



RAIN-INDUCED LANDSLIDE HAZARD CONTINGENCY PLAN



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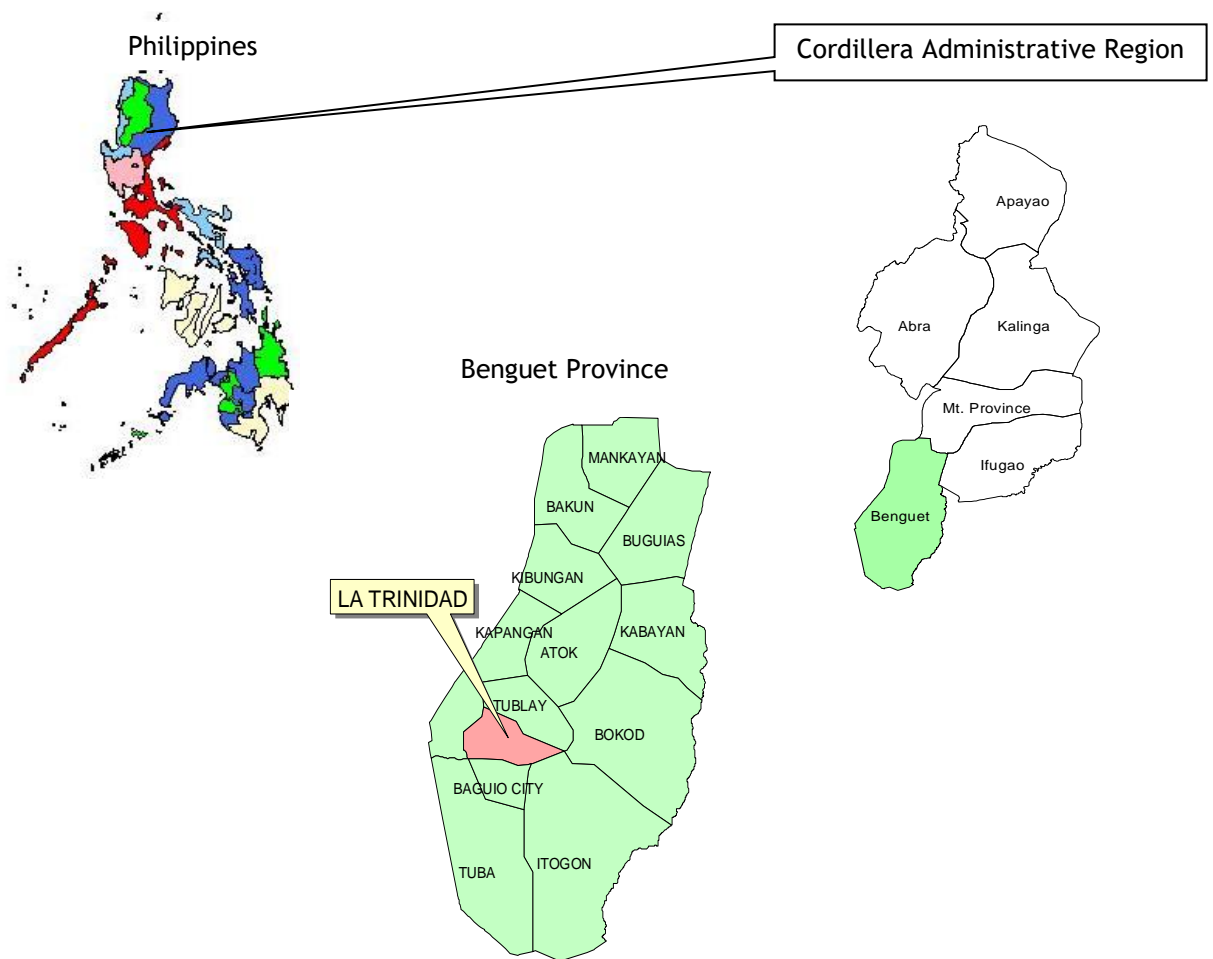
CHAPTER I. BACKGROUND

A. INTRODUCTION

Geographical Location

The capital town of Benguet Province, the Municipality of La Trinidad is located 256 kilometers north of Metro Manila. It is bounded on the north by the Municipality of Tublay, on the south by the city of Baguio, on the west by the Municipalities of Sablan and Tuba. Its geographical coordinates are 16 degrees, 21 minutes north latitude and 120 degrees and 35 minutes east longitude.

