self-sufficient in major commodities
 - : 100% growth in the number of new non-agri MSMEs
- Develop and promote incentives and services supportive to trade and industry
- Develop MSME financing support programs
- Promote, standardize and streamline business process in all the component LGUs
- Promote aggressively the investible areas in the province
- Develop and promote exportation strategies
- Promote local products in the province
- Maintain a database of investments in all component LGUs

Office/Department: Provincial Information and Tourism Office

ISSUES/CONCERNS	INDICATOR	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
Un-updated and non-implementation of the La union Investment Code	No. of meetings for updating of the LUIIC and the TWG No. of Investment Portfolio and Investment Brochure Produced	Updating of the LUIIC by the SangguniangPanlalawigan (SP) SP to create ordinance requiring all component LGUs to submit a report on investments in their area Information Dissemination Campaign on LUIIC	SP to update LUIIC Create a Technical Working Group (TWG) for the inventory of investment assets, potentials and areas of the province. Production of Investment Portfolio and Investment Brochure
Weak MSME support programs	No. of trainings held for MSME No. of MSMEs assisted No. promotional avenues for MSMEs No. of new non-agri MSMEs No. of component LGUs with ISO compliance with BPL processed aligned with provincial standards	Capacitate Communities for entrepreneurial skills, product development, agri-product development and business processes. Provide start-up capital for developing Agri- MSMEs Provide avenues for MSMEs to market their products Streamline/Standardize Business Registration Process in all component LGUs of the Province Strengthening of Farmers' Cooperatives through promotion of their produce	Skills Development Trainings for MSME Technical Livelihood Programs for Communities Staging of Trade Fairs for MSMEs to promote their products Creation of Ordinance Streamlining/ Standardizing Business Registration Process in all component LGUs Establishment of Financing mechanism for Product Development and improve Marketability Facilitate Market Matching/ Advertising Improve La Union Website to contain investment information, investment requirements, etc.

ISSUES/CONCERNS	INDICATOR	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
Weak Investment Promotion	No. of Investment Brochure/Portfolio Created/ Distributed No. of Trade Fairs Participated No. of Local Trade Missions Conducted No. of International Trade Missions Conducted No. of Investment Infra Reduction in the Investment Gaps Percent contribution of private investments to the total investments in the province	Create Investment Portfolio/brochure Legislative Support on Sisterhood and partnerships Create La Union Investment Council Strengthen Partnership with PPMC Infra Support	Trade fair Participations Re-visitation and Re-activation of local and international sisterhood ties Creation of La Union Investment Council SP to create ordinance requiring all component LGUs to submit a report on private investments in their area Improvement of Provincial Investment assets Conduct of International and Local Trade missions focusing on local products to stir exports Participation in International Trade Fairs to market local products Promotion of the Poro Point Freeport Zone to investors Strict Implementation of Business Registration Laws; Creation of Monitoring Group in all component LGUs Establishment of Product Display Centers (Pasalubong Centers) in the 3 tourism circuits.

8.2.6 TOURISM

GOAL : To develop agri-tourism as a major sustainable socio-economic activity of the province
Develop Functional Agri-tourism Circuits in the Central, North and South component LGUs in La Union

OBJECTIVES :

- Increase Tourist Arrivals
2019: La Union as Top 1 in Region 1 in terms of tourist arrivals
2022: La Union as Top 2 in Northern Luzon (1,2 and CAR) in terms of tourist arrivals
2025: La Union as Top 1 in Northern Luzon in terms of tourist arrivals
- Increase Tourist Arrivals in Major Agri-Tourism attractions
2019: To be the major agri-tourism attractions in the Central circuit with at least 10% growth rate in arrivals
2022: To be the major agri-tourism attractions in the South circuit with at least 10% growth rate in arrivals
2025: To be the major agri-tourism attractions in the North circuit with at least 10% growth rate in arrivals
- Develop Nationally competitive tourism circuits around community based agri-tourism sites
- Promote investment opportunities in the tourism circuits to the private sector
- Brand and Market La Union as an agri-tourism destination
2019: A 50% increase from BL (Baseline) of tourist arrivals in La Union
2022: A 100% increase from BL (Baseline) of tourist arrivals in La Union
2025: A 150% increase from BL (Baseline) of tourist arrivals in La Union
- Address workforce requirements and harmonize service standards of the tourism industry
- Maintain database on tourist arrivals

Office/Department: Provincial Information and Tourism Office

ISSUES/CONCERN	PROGRAMS/PROJECTS/ACTIVITIES
<p>-Outdated tourism plan in La Union -tourism plan needs to highlight the potential agri-tourism assets of the province</p>	<ul style="list-style-type: none"> -Mapping/Clustering of tourism assets -Assessment of Tourism Assets -Identify Target Tourist Markets -Prepare/revise tourism circuit plans -Create tour packages and sell these packages to tour operators -Train tourism front liners such as tour guides, tourist drivers, hotel, resort and restaurant workers
<p>There is no cohesive recognizable branding and marketing strategies to highlight the agri-tourism potentials of the province</p>	<ul style="list-style-type: none"> -Conduct of Destination Audit -Branding Workshop with Industry Stakeholders -Develop tourism Destination brand (Tagline and Logo) -Organize a marketing team -Conduct internal marketing activities to educate residents and local businesses about the brand -Develop a Destination brand book to provide clear guidelines on the proper use of the brand -Build marketing and communication tools and media around the brand

<p>Non-compliance and non-enrollment of transportation, accommodations, restaurants and tourism workforce to service standards accreditation due to stringent process</p>	<ul style="list-style-type: none"> -Consultation Dialogue with the Tourism Industry stakeholders regarding existing standards laid by the Department of Tourism -Create a TWG which will be in charge of creating Tourism Services Standards in the provincial level -Passing of a provincial ordinance on the standardization of Tourism Standards -Coordinate with the LGUs in monitoring the implementation of Tourism Services Standards -Incentive Programs for compliant support service
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8.2.7 ENVIRONMENTAL MANAGEMENT

GOAL : Enhanced Ecological Balance for Sustained Healthy Environment

OBJECTIVES :

- Rehabilitation of degraded eco-zones
- Greening/Reforestation
- Resource Management
- Research and Development of Appropriate environment friendly technology and adoption
- Protection and Rehabilitation of Critical Habitats
- Pollution Control and Management
- Institutional Development
- Zoning

Office/Department: OPAG- Environment and Natural Resources

ISSUES/CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
Degraded eco-zones due to population pressure	To rehabilitate Degraded Eco-zones *Deforestation *Siltation *Erosion *Pollution	*Integrated Social Forestry Program *Urban Reforestation *Greenchain Reforestation Program
Depletion of natural resources due to excessive extraction	*To restore the Natural Resources *To rehabilitate and sustainably managed natural resources	*Integrated Social Forestry Program *Urban Reforestation *Greenchain Reforestation Program *Seedlings Production and Distribution *Watershed Dev't Program *Clean and Green *Zoning

ISSUES/CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
Degradation due to extraction by destruction *Illegal logging *Kaingin *Illegal quarrying/overextraction	*To restore degraded Eco-zones *To stop the use of the destructive method of extraction	*Integrated Social Forestry Program *Urban Reforestation *Greenchain Reforestation Program *Seedlings Production and Distribution *Watershed Dev't Program *Clean and Green *Mines and Geoscience Services
Weak Solid Waste Management Program	*TO intensify monitoring of the compliance of LGUs on SWM	*Environment Monitoring *Solid Waste Management Program
Degradation/destruction of the environment and natural resources due to natural hazards	*Implementation of Slope Stabilization Measures *Identification of degraded eco-zones for rehabilitation *Implementation of Integrated Coastal Management which will include ridge to reef management *Social Mobilization for Reforestation	*Slope Protection *Integrated Coastal Management (ICM) *Community Based Reforestation
Support for LGUs to improve implementation of solid waste,management. (SWM).	Information education campaign (IEC) Assists LGUs in the capacity building of their staff on solid waste management. Monitoring of LGUs compliance on SWM. Technical assistance to emerging areas of concern	Solid waste management program(SWMP) - distribution of IEC materials, LGUs' assistance in their SWM trainings, giving training to stakeholders of SWM, monitoring the compliance of LGUs in terms of SWM implementation (waste disposal facility, SWM 10 year plan,MRFs, segregation, collection, reduction and processing system relative to SWM). SWMP for San Juan Sanitation Area

ISSUES/CONCERNS	STRATEGIES	PROGRAMS/PROJECTS/ACTIVITIES
Illegal logging/cutting & reforestation program	Reforestation program	Seedling production Tree planting activities Monitoring of planted areas
Illegal quarrying	Mines and Geosciences Management Services	Monitoring of the operations of the permitholders within the province. Conduct of manning of checkpoints. Monitoring of the SHES (Safety & Health of the workers and the operations of the permitholder, status of the quarry area, social devt. projects) requirements of the permittees if complied.
Pollution (Air & Water)	Environmental Management Services.	Solid waste management Reforestation (Urban, riverbanks, upland) Clean-up activities on coastal areas and along riverbanks and urban areas.
DRR-CCA	Improve resiliency of LGUs on Disaster and Climate Change	DREAM PDRRMC- training and capability and capacity build

8.2.8 TRANSFORMATIVE GOVERNANCE

Office/Department: Provincial General Services Office

ISSUES / CONCERNS	PROGRAM/PROJECT/ACTIVITY
Absence of Computerized / Automated records to support the Agri-Tourism Vision of the PGLU	Computerization / Automation of Records in support of the Agri-Tourism Project of the PGLU
Absence of a Master Plan and Project Proposal for the Development of the Capitol Loop in support to the Agri-Tourism Vision of the Province	"Capitol Loop / Park Complex Development" Project
Absence of a Centralized Records Storage Area/Archives Building specifically built for document preservation	Construction of Centralized Records Storage Area
Repair of La Union Provincial Administrative and Commercial Building (LUPACB)	La Union Provincial Administrative and Commercial Building Elevator Repair

Office/Department: Office of the Provincial Planning and Development Coordinator

ISSUES / CONCERNS	PROGRAM/PROJECT/ACTIVITY
Leverage on agri-tourism to improve competitiveness and quality of life	<p>Tourism Circuit Plan</p> <p>2019: 10% increase in household income (province-wide)</p> <p>15% decrease in provincial IRA dependency</p> <p>3% reduction on poverty incidence</p> <p>15% decrease on poor households</p> <p>2022: 20% increase in household income (province-wide)</p> <p>30% decrease in provincial IRA dependency</p> <p>6% reduction on poverty incidence</p> <p>30% decrease on poor households</p> <p>2025: 30% increase in household income (province-wide)</p> <p>45% decrease in provincial IRA dependency</p> <p>9% reduction on poverty incidence</p> <p>50% decrease on poor households</p>

<p>Harmonize the land use plans, zoning ordinances, and tourism plans of the component LGUs.</p>	<p>CLUP and Zoning Ordinances Alignment Project</p> <p>2019: Complete number of CLUPs component LGUs aligned with Provincial CLUP, zoning ordinances aligned with provincial zoning ordinances and tourism master plan aligned with provincial master plan</p> <p>2022: Complete number of CLUPs component LGUs aligned with Provincial CLUP, zoning ordinances aligned with provincial zoning ordinances and tourism master plan aligned with provincial master plan</p> <p>2025: Complete number of CLUPs component LGUs aligned with Provincial CLUP, zoning ordinances aligned with provincial zoning ordinances and tourism master plan aligned with provincial master plan</p>
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8.1 STRATEGIC DEVELOPMENT THRUST

A. Financial Administration or Good Financial Housekeeping

- a. Intensifying good governance through public-private engagement, forging alliance and institutionalizing transparency and accountability;
- b. Leveraging on Agri-Tourism to improve competitiveness and quality of life.