The municipality is relatively the most developed settlement in the province of Benguet because of its proximity to the City of Baguio. It is the gateway of the southern lowlands into the Cordillera Region. Due to its advanced development, La Trinidad is considered as one of the Central Business Districts of Benguet.



Accessibility

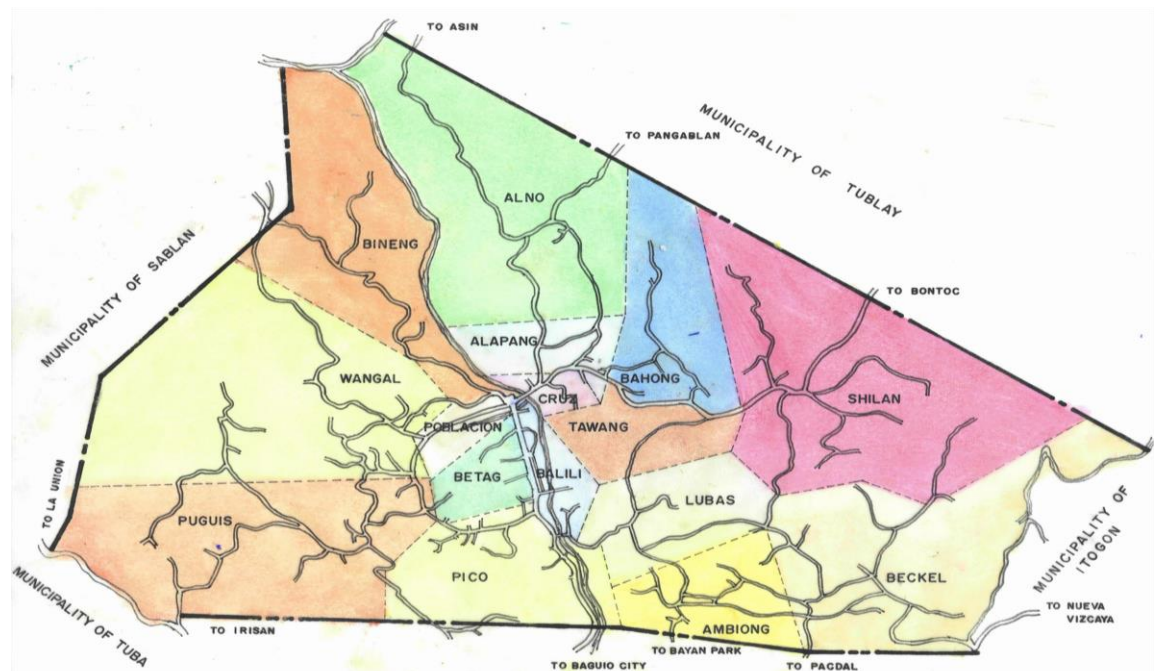
The municipality is accessible by land transport via the following entry points: from the Mt. Province through the Baguio-Bontoc Road; from La Union, through the Marcos Highway via the Pico-Lamtang; from Nueva Viscaya through the Benguet-Nueva Viscaya Road; from Pangasinan, through Kennon road. All these roads converge at the City of Baguio. The nearest airport is in nearby Baguio City, Loakan airport. Baguio- Manila travels take about 45 minutes flight or a 7-hour ride via land.

Total road kilometer age for the whole municipality is 135.2 kilometers. The road network in the municipality exhibits a strong linear type of settlement characterized by a circumferential road that services the valley floor. Accessibility in the rural areas is still relatively inadequate, with generally very narrow roads.

Heavy road traffic is concentrated in its main road, the Baguio-Bontoc National Road which traverses the valley proper and to which all other roads originate. This road is the center of socio-economic activities for the municipality. The municipality has several radial-circumferential roads that branch out to provide access to interior barangays and *sitios* most of which are tire-path roads, generally not feasible for commercial traffic.