B. Disaster Preparedness

- a. Harmonize the Land Use Plan, Zoning Ordinance and tourism plans of LGUs towards the Agri-Tourism Road Map;
- b. Achieving resiliency amidst Climate Change and Disaster Risk Reduction and Management.

C. Social protection

- a. Intensifying preventive, promotive as well as curative and rehabilitative health programs, focused on risk brought about by human influx and corresponding pressure gravitating towards the Agri-tourism Circuits;
- b. Ensuring accessible, comprehensive and quality basic social services to the poor and marginalized groups;
- c. Broadening mainstreaming effort for the social and economic empowerment of vulnerable and disadvantage groups
- d. Establish district hospital as centers for HOPE;
- e. Develop an efficiently enforce pro-action policies and plan.

D. Peace and Order

- a. Sustaining the Peace Initiative to ensure continuing economic and social prosperity;
- b. Neutralize illegal drug demand and illegal drug supply;
- c. Intensify anti-illegal drug awareness and education
- d. Increase awareness and treatment, rehabilitation and aftercare services.

E. Business Friendliness and Competitiveness

- a. Capacitate the PGLU for greater productivity innovation and peak performance thru transformative governance;
- b. Accredite (national) community based Agri-tourism sites identified in the tourism circuit
- c. Capacitate LGUs in streamlining Regulatory Processes
- d. Develop globally competitive tourism circuits around community based Agri-Tourism sites;
- e. Promote investment opportunities in tourism circuits to the private sector;
- f. Brand and market La Union as an Agri-Tourism destination;
- g. Capacitate Agriprenuers and other MSMEs to be direct and sustainable inputs to tourism;
- h. Address workforce requirements and harmonize Service Standards of the Tourism Industry;
- i. Accelerating sustainable agri-fishery and livestock modernization and enterprise development;
- j. Maximize Public-Private Partnership in Agri-Tourism, Infra Development and Environmental Management.

- k. Align AIP with tourism circuit plan at provincial and municipal level to provide infrastructure support critical to the Tourism Circuit and Agricultural Sector.

F. Environmental Management

- a. Managing ecological zone: community-based and multi-stakeholder resource management;
- b. Addressing boldly unwanted by-products of development: solid and liquid waste management and pollution control and management;

G. Transformative Governance

- a. Institutionalize a robust provincial knowledge management system.

SECTORAL FRAMEWORK

A. SECTORAL DEVELOPMENT AREA: FINANCIAL ADMINISTRATION OR GOOD FINANCIAL HOUSEKEEPING

1. Situation Analysis

For revenue generation, the Provincial Government is guided by the provisions of the Tax Ordinance No. 001-2008 otherwise known as the Revised Revenue Code of the Province of La Union. While most of the province's income is derived from Real Property Tax Collection, its other income is also derived from other sources such as the Economic Enterprises of the different District Hospitals, the Office of the Provincial Veterinary and the Office of the Provincial Agriculturist. For CY 2013, Total Revenue from these sources is Php 416,128,313.75, while for CY 2014 it decreased by Php 956,849.10 or a record of P 415,171,464.69. However, for CY2015 a total of Php 474,951,483.46 was realized or an increase of 15% from that of the income of the previous year.

2. Goals and Objectives

2.1 Goals :

- 2.1.1 To generate additional income through innovative local revenue and resource measures;
- 2.1.2 For a synchronized planning-budgeting and expenditure management to ensure maximized use of the PGLUs limited funds;
- 2.1.3 To effect reconciliation and integration between the plans of component LGUs and those of the provincial government.

2.2 Objectives:

- 2.2.1 To formulate/update all planning documents of the province aligned with the Transformative Governance Roadmap of the Provincial Government of La Union;
- 2.2.2 To initiate/propose/plan for the implementation of projects that will lessen the province's dependence to the Internal Revenue Allotment (IRA) by 60% in 2019;
- 2.2.3 To be able to collect 90% of the delinquent Real Property Taxes in accordance with the new methods;
- 2.2.4 To realize increased income by 50% from other local sources aside from the RPT Revenue.

3. Strategies:

- 3.3.1 Support development of the Agri-Tourism Industry as a means additional income generation by engaging in Public-Private Partnership
- 3.3.2 Strengthen the existing local income sources as in the Honeybee Center, Agri-Vet Facilities, the La Union Provincial Administrative and Commercial Building and the Heavy Equipment Rental and continue to explore in developing other possible income generating programs;
- 3.3.3 Strict compliance with the synchronized planning, programming, budgeting and monitoring and evaluation system;
- 3.3.4 Support from the Legislative body for the approval of the Proposed Provincial Revenue Code to increase schedule unit values;

- 3.3.5 Full operation of the iTax System Provincewide by 2017 thereby increasing the Real Property Tax Collection;
- 3.3.6 Creation of a technical planning force responsible for the conduct of workshops/public consultation to update the different planning documents;
- 3.3.7 Continue to enhance Financial Accountability and Transparency through the implementation of the ISSP & the Knowledge Management –RPTA and the FMIS Automation.

4. Programs/Projects/Activities :

- 1. Agri-Tourism Investment Incentives;
- 2. Additional investments for the improvement of the Honeybee Center , LUPAC, Agri-Vet Facilities, and the Heavy Equipment Rental;
- 3. iTax Program Full Implementation Province wide ;
- 4. Synchronized Planning, Programming, Programming, Budgeting and Monitoring & Evaluating System;
- 5. Enhanced iTax Program;
- 6. Technical Planning Workshop and Consultation Dialogues;
- 7. Maintenance of the Transparency Board and the Full Disclosure Policy Portal ;
- 8. Economic Enterprise Operations (LUPAC, OPVET, LUTLC, District Hospitals & PEO)

B. SECTORAL DEVELOPMENT AREA: DISASTER PREPAREDNESS MANAGEMENT

1. Situationer

The new normal of the wet season becoming wetter and the dry season becoming a lot drier and hotter; should be addressed by effective and proactive disaster mitigation, preparation and management.

1.1 Risk Reduction and Disaster Management.

Through the Provincial Disaster Risk Reduction and Management Council (PDRRMC), the organized provincial emergency response team became world class brought about by their national and international trainings on basic life support, first aid, disaster risk reduction management at the Asian Disaster Preparedness Center in Bangkok, Thailand and some other areas. Related to this is the on-going construction of the 1st Provincial Disaster Preparedness and Evacuation Center at the Capitol Grounds for operation centers of the PDRRMO.

1.2 Disaster Management Training.

This include the Water Search and Rescue Training which is a year round activity of the Provincial Disaster Risk Reduction and Management Council through the Provincial Response Team that enhance their capability and knowledge in water search rescue. This training is in collaboration with the Philippine Coast Guard, Philippine National Police, Bureau of Fire, Philippine Army Reserve, Philippine Red Cross and the Provincial Government of La Union. The fifty (50) trainees/participants are on stand-by or on-call basis whenever there are cases that their service is needed. Likewise, the High Angle Search and Rescue Training Simulation Exercises was also conducted every month of the year wherein all the Provincial Disaster Response Team come together to practice, to enhance and sharpen their capability and knowledge in high angle rescue to come up with a better delivery of service.

2. Goals and Objectives

2.1 Goals:

- 2.1.1 Achieve zero (0) percent (%) casualty during disasters
- 2.1.2 Achieve 100 percent (%) rehabilitation / restoration of calamity effects to victims in order to return to their normal lives and activities
- 2.1.3 Provide the 19 municipalities and 1 city complete geohazard mapping and assessment (1:10,000 scale) by the end of 2019
- 2.1.4 Strengthen the BDRRMCs, CDRRMCs and MDRRMCs by the year 2017 through trainings, IEC on Weather Hazards / Community Based Flood Early Warning System to Barangay Level (in areas prone to flooding)

2.2 Objectives:

- 2.2.1 To conduct trainings for the 19 municipalities and 1 city regarding pre-disaster preparedness to strengthen capacities of communities and response to save lives and Properties.
- 2.2.3 To provide a continuing program of trainings and education on disaster preparedness among the various sectors so as to develop camaraderie in moments of calamities.
- 2.2.4 To augment LGU capacity on DRRM and CCA through conducting summit/forums to DRRMOs and other DRRM practitioners.
- 2.2.5 To carry on the DRRM / CCA advocacy through enhancement training of LDRRM Officers.

3. Strategies and Policies

- 3.1 Partnership agreements with NGOs, POs, NGAs and private sector to strengthen sourcing out external assistance (financial and technical).
- 3.2 Access external fund sources for the training expenses (RA 7171, CDF, RDRRMC, PRC, DOH, MGB, DOST, CCA funds)
- 3.3 Conduct Summits, Boot Camps, and Conferences.
- 3.4 Utilization of the CLUP in planning for the rehab/restoration of damaged infra/facilities, including shelter/houses.
- 3.5 Production or reprinting and distribution of IEC materials, preferably translated to local dialect, including Posters, Radio Ads, Billboards
- 3.6 “DRRM on Air” - modular instructions given through a regular radio program where listeners can interact by answering a set of questions at the end of the show.

4. Programs, Projects and Activity

- 4.1 Creation and building of PDRReam Academy
- 4.2 Creation of Provincial Rapid Damage and Needs Assessment Team.
- 4.3 Creation of Response Cluster Team during disasters and emergencies.
- 4.4 Grant of incentive/honorarium to volunteers during disasters and emergencies.
- 4.5 Review/revisit the present 2013-2018 PDRRM Plan.

C. SECTORAL DEVELOPMENT SECTOR: SOCIAL PROTECTION

I. SUB – SECTOR : PUBLIC HEALTH

1. Situationer

The province recorded that the crude birth rate for 2015 is 15.15/1000 population. Infant Mortality Rate is 8.95/1000. Maternal Mortality Rate of 2015 is 67/100,000 livebirth. The Malnutrition Rate of 2015 is 3.89.