Several public utility vehicles ply around the urban core, majority of which, are public utility jeeps (PUJs). A few taxicabs ply the areas less served by the jeeps while neither buses nor mini-buses ply in the area, except for those buses that pass through the Baguio-Bontoc national road leading to the northern towns of Benguet.

Municipality of La Trinidad General Map



Land Area and Political Subdivisions

La Trinidad has a total land area of 80.795125 square kilometers representing 2.7% of the total province area. It has sixteen (16) barangays namely: Alapang, Alno, Ambiong, Balili, Bahong, Beckel, Betag, Bineng, Cruz, Lubas, Pico, Poblacion, Puguis, Shilan, Tawang and Wangal. Wangal is the largest barangay with an area of 11.159642 sq. km. constituting 13.81% of the municipality. Puguis is the second largest area with 10.2182 sq. m km. or 12.65% of the municipal land area. The third largest barangay is Alno and the smallest barangay is Cruz with an area of 0.5659 sq. km. constituting 0.70% of the municipality. In the process of Updating the Municipality's Comprehensive Land Use Plan for the next ten years in 2013, a new criteria for classifying barangays into an urban or rural was approved by the National Statistical Coordination Board in a resolution no. 9 series of 2003. The same criteria were used to classify the barangays in 2018 which are as follows:

Barangay Classification, 2018

Barangay	Population (2015)	Area (has)	Population Density/ha.	*Classification
Ambiong	7,149	342.03	21	Urban
Balili	18,962	119.02	159	Urban
Betag	9,747	156.92	62	Urban
Lubas	6,159	240.59	26	Urban
Pico	23,282	329.36	71	Urban
Poblacion	13,196	104.66	126	Urban
Puguis	9,038	1021.82	9	Urban
Tawang	9,014	247.6	36	Urban
Wangal	5,942	1115.96	5	Urban
Alapang	4,477	201.22	22	Urban
Alno	2,883	958.35	3	Rural
Bahong	5,188	657.56	8	Urban
Beckel	3,918	951.3	4	Rural
Bineng	1,624	825.43	2	Rural
Cruz	3,721	56.69	66	Urban
Shilan	4,833	750.99	6	Rural
Total	129,133	8079.5	16	