For service delivery, there were disease free-zone initiatives which include Rabies Elimination Campaign, Malaria Prevention and Control Program. There is an increase in animal cases in 2015 which is 12,775. There were no Malaria cases reported for 2015.

Under the Child Care Program, there were 63.43% children who were fully immunized.

In Maternal Health Care program, there is an increase in facility-based deliveries in 2015 which is 96.21% and this is due to increasing number of health facilities that can cater deliveries. Likewise with that of deliveries by skilled birth attendant, in 2015 98.49% was recorded because trainings were conducted for these attendants. The Contraceptive Prevalence Rate in 2015 is 66%.

As for Sanitation, there were 92.13% households with sanitary toilet and 95.05% households with access to safe water. For food establishments with sanitary permit, there were 10,526 or 98.82% for 2015 and 22,814 of 98.73% food handlers with health certificate.

2. Goals and Objectives

2.1 Goals

2.1.1 Maternal, Neonatal and Child Health and Nutrition

- a. To reduce maternal mortality ratio from 83/100,000LB of 2015 to 50/100,000 LB in 2019

2.1.2 Dental and Periodontal Services Program

- a. All daycare center will have lavatory for toothbrushing drills
- b. To prevent the incidence of dental caries in children
- c. At least 90% of prenanat women undergo mouth examination
- d. At least 80% of PWD's undergo mouth examination

2.1.3 Elimination and Control of Infectious Diseases

- a. To reduce animal bite incidence by at least 10%
- b. To eliminate human rabies cases for 5 consecutive years

2.1.4 Environmental Sanitation Program

- a. Improved sanitation status in problematic barangays
- b. Improved sanitation status in problematic schools
- c. All barangays declared as Zero Open Defecation Barangay by 2020
- d. Improved compliance to PD 856 (Code on Sanitation)
- e. Implementation of province-wide water quality standards
- f. All Municipalities/City will have its own LDWQMC
- g. Provincial Water Testing Laboratory established and made functional

2.1.5 Malaria Prevention and Control

- a. Malaria free Province of La Union
- b. Additional service vehicle

2.1.6 Strengthening the Surveillance & Epidemic Management System within the agri-tourism circuit

- a. To prevent outbreak due to notifiable diseases

2.2 Objectives

- 2.2.1 Maternal, Neonatal and Child Health and Nutrition
 - a. Provision of quality services for mothers is increased
- 2.2.2 Dental and Periodontal Services Program
 - a. To encourage all daycare children to join in the tooth-brushing drills
 - b. To lessen the incidence of dental caries
 - c. To decrease incidence of dental caries and gum problems
 - d. To decrease oral health problems among PWD's
- 2.2.3 Elimination and Control of Infectious Diseases
 - a. To advocate for the provision of a separate ordinance for Responsible Pet Ownership and its IRR
 - b. To draft/create IRR for Provincial Anti-Rabies Ordinance
 - c. To reduce number of stray animal
 - d. To reduce number of stray animal
 - e. To establish rabies-free zones in the province
 - f. To provide sufficient augmentation for anti-rabies vaccine and Immunoglobulin
- 2.2.4 Environmental Sanitation Program
 - a. To improve sanitation status in problematic barangays and eliminate water pollution, filthy environment, nuisance and occurrence of water borne diseases
 - b. To improve sanitation status in problematic schools and eliminate water pollution, filthy environment, nuisance and occurrence of water borne diseases
 - c. To evaluate barangays for the declaration of ZOD status
 - d. To strictly implement PD 856
 - e. To craft uniform standards on water quality
 - f. To encourage all municipalities/City to create its own LDWQMC and make it functional
 - g. To establish a Provincial Water Testing Laboratory that will cater to the needs of WRS and food establishment/resorts/hotels and restaurants/other establishments
- 2.2.5 Malaria Prevention and Control
 - a. Sustain of malaria indigenous case
 - b. On time during operation
- 2.2.6 Strengthening the Surveillance & Epidemic Management System within the agri-tourism circuit
 - a. To Establish of health intelligence and assistance services within the agri-tourism circuit
- 2.2.7 Provisions for Disaster Relief and Response to health services

3. Strategies and Programs/Projects/Activities

- 3.1 Maternal, Neonatal and Child Health and Nutrition
 - 3.1.1 Strengthen Service Delivery Network and Referral System
 - a. Re-organization of SDN oversight and Maternal and Neonatal Death Review Committee
 - b. Quarterly Maternal and Neonatal Death Review
 - c. Enhancement of MOA on referral system
 - 3.1.2 Enforcement of the MNCHN Ordinance
 - a. Draft and submission of Implementing Rules and Regulation of the MNCHN Ordinance
 - 3.1.3 Strengthen health promotion activities
 - a. Buntis Congress
 - b. Talakayan Sessions
 - 3.1.4 Nourishing the underweight and undernourished pregnant women/children
 - a. An egg and cup of milk a day Project

- 3.1.5 Capability Building of Rural Health Midwives
 - a. Request
- 3.2 Dental and Periodontal Services Program
 - 3.2.1 Require all daycare centers to have their toothbrushing area that could accommodate at least 10 daycare children and participate in the tooth-brushing drills every after feeding
 - a. Formula in Toothbrushing Drills (FTD)
 - 3.2.2 Conduct lectures, mouth exam, and prophylactic treatment on pregnant women
 - a. Wisdom Tooth Strategy
 - 3.2.3 Conduct lectures, mouth exam and prophylactic treatment to PWD's
 - a. DWP for PWD (Dental wellness Program for Person With Disability)
- 3.3 Elimination and Control of Infectious Diseases
 - 3.3.1 Consultative meeting with OPVet, SP, DOH and DA
 - a. Draft Ordinance and IRR for Responsible Pet Ownership
 - b. Draft IRR for Provincial Anti-Rabies Ordinance
 - 3.3.2 Monitoring and evaluation of rabies-free zones
 - a. Establishment of Animal Pound and Rehabilitation to home stray animals and rehabilitate for future adoption
 - 3.3.3 Submission of Project Proposal / PR for more anti-rabies vaccines and immunoglobulin
 - a. Establishment of Rabies-free zones in the province
 - b. Increase budget for Anti-Rabies Vaccines and Immunoglobulin
- 3.4 Environmental Sanitation Program
 - 3.4.1 Implementation of community-based and school-based sanitation projects
 - a. Establishment of Rabies-free zones in the province
 - b. Increase budget for Anti-Rabies Vaccines and Immunoglobulin
 - 3.4.2 Coordination with Municipalities/City
 - a. Creation of Municipal evaluation Team, Give Incentives to declared ZOD barangays
 - 3.4.3 Capacitate implementers
 - a. Training of MHOs and RSIs on PD 856
 - 3.4.4 Draft standards
 - a. Passing of Ordinance
 - 3.4.5 Lobby to LGUs
 - a. Creation of LDWQMC (Lack of Functional Local Drinking Water Quality Monitoring Committee)
 - 3.4.6 Benchmarking, conduct feasibility study in collaboration with concerned agencies
 - a. Feasibility Study, Establishment and Functionalization of Provincial Water Testing Laboratory
- 3.5 Malaria Prevention and Control
 - 3.5.1 Malaria Border Operation
 - a. Request for service vehicle
- 3.6 Strengthening the Surveillance & Epidemic Management System within the agri- tourism circuit
 - 3.6.1 Capability Building and skills training
 - a. Training of BHWs,BSIs and RHU staff on Disease Surveillance & Epidemic Management System
 - 3.6.2 Disease Surveillance
 - a. Request vehicle for monitoring

- b. Request computers to monitor daily and weekly reporting of diseases
- 3.7 DRR/CCA enhanced Sector Plan on Health
- a. Sectoral Plan on health
 - b. Intensifying advocacy or awareness on public health issues
 - c. Identification/Training of Disaster Risk Reduction to Hospital Personnel

II. SUB – SECTOR : POPULATION DEVELOPMENT

1. Situationer

Family Planning/Reproductive Health Program is an intervention for the improvement of health and welfare of mothers, children and other members of the community. There are different methods of family planning recruitment and referral, Bilateral Tubal Ligation (BTL); Depoprovera Medroxyprogesterone Acetate (DMPA); Pills; Lactational Amenorrhea; and Standard Method. There were 1176 acceptors for the year 2015. Motivation of Married Women of Reproductive Age (MWRA) is 5187 for 2015. Development sessions are also made for gender equity and women empowerment, for 2015 there were 7067 men and women who participated in the different lectures and counseling which made them realize their roles in the community and in the family.

Adolescent Health and Youth Development Program will help improve and promote the welfare of the youth by giving them symposiums or lectures about sexual and reproductive health and there were 3195 youths who participated in the different symposiums. On the other hand, exposure of the population to natural hazards is a risk assessment that evaluate existing conditions of vulnerability that could pose a potential threat or harm to people, property, livelihood and the environment on which they depend.

2. Goals and Objectives

2.1 Goals

- 2.1.1 To accomplish the mandate of the Governor in letting the localities feel its administration.
- 2.1.2 To alleviate poverty, ensure inclusive growth, and have sustainable development towards much improved quality of life until 2019.
- 2.1.3 To promote and sustain a healthy lifestyle of the population through promotive, curative and rehabilitative health services by utilizing technology which are relevant, affordable and acceptable in the community.

2.2 Objectives

- 2.2.1 To intensify information campaign on voluntary family planning methods down to the barangay level.
- 2.2.2 To enhance and strengthen population management programs in the Province of La Union.
- 2.2.3 To establish a flagship rural community/barangays-driven development program that is comprehensive, integrated, holistic and participatory in approach for poverty alleviation, inclusive growth and sustainable development towards much improved quality of life.
- 2.2.4 Mind-set Change or attitudinal change or spiritual
- 2.2.5 To provide the needs of people based on diagnosis conducted before “I Love La Union, I Love My Barangay Program” implementation in the scheduled barangay.
 - Medical/ Dental Mission
 - Distribution of Seedlings
 - Conduct RPPF lecture

- Supplemental Feeding
- Provide Animal Care
- Legal Assistance
- Livelihood Training (Lumpia, Siomai & Deboning Bangus)

3. Strategies and Programs/Projects/Activities

- 3.3.1 Prioritization of Zones with identified vulnerable sectors (PWDs, Senior Citizen)
- 3.3.2 Intensifying advocacy or awareness on public health issues relative to flood events
- 3.3.3 DRR/CCA enhanced Municipal CLUPs and Zoning
- 3.3.4 Recruit, Follow-up family planning acceptors
- 3.3.5 Implement appropriate training programs on population development and management
- 3.3.6 Quarterly Bilateral Tubal Ligation Program
- 3.3.7 Massive Information Dissemination on:
 - a. Family Planning and Responsible Parenthood
 - b. Conduct/Facilitate Mother's Classes
- 3.3.8 Conduct of Community Based Outreach Program - 1 Barangay per month = 36 barangays a year
 - "I LOVE LA UNION, I LOVE MY BARANGAY: A PROVINCIAL RURAL DEVELOPMENT PROGRAM PRDP) FOR POVERTY ALLEVIATION" (An Enhanced Program of the La Union "Operation Rang-ay ti Barangay (ORB)" and Health In Every Home)

III. SUB – SECTOR : HOSPITAL SERVICES

1. Situationer

The Average Hospital Bed Occupancy Rate in 2015 is 140.91 While in the Hospital Gross Death Rate is .39%

There were 169,485 recorded patients in all the district hospitals who consulted in their out-patient department while there were 36,577 total in-ward patients.