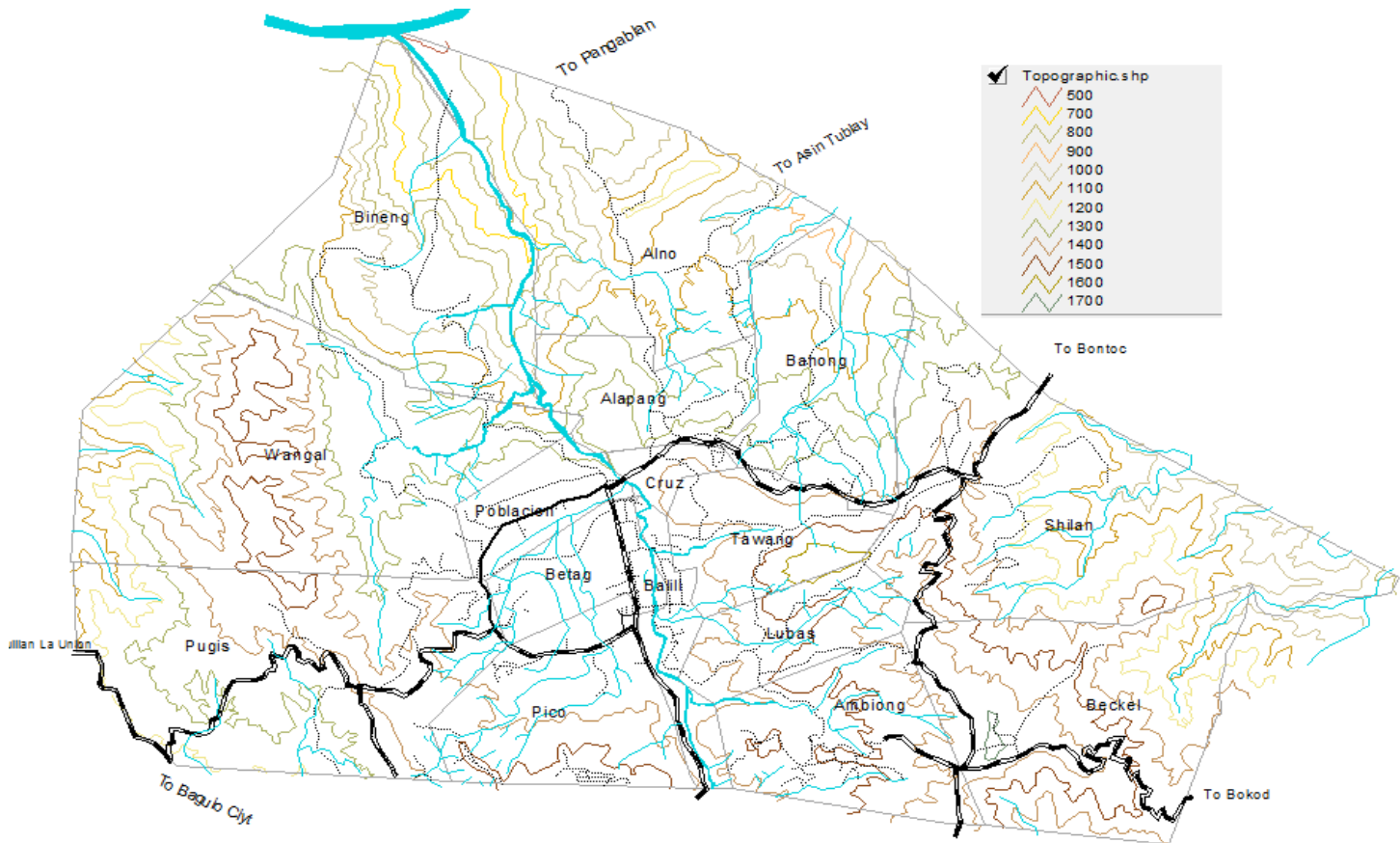
Source: PSA census 2015, *MPDO classification based on NSCB Res. No. 9 s. 2003,

Topography

Characterized by steep mountains and high terrain, amidst the mountain peaks, is an approximately 350-hectare valley. Across the valley runs the major water body, the Balili River running from Baguio towards the eastern edge of the valley flowing to the north. The Wangal River, Bayabas, Pico and Puguis Creeks flowing from the mountainsides form the Bolo Creek which runs across the valley and converges with the Balili River at Poblacion. Draining from the *Busol* Watershed are Ambiong Creek, Lubas Creek, and Tawang Creek joining the Balili River from the south.

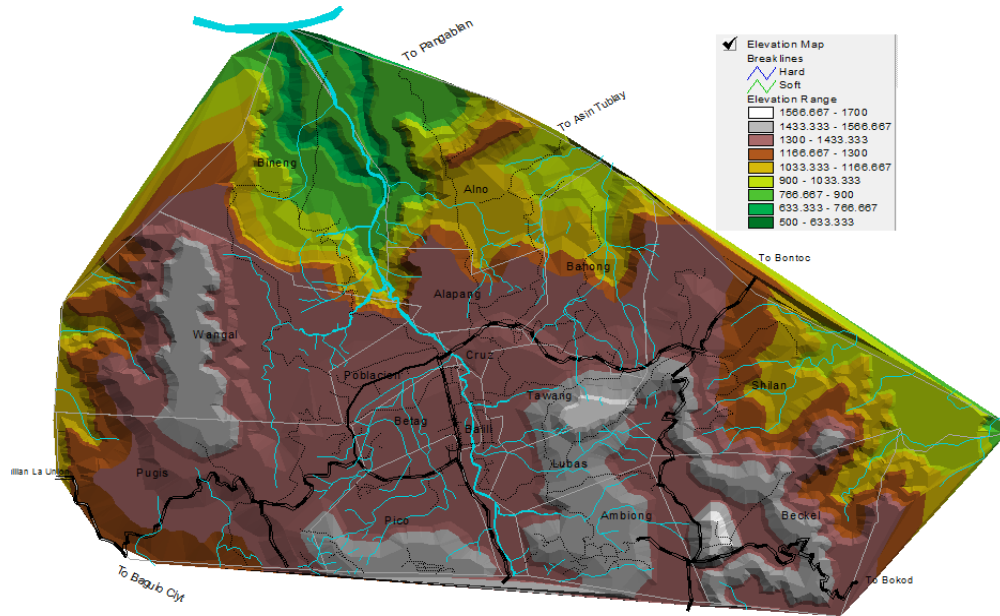
Creeks in the northeast areas are separated into the east and west by the mountainous and northern part of Alno. *Peril* Creek has its basin at *Bagto* Mountain. It runs through the Alno Valley and reaches the Balili River. Moreover, waters from Alapang Creek come from Balili River flowing from Bahong Cave. The *Gayasi* River from Wangal also drains itself into the Balili River at Bineng.