2. Goals and Objectives

2.1 Goals

- 2.1.1 To render quality holistic primary health care, wellness and revenue-generating services at affordable cost
- 2.1.2 To improve and rehabilitate health care facilities for better and quality health care.
- 2.1.3 Encourage community participation thru the conduct of regular community outreach programs
- 2.1.4 Improved health care system/program among employees who shall serve as work force in promoting Agri-Tourism

2.2 Objectives

- 2.2.1 To improve health care services for client satisfaction
- 2.2.2 Hospital service is accessible at all times regardless of economic status, political affiliation, religion and nationality
- 2.2.3 To improve and develop health care facilities in accordance with the DOH standards for licensing purposes
- 2.2.4 Encourage community participation thru the conduct of regular community outreach programs and to enhance and strengthen the Nutrition Programs
- 2.2.5 To enhance revenue collection

3. Strategies and Programs/Projects/Activities

- 3.1 Healthy La Union: Happy La Union by 2025
- 3.2 Establish district hospitals as center for H.O.P.E

- **HEALTHIER AND SATISFIED PATIENTS**

- 1. Funding allocation for the Point of Care
 - a. Online registration Enrolment- Point of care (ORE-POC)
- 2. Request of Funding Assistance
 - a. Medical Financial Assistance
 - b. Quantified Free Service

- **OUTSTANDING AND MODERN FACILITIES**

- 1. Appropriation of funds
 - a. Construction, rehabilitation and repair of health facilities
 - Construction of additional buildings and ramps
 - Repair of main building and wards

2. Private – Public Partnership in the acquisition of high – end diagnostic equipment
 - a. Acquisition and upgrading of high – end diagnostic equipment for patient’s use
 - **PROFESSIONAL AND PASSIONATE PERSONNEL**
 1. Creation and filling up of plantilla positions
 - a. Hiring additional personnel
 - b. Filling up of vacant positions
 2. Determine the competency gap of personnel
 - a. Capacity Development and competency intervention
 3. Presence of Medical Specialists
 - a. Invite Medical Specialists as visiting physicians and to enter into a Memorandum of Agreement
 - OB-Gyne
 - General Surgery
 - Internal medicine
 - Pediatrics
- **EQUITABLE AND INCLUSIVE SERVICES**
 1. Outreach programs to clients and community
 - a. Campaigns and promotion of programs
 - No smoking campaign Program
 - Healthy Lifestyle promotion
 - Maternal and Child care Program
 - Anti Rabies Program
 - TB DOTS Program
 - Blood Donation Program
 - Nutrition Program
 - Senior Citizens Program
 - Environmental Care Program

IV. SUB-SECTOR: SOCIAL WELFARE AND DEVELOPMENT

1. Situationer

The sectoral needs of women sector and other disadvantaged groups such as children and youth, persons with disabilities, elderly and disaster victims' roles are defined according to their motivation or interest and perspectives.

For Women's welfare, the province continued providing the different programs like the Maternal and Child Care Skills Development Program where they will acquire knowledge in child rearing practices and understand their child's behavior. A total of one thousand four hundred forty three (1,443) mothers were served for CY 2015.

With the organization of the LUVWI, the women's participation in the Community development is strengthened. As of Dec. 2015, there is a total of fifteen thousand nine hundred thirty five (15,935) LUVWI/KALIPI members in the province. Women actively participate in the activities of the province like the conduct of adolescent health seminars, healthcare, livelihood and supplemental feedings.

In support to the welfare of the elderly, the Enhanced AGE program continued to address the pressing needs of the unattached and poor elderlies' burial assistance.

For *Persons with Disability*, the Pederasyon ng May Kapansanan ng La Union (PKMLU) was organized as a venue to strengthen the advocacy on the rights and privileges of the sub-sector. Records show that there are 8,232 persons with disabilities registered in the province.

To ensure the best quality of education for the Day Care Children, the Day Care Workers continued to be equipped with knowledge, skills and competencies through conduct of seminars and workshop. There are 561 Day Care Centers in the province with a total of five hundred sixty six (566) Day Care Workers. There is also the Supplementary Feeding Program in the Day care Centers sponsored by the DSWD,

The banner program of the Provincial Government of La Union for the families is the *Medicare Para sa Masa Program*. This aims to ensure that all families have a health insurance which enables the families and their qualified dependents to have access to quality health services without fear of incurring exorbitant hospital bills. For CY 2015, there is a total of 10,487 Philhealth enrollees sponsored by the LGU, PGLU, Congressional fund, and private company (HOLCIM). There is also the provision of health insurance among indigent/low income families thru the NO BALANCE BILLING SCHEME.

2. Goal and Objectives

2.1 Goal:

Restore the normal social functioning of the disadvantaged individuals, families, groups and communities through appropriate social welfare interventions to uplift their living condition and become active participants in the development process

2.2 Objectives:

- 2.2.1 To institutionalize the Early Childhood Care and Development among pre-schoolers
- 2.2.2 To provide social protection and development interventions to children and other disadvantaged sectors
- 2.2.3 To empower the women, senior citizens, youths, persons with disabilities, indigenous people, recovered drug users and released prisoners as partners in the development process
- 2.2.4 To establish residential care facilities for the senior citizens and crises/refuge centers for abused women and children
- 2.2.5 To mainstream the PWDs through the establishment of Computer Assistive Technology Center and Sheltered Workshops
- 2.2.6 To improve the economic status of the clientage groups
- 2.2.7 To strengthen family solidarity and to actively promote its total development
- 2.2.8 To safeguard the welfare and development of children
- 2.2.9 To accelerate economic growth and development in the rural and cultural communities to attain an improved quality of life.
- 2.2.10 To restore the normal social functioning of families affected by calamities/disasters by way of providing quality relief assistance/materials.
- 2.2.11 To provide centers for the senior citizens and the persons with disabilities for them to be mainstreamed in the society.

3. Strategies and Policies

- 3.1 Design and implement a comprehensive community based rehabilitation and treatment program for drug users and dependents and strengthen the capacities of the direct services providers in handling community based rehabilitation and treatment of drug surrenderees
- 3.2 Provision of basic social services directly to the poor, vulnerable and disadvantaged groups based from the result of the NHTS-PR/Listahan 2015
- 3.3 Provision of skills development training and livelihood projects to uplift the economic condition of the marginalized and disadvantaged groups
- 3.4 Network and Converge with National Line Agencies, Non-Governmental Organization and People's Organizations/Private Sectors for complementary assistance
- 3.5 Maintenance of Day Care Centers and provision of developmentally appropriate learning materials
- 3.6 Strengthening and empower frontline services structures/councils/committees
- 3.7 Implement the National Decade Plan of Action for the Filipino Families
- 3.8 Establish centers and homes for the disadvantage populace to seek refuge to
- 3.9 Broaden, strengthen and empower the various marginalized families and groups for their social and economic mainstreaming.
- 3.10 Implement relevant and issuance for the promotion, protection and general well-being of the social welfare clientele groups
- 3.11 Cater evacuation centers to specialized sector
- 3.12 Mapping of Household with the vulnerable sector (PWD, elderly and children)

4. Programs/Projects/Activities

- 4.1 Comprehensive community based rehabilitation and treatment program for drug users and dependents for drug surrenderees
- 4.2 Access to delivery of health seminar of the DCC Children
- 4.3 Child Development Center (CDC) for PGLU employees

- 4.4 Expansion and Establishment of LU Technology and Livelihood Development Center as economic enterprise
- 4.5 Establishment of Bahay Pag-Asa (half-way home) for the children who are victims of violence, children at risk, children in conflict with the law for LU
- 4.6 Establishment of Persons with Disability Affairs Office
- 4.7 Functionality of the PWD Assistive Technology Center
- 4.8 Evacuation Centers/Zones

V. SUB SECTOR: EDUCATION AND MANPOWER DEVELOPMENT

1. Situationer

1.1 School Going Age Population

The province had a total projected school going-age population of 330, 188. As to school level, the elementary (6-12 years old) had the highest share of 143,975 children, while the secondary (13-16 years old) posted at 65,926 students and the tertiary level (17-24 years old) accounted 152,937 students in the year 2015.

For the SY 2015-2016 there were a total of 93,822 pupils enrolled in elementary and 7 percent of it is enrolled in private elementary schools. It also indicates that there was a decrease in enrollment of public elementary schools with the same situation in the enrollment of the private elementary school in La Union.

As per report of the Department of Education enrolment in pre – elementary shows an increasing trend from SY 2013 -2014 to SY 2015 – 2016 with an average yearly increase of 5.33 percent or 606 pupils.

Though the number of classroom is increasing, there are still classroom needs in the secondary level based on the record of classroom – student ratio 1:44.

1.2 Education Manpower

Base on the Basic Education Information System of the Department of Education the province of La Union reflects a generous teacher provision with a teacher – pupil ratio of 1:33 and 1:32 for secondary level in SY 2014 – 2015. This indicates that the province had an adequate number of teachers both for public elementary and secondary level. However, there are still schools handling combination classes and multi-grade classes in the province particularly in the rural hinterlands because disparity still exists in the allocation of said teachers against school manpower requirements. Under the Provincial Manpower Augmentation Program there are existing 17 PSB teachers to augment the teacher needs in schools with combination and multi-grade class.

2. Performance Indicators

2.1 Elementary. In elementary level, records shows that there is an improvement on net enrollment, repetition rate, cohort survival rate and graduation rate. Drop-Out Rate gradually decreased from 0.59% to 0.29% in the school year 2013-2014 to school year 2015-2016. This marks a good indication.

TABLE 7. PERFORMANCE INDICATOR AT THE ELEMENTARY LEVEL			
Performance Indicators	2013-2014	2014-2015	2015-2016
Gross Enrollment	103.42%	103.93%	
Net Enrollment	91.52%	93.67%	
Cohort Survival Rate	82.31%	86.79%	99.52%
Retention Rate	95.93%	96.81%	100.65%
Repetition Rate	.55%	.82%	0.25%
Drop Out Rate	.53%	.29%	.84%
Completion Rate	81.63%	86.48%	99.52%
Graduation Rate	81.63%	86.48%	99.52%
Achievement Rate	69.72%	73.02	69.59%

2.2 *Secondary*. On the other hand, all of the performance indicators of secondary level were noted to have improved from school year 2013-2014 to school year 2015-2016.

TABLE 8. PERFORMANCE INDICATOR AT THE SECONDARY LEVEL			
Performance Indicators	2013-2014	2014-2015	2015-2016
Gross Enrollment	88.17%	88.28%	
Net Enrollment	72.18%	71.31%	
Cohort Survival Rate	8052.00%	83.93%	87.65%
Retention Rate	93.05%	94.29%	95.55%
Repetition Rate	1.45%	1.33%	.36%
Drop Out Rate	3.22%	2.49%	3.00%
Completion Rate	78.71%	80.75%	85.09%
Graduation Rate	78.71%	80.75%	85.09%

2.3 *Literacy Rate*. Literacy rate of La Union in CY 2000 was pegged at 95.89 percent, with more males gaining high literacy rate than females.

2.4 *Non Formal Education*. The sector also covered service in Non – Formal Education through Alternative Learning System (ALS) in the elementary, secondary and special needs education. Based on record submitted by the Department of education, there is an increase of 2.31 percent in the enrollees – completers under this program from 5,140 in SY 2013-2014 to 5,259 in SY 2014-2015 and a decrease of 14.73 percent or 775 in SY 2015-2016 with a figure of 4,484.

3. Issuance and Challenges

- 3.1 Deteriorating quality of education services rendered attributed by critical factors such as:
 - 3.1.1 There are still schools at the elementary level particularly at the rural hinterlands wherein teachers handle multi grade classes. These showed that though the province recorded a standard ratio of 1 teacher for every 30 pupils, a disparity still exists in the allocation of said teachers against school manpower requirements;
 - 3.1.2 Continuing advancing of technology which requires teachers and administrators for a continuing enhancement of their knowledge and skills;

- 3.1.3 Inadequacy of primary instructional facilities/ equipment's (e.g. computer, etc) and additional text books both at elementary and secondary schools;
- 3.1.4 The continuing increase of school-age-population which necessitates the construction of more school classrooms and its facilities particularly comfort rooms which is extreme in every schools. Said situation is further aggravated by the presence of some existing classrooms which are already dilapidated and/or condemnable.
- 3.2 Progressive growth of external factors that affect learning to include, among others, the following
 - 3.2.1 Proliferation of recreational houses within the periphery of school premises affect learning;
 - 3.2.2 Threat of drug addiction/abuse which is centered to the young mind of the youth due to curiosity or ignorance.
- 3.3 Increasing educational expenses continuously threaten the chances of students in finishing their degrees. With the impoverished state, parents could hardly pursue their children's education;
- 3.4 Insufficiency of funds for the effective implementation of special education/learning programs which include the NFE courses and the SPED Programs;
- 3.5 Inadequate coordinative efforts in the sport program hindering the full development of said program in the province.

4. Goals and Objectives

- 4.1 To ensure development of potentials of the individual where education and manpower development are provided based on their needs and aspirations.
- 4.2 To provide universal access to quality education to all school age children in the province;
- 4.3 To improve the quality of education;
- 4.4 To ensure effective coordination and cooperation of stakeholders in the provision of the educational services and facilities.
- 4.5 To promote systematic coordinative mechanism among stakeholders in the implementation of special education programs

5. Strategies and Programs/Projects/Activities:

- 5.1 Strengthening/expansion of the educational assistance program towards ensured access of quality education and training opportunities for all, thru:
- 5.2 Expand scholarship assistance program for poor but deserving students;
- 5.3 Make funds available for the educational requirements such as textbooks, computers and the like;
- 5.4 Expand services to depressed barangays particularly the hinterlands with the aggressive implementation of the school in every barangay;
- 5.5 Reduce number of non – readers by improving the achievement level of pupils/students in the different subject area;
- 5.6 Conduct periodic evaluation of pupil/student performance as basis in improving instructions and performance level of pupils/students which will reduce the number of non-readers thru improved performance level.
- 5.7 Develop more rational allocation framework for school buildings and its facilities
- 5.8 Continuing program for the enhancement of the human resource development of school personnel;
- 5.9 Identity fund sources to be tapped as funding support in the scholarship and competency upgrading programs for school personnel;

- 5.10 Provision of incentives and upgrade competence of teachers handling multi-grade classes;
- 5.11 Comprehensive program to reduce the rate of illiteracy among young adults in the Province;
- 5.12 Allocate funds for NFE courses education;
- 5.13 Strengthen the SPED Programs;
- 5.14 Strengthened functional linkages in instruction, research and extension;
- 5.15 Transfer school site ownership from LGU's /private individuals to the school/Dep.Ed.;
- 5.16 Expanded youth, cultural, sports and physical fitness programs in the province.
- 5.17 Scholarships Programs
- 5.18 Introduction of Values Orientation in the curriculum

VI. SUB-SECTOR: HOUSING, HUMAN SETTLEMENTS

1. Situationer

One of the significant phenomena that have characterized the development process of the province has been the explosive and unabated growing population due to natural birth and rural-urban migration and in-migration. In 2010, the Census of Population has a total population of 741,906 persons. This is 83,961 persons added to the province’s population since the 2000 Census of Population of 657,945 with a 1.21 percent growth.

In 2010, the province has a total of 159,031 occupied dwelling units for 163,820 households giving a ratio of 1.03 households per housing unit compared to 1990 of 89,900 occupied dwelling units or a ratio of 1.14.

Table 1. HOUSEHOLDS, OCCUPIED HOUSING UNITS, LA UNION: 1990-2010			
YEAR	HOUSEHOLDS	OCCUPIED HOUSING UNITS	%
2010	163,820	159,031	97.08
2000	127,579	123,994	97.19
1990	102,139	97,673	95.63

Source of Data: Philippine Statistics Authority (1990-2000-2010 POPCEN)

Of the 163,820 households in the province, 7,702 or 4.70 percent of lots are being rented, 35,016 or 21.38 percent are being occupied for free with consent of the owner and 1,220 or 0.74 percent of lots are being occupied by illegal settlers for free without the consent of the owner or 0.3 percentage points decreased from the CY 2000 data of 1.04. Refer to Table 1.

Table 2. NUMBER OF HOUSEHOLDS, BY TENURE STATUS OF LOT, LA UNION: 1990-2010						
TENURE STATUS OF LOT	1990	%	2000	%	2010	%
Owned/Being Amortized	89,900	88.02	78,613	61.62	119,358	72.86
Rented	3,754	3.67	6,877	5.40	7,702	4.70
Rent-free with consent of owner	8,449	8.27	35,739	28.01	35,016	21.38
Rent-free without consent of owner	36	0.04	1,326	1.04	1,220	0.74
Not Applicable	-	-	2,698	2.11	492	0.30
Not Reported	-	-	2,326	1.82	32	0.02
LA UNION	102,139	100.00	127,579	100.00	163,820	100.00

Source of Data: Philippine Statistics Authority (1990-2000-2010 POPCEN)
PSA data census on household is 2010

In 2000 and 2010 census, still the City of San Fernando, the regional center of Region I has the highest recorded dwelling units followed by Bauang and Agoo which are the two fast growing first class municipalities. In 2010, the census results show that in Bauang, a total of 225 lots are being occupied by illegal settlers the highest among the municipalities, followed by Agoo and the City of San Fernando with 148 lots and 141 lots, respectively. Burgos being an upland municipality has the least occupied housing units at 1,610 or 1.01 percent followed by Bagulin, Santol and San Gabriel with 2,530; 2,661 and 3,433, respectively.

For CY 2010, the City of San Fernando with 26,154 has the highest number of households by type of buildings and tenure status of lots, followed by Bauang and Agoo with 15,920 and 12,619 respectively. Upland municipalities still have the least number of households by type of buildings and tenure status of lots; they are the municipalities of Burgos with only 1,633 and Bagulin with 2,572. Same scenario is seen in CY 1990 and 2000, City of San Fernando is still the highest and Burgos being the lowest. Refer to Table 2.

Census results also show that out of the 119,358 households, 72.86 percent own their housing units and lot, 4.70 percent renting, 21.38 percent who occupied housing units and the lot for free with consent of the owner, 0.74 percent occupying housing units and the lot for free without consent of the owner and 0.32 percent not reported. (Refer Table 2).

Squatters' phenomenon in the province is almost located along the coastal areas, Philippine National Railways (PNR) railroad tracks, danger zone and lots without consent of owners. These communities/areas are characterized by unsanitary conditions and health hazards, extreme overcrowding and congestion, and limited or no access to basic urban services, although resettlement and relocation program have been implemented to 210 qualified families displaced due to the construction of the San Fernando Diversion Road. For its expansion, where two-way tricycle lane is being proposed, lot and household survey to almost 347 affected squatters were conducted. Relocation of 80 qualified informal settlers in the municipality of Bangar due to the proposed Integrated Amburayan River Flood Control Project cum Livelihood Project and families affected by typhoon as beneficiaries for the proposed Resettlement Area at Damortis, Sto. Tomas.

The City of San Fernando, a major urban/regional center, accounted 20 percent of the total urban housing needs in the province.

Total built-up occupies 9,146 hectares which is 6.13 percent of the province's total land area.

In 2010, the province had a housing backlog of 5,256 units.

2. Issues and Challenges

- 2.1 High Cost of Housing Units
- 2.2 Unaffordable long term home financing
- 2.3 Presence of informal settlers in private owned lots
- 2.4 Squatting
- 2.5 Need for more housing and settlements

3. Goal

“La Union a Slum Free Province”

4. Objectives

- 4.1 To provide the people, especially the lowest 30%, with safe, decent, affordable and sanitary housing units and amenities

5. Strategies

- 5.1 Full Implementation/Strict Compliance of Urban Development and Housing Act (UDHA) Law
- 5.2 Increase accessibility of homeownership to lower income families
- 5.3 Provide stale, sustainable and viable long and medium-term home financing
- 5.4 Regularization/provision of security of tenure for informal settlers
- 5.5 Prevent unauthorized and unplanned squatting
- 5.6 Identification of settlements outside hazard prone areas.
- 5.7 An evacuation plan to educational institution should be in place. Responders to prioritize these areas.