Prominent mountains are “Marlboro” mountain located at Beckel, Mount *Mungao* located at Bineng, Mount *Yangbeo*, Mount *Kalugong* and Tawang Mountains all located at Tawang and Mount *Peripin Bato* at Pico. In the center of the municipality is the valley located within the barangays of Betag, Pico, Balili and Poblacion surrounded by cliffs and huge mountains of limestone.



Elevation

Relief is high with elevation ranging from 500 to 1,700 meters. The highest elevation is at 1,700 meters on the south-eastern portion near the Ambuklao Road at Beckel. The valley floor has an elevation of 1,300 meters above sea level. Bineng is the lowest barangay, with an elevation of 500 meters above sea level at the lowest point of Balili River.



Slope

La Trinidad valley is on plains with rising and falling slopes. It is bounded on the north and northwest by steep slopes. Comparatively gentle slopes are found in Cruz, Alapang, Bahong and Alno. The municipal mean slope is 40%. Steep (above the mean) slope areas include sitios of Banengbeng, Oring, Amsalsal and Dilad in barangay Bineng.

Slope Distribution by Area and Percentage

Description	Slope Percentage	Area (in hectares)	Percentage
Level to nearly level	0.0 – 9.9	422	6.04
Gentle	10.0 – 19.9	880	12.60
Undulating	20.0 – 29.9	594	8.51
Moderately steep	30.0 – 39.9	2,102	30.11
Steep	40.0 – 49.9	866	12.40
Very Steep	50.0 – above	2,118	30.34