6. Programs/Projects/Activities

- 6.1 Implementation of IRR of the SP Ordinance # 021-2012 otherwise known as “An Act Creating the Provincial Housing Board of the Province of La Union”
- 6.2 Creation of Provincial Housing and Development Office including Estate Management Unit and Designation of Housing Officer
- 6.3 Formulation of Provincial Shelter Plan 2017-2026
- 6.4 San Fernando City Resettlement Project (Phase II), District I
- 6.5 Proposed Provincial Employees Housing Project
- 6.6 Weatherproof Design (Elevation, Strength (atleast 350 kph wind load)

D. SECTORAL DEVELOPMENT AREA: PEACE AND ORDER

1. Situationer

The Province of La Union was generally peaceful for the past three years (CY 2013-2015) as evidenced by the continuous decrease incidence of index crimes. However, for the past 6 months right after President Duterte have waged an all-out war against illegal drugs , a few isolated killing incidences have cropped involving suspected drug personalities . According to the LUPPO Report these crimes are now considered as Crimes Under Investigation and extensive operations are now being done to solve these crimes. Furthermore, drug personalities who have surrendered has reached a total of 5,123 provincewide while 220 barangays out of the 576 barangays of the Province are now drug affected. As of October 2016, Total Crime Volume is 4,854, Index Crimes 412, Non-Index Crimes 4,442 and the Total Crime Solution Efficiency is 86%.

The Province remains free from the threat of insurgency and no armed activity was monitored or reported. However, several Rebel Returnees from other provinces chose to surrender here in the Province of La Union under the CLIP Program because according to them “it is much safer to surrender here in La Union than in their own provinces”. A manifestation that more than any provinces here in Region1, La Union is the safest and most peaceful.

For Jail Management, the La Union Provincial Jail is responsible for the custody of 185 inmates. Initiatives for the fastracking of the court cases of the said inmates are being done by the LUPJ in coordination with the DOJ through the Council of the Five Pillars of Criminal Justice System.

2. Goals and Objectives:

2.1 Goals:

1. To sustain a peaceful and secured environment within the principle of human respect, social justice and cooperation;
2. To maintain good peace and order situation conducive for investment;
3. To protect the rights of crime victims belonging to the marginalized sector;
4. To enhance the link among the Five Pillars of Criminal Justice System.
5. Drug Free La union by 2017 and beyond.

2.2 Objectives :

1. To increase Crime Solution Efficiency Rate ;
2. To recruit and empower additional force multipliers from the competent LGUs/barangays;
3. To minimize if not totally eradicate the use of the tri-boundaries of La Union, Ilocos Sur and Benguet as drug routes/transhipments;
4. Totally eradicate the illegal drug trade in the province;
5. To increase conviction rate and reduce the incidence of case dismissals in court due to technicalities from the law enforcers' end;
6. To enhance the Jail Management and Facilities.
7. Neutralize illegal drug demand and supply

3. Strategies and Policies:

1. Anti-illegal drug transformation Road Map
2. Sustain and strengthen the tri-peace structures – Peace and Order Council, Anti-Drug Abuse Council and the Council of the Five Pillars of Criminal Justice System;
3. Continue to establish innovations in the fight for illegal drugs and other forms of criminality;
4. Keep the Prosecutors abreast and knowledgeable of new laws, etc. for efficient, and effective deliverance of justice;
5. Capacitate the investigators of the PNP to avoid technicalities in the conviction of crimes involving them;
6. Pursue and adopt the Justice on Wheels Program for speedy trials of cases;
7. Upgraded Jail Facilities and management innovations.
8. PGLU Anti-Illegal Drug Transformation Roadmap
 - 8.1 Intensify anti-illegal drug awareness
 - 8.2 Increase awareness and access to treatment rehabilitation and aftercare
 - 8.3 Provide alternative livelihood projects to illegal drug traders.
 - 8.4 Intensify intergovernmental relations for anti-illegal drug campaign.

4. Programs/Projects/ Activities :

1. Peace, Order and Public Safety Plan Update;
2. Joint Meetings of the Peace and Order Council, La Union Anti-Drug Abuse Council and the Council of Five Pillars of the Criminal Justice System;
3. Police Visibility in Public Places and Schools;
4. Continuous Police Operations;
5. Updating of the Comprehensive Anti-Criminality Action Plan
 - Project Double Barrel
 - “Operation Tokhang”;
6. Justice on Wheels;
7. Capacity Training Program;
8. Strict Implementation of the Special Laws;
9. Perimeter fencing of the La Union Provincial Jail;
10. Procurement of firearms for jail guards;
11. Establishment of La Union Special Drug Education Center;
12. La Union Satellite Drug Rehab Center;
13. Alternative Livelihood Projects.

E. DEVELOPMENT SECTOR: BUSINESS FRIENDLINESS AND COMPETITIVENESS

I. SUB-SECTOR: AGRICULTURE

1. Situationer

In terms of Crops, Palay remains to be the major cash crop of the province. The total area planted with palay is 38,693 hectares, of which, 24,596 hectare were irrigated while the remaining 14,097 hectares were rainfed. The province's production for the year 2015 is 187,148 Metric Tons where only 86,061 Metric Tons were consumed giving the province an average sufficiency level of 124%. While ricelands in the province is located basically at low –lying areas which are susceptible to severe flooding and siltation to farm and river is most often caused by soil erosion or sediment spill.

In 2015, corn sub-sector has yielded 27,508 metric tons with an income generated of Php229 Million employing 1,238 people. The largest area planted with yellow corn can be found in San Juan of District I with an area of 630 hectares while Tubao of District II has the biggest production of green corn at 1,295 Metric Tons.

In terms of fruit trees production, the province is 166% sufficient. Mango dominated all the fruit trees with a total production of 32,250 Metric Tons. District II with an area of 2,389 almost doubled the area of District I at 1,261 hectares. Bauang of District II has the widest area of fruit trees planted (541 has.) with a production of 7,361 metric tons while Bagulin and upland area of the same District has the lowest produce of 1,052 metric tons with 82 hectares covered.

Fruit vegetables yielded 50,192 Metric Tons in production of which only 23,600 Metric Tons were consumed giving the province an average sufficiency level of 213%. Legumes had a total production of 4,311 Metric Tons while its average sufficiency level is 91%. The total production for root crops is 12,915 Metric tons, against a consumption of 5,804 Metric Tons giving the province an average sufficiency level of 223%. Leafy vegetables had a total yield of 7,070 Metric Tons from the total area planted of 707 hectares giving the province a 225% sufficiency level.

The High Value Crops sub-sector registered 4,378 man-years for the year 2015 which represents 21.41% increase vis-a-vis the CY 2014 output. Rice sub-sector posted a slight increase in income generated at 6% which utilized 12,381 manyears. Manyear utilization for CY 2015 under the corn sub-sector was recorded at 1,238 manyears giving an income of Php229 Million. In summary, the total manyears generated by the agriculture sector of the province is 17,997 manyears which is around 7% higher to the 16,840 posted in CY 2014.

As for Fishery, fish production was recorded at 18,087.78 metric tons in 2015 with a total income of Php 1.61 Billion giving employment to 13,365 people. Sufficiency level figured at 105 percent. The Municipality of Sto. Tomas of the second district has the highest fish production of 3,821.57 metric tons followed by Aringay at 3,138.71 metric tons.

As for Livestock and Poultry, the province's total production of 36,107.43 metric tons is sufficient to fill the demands based on the computation of production against consumption which reflects a sufficiency level of more than 100% in all livestock commodities.

Poultry production yielded 16,380.45 metric tons while consumption is only at 7,600.64 metric tons thus, the province is sufficient in chicken meat at 216% average sufficiency level while chevon production is recorded at 188.52 metric tons giving the province 104.19% sufficiency level. Carabeef production likewise yielded 701.22 metric tons while consumption is

only at 443.67 metric tons while its sufficiency level is at 158.05%. Likewise, pork production reached 17,459.86 metric tons giving the province a 150.8% sufficiency level. The province provides technical support on the existing thirteen (13) slaughterhouses, four (4) private-owned operated abattoirs, 1 meat processing plant, 1 poultry dressing plant and 5 feed mills.

2. Goals and Objectives

2.1 Goals:

- 2.1.1 Uplift rural communities towards higher agricultural productivity and income of farmers, fishers and raisers in a sustainable environment.

2.2 Objectives:

By the end of 2019:

For Crops and Fisheries:

1. To increase production by 10% per cropping season
2. Provide alternative livelihood for farmers and fisherfolks
3. Sustain competitive agricultural and fishery prices all year round
4. Create a pool of technically competent and equipped AEWs
5. Assist in the Good Agricultural Practices/Organic Agriculture certification
6. Assist farmers to be established as farmers learning center in the province
7. Seedlings production of nurseries accredited by the BPI
8. Establishment of Organic papaya and dragonfruit orchard intercropped with edible landscaping at Bungol
9. Establishment of multi-storey farm at Bungol
10. Establishment of Floating Bahay Kubo at Sta. Rita Fish Farm
11. Develop Self-reliant cooperatives/RBO's
12. Increase in millionaire and billionaire cooperatives
13. Adaption of farm mechanization to minimize production and postharvest loss
14. Develop all weather farm to market roads
15. Availability of low-cost water pumps and other small scale irrigation systems
16. Improvement/ repair of National irrigation System
17. Improve/increase office performance in terms of effectiveness and efficiency
18. To attain food self-sufficiency, increase income of farmers and generate more off-farm employment opportunities
19. To modernize agriculture through the use of farm machineries, facilities with effective and efficient all weather farm-to –market roads and bridges support
20. To strengthen markets linkages and promote agri-business projects
21. To improve production in the fishery sector for sustained sufficiency level in the province
22. To increase actual areas irrigated by system and expand service areas for irrigation for higher crop yield
23. To enhance capability of cooperatives province wide and encourage them to engage in agri-business
24. To intensify extension activities and promotion of research results

For Livestock:

1. To Maintain FMD and Avian Influenza Free Province
2. To increase production of livestock and poultry for the next five years
3. to decrease selling of "hot meats" in the local market for the next 5 years
4. To hire new veterinarians and quarantine officers for the next five years
5. To deliver veterinary and other related services to farmers so as to contribute to uplift their economic status
6. To maintain good level of security vs. priority livestock diseases
7. To induce production of high quality breedable animals

3. Strategies and Programs/Projects/Activities

For Crops and Fisheries:

1. Production support Services in terms of Seeds and Seedlings Fingerlings Production and Distribution/Sale
 - Production, procurement and distribution/sale of seedlings, fingerlings and quality seeds (palay, vegetables, corn)
 - Improvement and maintenance of Provincial Nurseries and facilities
 - Seeds Subsidy and Fertilizer Assistance
 - Seed production and utilization
2. Preservation and maintenance of soil fertility
 - Trichoderma production, metarizium anisoplae and vermicompost production
 - Collection of soil samples and conduct of soil sampling analysis
3. Crop Protection and Diseases Management
 - Conduct of IPM FFS and establishment/monitoring of Bantay Pest Brigade
4. Provision of Post Harvest Facilities and Equipments and Fishing gears paraphernalia
 - Procurement, institutionalization, distribution, monitoring and evaluation of farm implements, post harvest facilities, fishing gears paraphernalia, seaweeds nursery and smokehouse
 - Conduct of Technical Briefings in the proper handling and operation of farm implements/equipments
5. Establishment of techno demo sites
 - Conduct of techno demo on FFS on Rice, Corn, HVCDP, Cassava and Fisheries
6. Livelihood/Capability trainings
 - Conduct of Livelihood/Capability /Entrepreneurship Trainings
 - Soft loan financial assistance to farmers/fisherfolks as initial capital
 - Provide livelihood trainings and entrepreneurship and provide soft loan as startup capital
7. Capacitate farmers on the new technologies
 - Establish and Update Farmers profile through Farmers registry system
 - Promote cluster production of high value crops/fisheries
 - Create linkages of market for agricultural products and operationalize Bagsakan Center
8. Capacitate AEW's, promotion of qualified and competent technical staffs; provision of transportation support services and documentation equipments
 - Conduct of Capability Building for AEW's, TOT Trainings, attendance to National Summit and Congress
 - Purchase of motorcycles, vehicles and documentation equipments
9. Implementation of Organic Agriculture Program and GAP

- Farmers Training on GAP and Organic Agriculture
 - Provision of soft loan financial assistance to GAP/OA practitioners applying for certification
 - Technical assistance to farmers/fisherfolks with regards to GAP/OA practices
10. Partnership with ATI in the evaluation of farmers for the accreditation of Farmers Learning Center
 - Vegetable production training of farmers, Farm records training and farm layouting
 11. Capacitate nursery staffs in sexual and asexual propagation
 - Vegetable production training / budding and grafting training of nursery staffs
 - Procurement of budding/grafting supplies/materials and equipments
 12. Utilization of the green/screen house and the 400 sq m area of HVCDP
 - Improvement /establishment of water system at Bungol
 - Improvement of the training center
 - Maintenance of the dragonfruits, rambutan, lanzones, papaya, malunggaytrees, etc.
 13. Vegetable and fruit trees production
 - Vegetable production
 14. Production of exotic fingerlings
 - Establishment of exotic fingerlings production
 - Improvement of the Floating Bahay Kubo
 - Production of aquaculture fishes
 15. Capacitate cooperatives/associations in the tourism circuits
 - Skills training for specific farm enterprise models for cooperatives/associations
 - Industry training for enterprise development
 - Conduct of Leadership/Management Training
 - Conduct continues education and updates on Cooperative
 - Conduct Records/Simple Bookkeeping
 - Coordinate and strengthen linkages with CDA/DOLE/SEC/BIR to assist coops and RBO's in registration
 - Provide soft loan financial assistance
 - Capacitate C/MCODO's
 16. Encourage coops/RBO's by giving incentives and awards
 - Conduct of Coop Month Celebration/RBO's Congress
 - Search for Outstanding Cooperatives/RBO's
 - Awarding/Recognition of Millionaire/Billionaire Cooperatives
 17. Capacitate farmers on the operation and maintenance of equipment/machineries/facilities through hands on training
 - Hands-on training on the operation of equipments/machineries
 18. Endorsed to DA/DPWH/DILG/LGU's the construction/improvement of FMR's/widening of barangay roads, etc.
 - Monitoring/evaluation of earth dams, SWIP, FMR's, etc.; identification of FMR's rehabilitation/construction; preparation of POW/Project Proposal
 19. Identification and establishment of productive dug wells and shallow tube wells
 - Procurement/construction and distribution of water pump powered by solar, dug wells and STw's
 20. Capacitate farmers in water management
 - Farmers training on water management; reforestation of watershed systems; improvement of irrigation systems, water dams and canals
 21. Integrated Pest Management and Climate Change Resistant Varieties
 22. River Flood Control Program

For Livestock:

1. Localization of RA 8485 or Animal Welfare Act and RA 9482 or Anti Rabies Act
 - Mandatory creation of Municipal Veterinarian
2. Localization of RA 10536 an Act Amending RA 9296 or Meat Inspection Code of the Philippines
 - Strict enforcement of the Meat Inspection Code of the Philippines
3. Animal Quarantine Checkpoints
 - Strengthening of the 24/7 Animal Quarantine Checkpoints
4. Retooling and enhancement training of all technical personnel in the municipal and provincial level
 - Partnership with the Department of Agriculture
5. Mandatory creation of Meat Inspection and Animal Services Division of the Office of the Provincial Veterinarian

II. SUB-SECTOR: TOURISM**1. Situationer**

Recognizing the dominance of the tourism industry vis-a-viz its role in the circle of economy, the Province of La Union thus its tourism platform taking into consideration its strategic location (as gateway to Ilocandia and Baguio City) and renown as a place in Ilocandia where the most number of conveniences, supplies and support facilities for visitors are available like a) shopping convenience and personal services, b) variety of hotel accommodations and restaurant facilities, c) entertainment facilities, souvenir and gift shops, d) parks, beaches, forest and other nature centers, e) transport terminals such as airport, seaport and land transportation, f) central bank, commercial and rural banks, and foreign currency exchange, etc.

The stretch of white and gray sand beaches along the towns of La Union is the main attraction to tourists. In the province tourist belts are located along the shores of San Juan, San Fernando City, Bauang and Agoo. Its calm crystal water is ideal for water skiing, snorkeling, swimming, scuba diving, wind surfing and boating. Its gifted multitude scenic landscapes is a tourism haven as well, and eco-tourism development. Surfing is now a tourism booster in the province owing to its long waves best for long board surfing. The stable peace and order situation and the tourism areas in La Union are the main attractions to local and foreign tourists.

Tourists continue to visit La Union. Since 2015, total tourist arrivals continued to post positive growth by 48 percent. It grew to 392,649 tourist arrivals compared to CY 2014 at 220,270 tourist arrivals. Domestic tourists continued to account for a major bulk of tourists visiting the province.

While environmental degradation is most commonly associated with the activities of humans, the fact is that environments are also constantly changing over time and that cause environmental degradation by unplanned tourism projects/activities.

2. Goal and Objectives

2.1 Goal:

1. To develop tourism as a major and sustainable socio-economic activity of the province.
2. To have a 100% submission of Tourism Statistics.
3. To have a codified tourism policy.
4. To have an active tourism council with more private sector members.
5. To have a 100% submission of report on Business Registration among component LGUs.
6. To have full implementation of the Tourism Council/Tourism Office with plantilla positions dedicated for LEIPO.
7. To develop renewed sisterhood/twinning ties with LGUs/foreign states with existing MOA and active/regular meetings

2.2 Objectives:

- 2.2.1 To develop, promote and preserve tourist attractions in the province to increase tourist arrivals in the province;
- 2.2.2 To produce an accurate Statistics Report
- 2.2.3 To codify ordinances pertaining to tourism
- 2.2.4 To re-activate the Tourism Council
- 2.2.5 To maintain data on investments
- 2.2.6 To establish an operational office for investment promotions
- 2.2.7 To foster ties with the LGUs/States and exchange of best practices along tourism and investment
- 2.2.8 To increase tourist arrivals
- 2.2.9 To create new major sources of income for the populace
- 2.2.10 To attract investment in the tourism sector
- 2.2.11 To generate community awareness and support on tourism
- 2.2.12 To develop manpower ready for providing good tourism services

3. Strategies and Policies

- 3.1 Development, preservation, protection, conservation and/or restoration of tourist resources and attractions.
- 3.2 Request SP to create ordinance mandating all tourism establishments/Accom stocks to submit tourism statistics report
- 3.3 Request SP to codify Tourism Ordinances
- 3.4 Revisit Ordinance creating Tourism Council and conduct a 3-day workshop with Tourism Stakeholders
- 3.5 Create ordinance mandating all LGUs to submit report of business registration
- 3.6 Create plantilla positions for LEIPO/Tourism Office
 - 2.2 Revisit sisterhood ties other than existing
- 3.7 Development, protection and preservation of tourist attractions in the province, both manmade and natural, with the provision of infra and utilities support
- 3.8 Retrofitting of Building
- 3.9 Prioritization of Tourism Centers in Rescue

4. Programs/Projects /Activities

- 4.1 Public hearings and Consultation with NGAs, Tourism Statistics Training, tourism establishment monitoring and documentation
- 4.2 Tourism Summit
- 4.3 Creation of Investment Portfolio and Brochure
- 4.4 Sisterhood/twinning activities
- 4.5 Building Permits
- 4.6 Hazard/Response Priority Maps

III. SUB-SECTOR: TRADE AND INDUSTRY

1. Situationer

As of CY 2015, there are 8,476 establishments operating in the province. Majority of these establishments are under the wholesale and retail trade and Repair of Motor vehicles and Motorcycles with a total no of 3,595.

The 19 Major manufacturing establishments that exist in the province are as follows: the Cement Factory in Bacnotan (HOLCIM), Coca-Cola Plant in San Fernando City, Pepsi Cola Plant in Rosario and the five (5) redrying and flue-curing plants (3 in Agoo, 1 in Bacnotan and 1 in Tubao). Steel Corporation, Ice Plant, Soil Tech Agricultural Products, Pilipinas Shell Petroleum Corporation, Petron, Caltex and Shell Depot are also found in San Fernando City. Other establishments found in the Province include B-Meg Satellite Plant (Feed mill) in San Juan and Bacnotan, Bauang Private Power Plant Corporation and the Shell Liquefied Petroleum Filling Station in Rosario.

Out of the 8,476 establishments in the province, more than one-half or 81.33 percent or a total of 6,894 are under Services, 17.17% or 1,455 are for Industry and 1.49 or 127 for agricultural industries. Please see Figure 10 below. More establishments are found in District 1 with a total of 4,637 against 3,839 establishments in the second district. San Fernando City, being the region's and the province's business center, have the most establishments with 2,625 or 56.61 percent of the districts total while Bauang in the 2nd District have the most at 821 or 32 percent of the districts total.

The manufacturing business in the province is mainly composed of the different cottage industries. They are the income-supplementing activities where people can engage in even during off-season. These are handicrafts, metal crafts, furniture, garments, ceramics and food processing, etc.

Commercial activities in the province consist mostly of wholesale and retail business. Again the City of San Fernando, the business center has the highest share with 32 percent of the provincial total.

2. Goal and Objectives

2.1 Goal:

- 2.1.1 To generate investments, employments and exports, and to make La Union as the investment destination in the region.

2.2 Objectives:

- 2.2.1 To create new major sources of income particularly in the rural populace as a way to increase the absorption of the rural labor force.

- 2.2.2 To increase the level of production of cottage and small scale industries opening opportunities to link in the domestic and international markets.
- 2.2.3 Develop and support MSMEs Programs
- 2.2.4 To promote aggressively the industrial estates
- 2.2.5 To develop and promote incentives and services supportive to trade and industry
- 2.2.6 To develop and promote exportation strategies
- 2.2.7 To streamline the implementation of SME policies and regulations
- 2.2.8 To identify High Risk Investment Zones

3. Strategies

- 3.1 Provide SMEs access to comprehensive and focused support for enhancing managerial and technological capabilities, tapping business opportunities, and becoming competitive in the local and international markets.
- 3.2 Strengthen support to the growth industries that are active in the international markets in order to sustain and enhance their competitiveness and improve their access to the international market.
- 3.3 Develop SME financing support programs strengthen and build the capabilities of institutions that generate and implement programs for SMEs development.
- 3.4 Updating of the Provincial Investment Incentive Code and its Implementing
- 3.5 Development and promotion of incentives and services supportive to trade and Industry.
- 3.6 Revisit share Services Facility (SSF) in every municipality
- 3.7 Mapping Economic Zones and Investment Areas

4. Programs/Projects/Activities

- 4.1 Entrepreneurship Promotion focused on Agri-Tourism
- 4.2 Support Mechanism for SMEs
- 4.3 Updated Provincial Invested Incentive Code
- 4.4 Promotion of SMEs thru trade fairs, expositions, etc
- 4.5 Provision of SSF by tourism circuit
- 4.6 Mitigation Measures: River Bank Flood Control and Elevation of Vulnerable Buildings

IV. SUB-SECTOR: INFRASTRUCTURE AND UTILITIES

1. Situationer

There are four (4) main roads that linked the different municipalities of the province. From south to north is the Ilocos Highway; from east to west are the Naguilian Road, Aspiras Highway and the Kennon Road, which traverse peripherally the town of Rosario at its southern part. The province has a road network measuring 1,735.596 kilometers. Barangay roads have the greatest share in the networks which comprise about 61% of the total or 1,059.003 kilometers. The remaining is distributed as follows: National Road (14 % or 247.87 kilometers), Provincial Road (15 % or 271.904 kilometers), and City/Municipal Roads (9 % or 204.034 kilometers). However, 91.00% (219.747 kilometers) of the provincial road length have already been paved, 0.85% (6.11 kilometers) were asphalted and 3.79% (31.509 kilometers) and 1.31% (9.21 kilometers) are still gravel and earthfill/unsurfaced roads, respectively. Majority of 9,752.98 lineal meter bridges of the province is made of concrete with a total length of 1653.95 meters. Other existing bridges are steel (422.8 meters), composite (569.38 meters), bailey (383 meters), timber (572 meters) and footbridges (1.273 meters).

As for potable water system, the main sources of water supply of the overall households in the province are shallow wells, deep wells, Spring Development, and rain collector. The waterworks system operating under the Local Water Utilities Administration (LWUA) are the Metro La Union Water District, Balaoan Water District, Naguilian Water District, Agoo Water District and the Rosario Water District.

For Irrigation System, the province had a total service area of 4,968 hectares. The Amburayan River Irrigation System in Sudipen and NIA- Masalip in Agoo are the two main sources of irrigation in the first and second district, respectively. There are still remaining 452 hectares that need irrigation development and 5,400 hectares are potential for irrigation. National Irrigation System in the province had a total service area of 4,837 hectares. About 203 hectares still need irrigation development while 5,040 hectares are considered potential for irrigation.

2. Goal and Objectives

2.1 Goal:

- 2.1.1 To achieve substantial socio-economic infrastructures, provide technical support to agri-tourism facilities and enhance the capacity of personnel in the delivery of goods and services.

2.2 Objectives:

- 2.2.1 Guarantee inter-department collaborations for the maintenance of roads, bridges, buildings and facilities
- 2.2.2 Ensure that agri-tourism infrastructure support is provided and maintained
- 2.2.3 Provide technical assistance to all municipalities on matters of public works and other related engineering works
- 2.2.4 To provide easy access between LGUs and minimize travel time
- 2.2.5 To back-up communication during emergencies

3. Strategies and Policies

The strategy for infrastructure development is anchored on the improvement/rehabilitation of existing road networks leading to agri-tourism sites and depressed areas where most of the disadvantaged groups are located. Other areas of concern will be the simultaneous assistance in the improvement of barangay feeder roads particularly in the upland hinterlands. This is in line with the principle of self-reliance. It is expected that the province's agricultural production areas and tourism activities will have a development acceleration, thus, ensuring the produce of the farmers to be delivered in the market with high and profitable cost and healthy tourism industry. Other strategies include conduct of feasibility studies and hands-on workshops related in the delivery of goods and services. The disruption of transportation and communication services in the province is a hurdle and identify an alternate routes for road network (CELUMEPA Circumferential Road). And necessary to provide back-up system for communication, charging station for cellular phones, and warning bulletins in Iloko.

4. Programs/Projects /Activities

- a. Special Local Road Fund
 - a.1 Cupang –Poblacion Roads
 - b.1 Santol-San Gabriel Roads
 - c.1 Pagdalagan-Bungro- Roads
- b. KALSADA Program
- c. Construction/Improvement of roads, bridges, buildings and other facilities
- d. Construction/Improvement of tourism related activities
- e. Procurement of new equipment, RTK instrument and conduct of actual workshops
- f. Expansion of Diversion Road to Bauang
- g. Provision of Emergency Communication System with Stand Alone Charging Stations
- h. Text Blast
- i. Radio Bulletin in Iloko
- j. Weathering Access or Escapes Routes

F. SECTORAL DEVELOPMENT AREA: ENVIRONMENTAL MANAGEMENT

1. Situationer

1.1 Solid Waste Management (SWM):

Poor Implementation of SWM due to the high cost of putting up of Sanitary land fill and poor implementation of support programs like the zero waste campaign and source segregation.

1.2 Forest Management.

Illegal cutting is still observed and rampant especially at the upland areas.

1.3 Pollution Control

Environmental sanitation is not prioritized specifically on the waste treatment and disposal specially on the emerging tourism areas. (i.e. Surfing Areas)

1.4 Small Scale Mining.

Illegal quarrying is still evident.

1.5 Water Conservation.

There is a felt need for water conservation for safe drinking water to support emerging urbanized area.

1.6 Coastal Resource Management.

Degraded coastal resource due to over exploitations. Destructive means of resource extraction are still rampant. Blast fishing, cyanide fishing, fine mesh net and electro fishing are still being seen

2. Goals and Objectives

2.1 Goals:

- 2.1.1. A clean and green La Union thru Ecological Solid Waste Management.
- 2.1.1 Protection and management of the watersheds and public forest in La Union.
- 2.1.3 Increased forest cover and biodiversity thru public-private partnership.
- 2.1.4 Increased income of upland communities thru agro-forestry.
- 2.1.5 To provide higher level of infrastructure, facilities and utilities to make La Union as the regional hub for economic activities, trade, investments, tourism and technological advances.

2.2 Objectives:

- 2.2.1 To provide Technical Assistance Package to LGUs in the formulation updating of their 10 Yr. Ecological Solid Waste Management Plan
- 2.2.2 To ensure all sanitary landfills are operated in a sound and efficient manner and to assist in the conversion of landfills into engineered sanitary landfill conforming to national standards
- 2.2.3 To capacitate the LGUs on their zero waste or waste conversion programs
- 2.2.4 To replicate watershed management programs and to assist the Water Quality Monitoring Areas of Naguilian River Basin and the Lower Amburayan River System.
- 2.2.5 Reforestation for water conservation and management

- 2.2.6 To regulate and manage the small mining industry.
- 2.2.7 To involve stakeholders in the preparation and development of an Integrated Coastal Management (ICM) and its adoption and for resource management
- 2.2.8 To disrupt or ultimate destruction of public works and utilities

3. Strategies and Policies

- 3.1. Capacity Building of stakeholders on Natural Resources Management.
- 3.2 Harness Public Private Partnerships.
- 3.3 Accountability – State of The Environment Reports.
- 3.4. Corporate Social Responsibility (CSR).
- 3.5. Provision of Livelihood Projects Capacity Building on Project/Financial Management.
- 3.6. Distribution of IEC Materials.
- 3.7. Development and Implementation of Watershed Management Plans with more focus on vulnerable environments (Ridge to Reef approach and river Basin management).
- 3.8. Strengthening partnership with the different NGOs involved with resource conservation.
- 3.9 Strict implementation of building code
- 3.10 Retrofitting of Critical Infrastructures
- 3.11 Design should be revisited to include hazard proofing

4. Programs/Projects/Activities

- 4.1 Solid Waste Management Program
- 4.2 Water Quality Management Area (WAQMA) Program
 - 4.2.1 Naguilian River System
 - 4.2.2 Lower Amburayan River
- 4.3 Resource conservation and Management
 - 4.3.1 Protected Area Management
 - 4.3.2 Greening Program
- 4.4 Marine Resources Conservation and Management
 - 4.4.1 La Union Baywatch Network for Sustainable Fisheries
- 4.5 Small Mining Regulatory programs
- 4.6 Permits, Zoning, Retrofitting

G. SECTORAL DEVELOPMENT AREA: TRANSFORMATIVE GOVERNANCE

1. Situationer

The La Union Transformative Governance Roadmap was developed through the series of workshop and consultation with the internal and external stakeholders of the Province critical to the development of strategy. The roadmap was finalized and was approved together with the scorecard by virtue of STLT Resolution no. 3 s.2016 dated September 28, 2016 and ratified by virtue of SP Resolution no. 472-2016 dated September 29, 2016.

The La Union Transformative Governance Roadmap is divided into four perspectives, namely; support process, core process, focus and impact perspectives. To support this, twenty-six (26) indicators were identified- 19 output, 2 outcome and 5 impact indicators. To realize our vision, we will work together to attain key strategic objectives including five core processes and five support process.

2. Goal

To realize our vision, we will work together to attain key strategic objectives including five core processes and five support process

3. Objectives

To establish an innovative system of documentation and procedure that is complaint with the requirements of the Performance Governance System and the standard of ISO (ISO 9001:2015, ISO 14001:2004, and ISO 37120:2014)

4. Strategies and Programs/Projects/Activities

- 4.1 Performance Governance System (PGS)
- 4.2 Set up of ISO 9001:2015 (Quality Management System), ISO 14001:2004 (Environmental Management System) and ISO 37120:2014 (Sustainable Development of Communities)
- 4.3 E-Governance System
- 4.4 Inter-Governmental Relations and Resource Mobilization (Abono Partylist-PGLU, Inter LGU, LGU-NGA)
- 4.5 Set up of Multi-Sectoral Governance Council (MSGC)
- 4.6 Public-Private-Partnership (PPP) for resource mobilization
- 4.7 Knowledge Management Strategic Plans