Total 6,982

Mean Slope 40.00

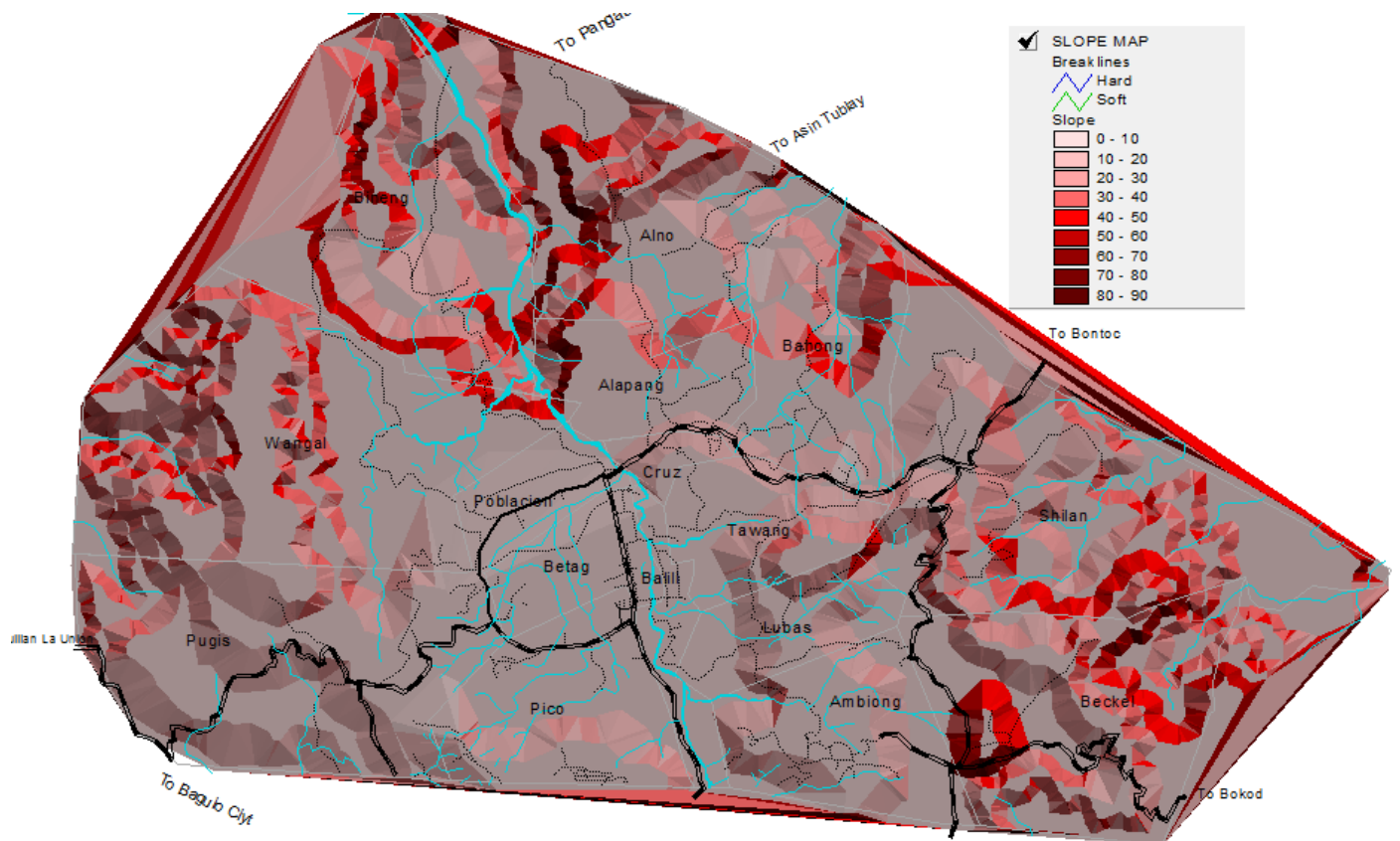
Source: Engineering Geological Hazard Studies of Earthquake- Affected Areas in Baguio and Benguet, Mines & Geo-Sciences Bureau, DENR-CAR, 1992.

Slope category of 3-8 percent occupies about 2.451 square kilometers or 3.03 percent. These are very gently sloping lands located on the centers of Barangay Pico and Bineng and portions of Betag. These are suited for intensive crop production and human settlements.

Slope category 15-25 percent occupies about 11.161 square kilometers or 13.81 percent which are sloping to moderately steep. These are located on the portions of Alno, Bineng, Wangal, Alapang, Cruz, Tawang, Bahong and Shilan. These are limited for cultivation and settlements.

Slope category 25-40 percent occupies about 26.903 square kilometers or 33.29 percent. These are described as moderately steep to steep lands located at Barangay Ambiong, Lubas, portions of Shilan, Pico, Beckel, Bahong Alno, Tawang, Cruz, Puguis, and Wangal. These are best suited for forest production.

Slope category 60 percent and above occupies about 35.214 or 43.58 percent. These are very steep lands found in Shilan, Beckel, Alapang, portions of Poblacion, Wangal, Bineng, and Puguis. These are suited for forestry, watershed, and wildlife conservation. The map show the slope category by location, description and recommended use. About 5.065 square kilometers or 6.26% of the total land area of La Trinidad are under 0-3 percent slope category. These are broad area of level to nearly level land, located in Barangays Poblacion, Betag, Balili portions of Pico, Lubas, and Cruz. Wangal and Puguis. These could use for high density urban development.



Geology

Rock Formation

The Bahong cave provides a characteristics example of rocks found in the Municipality. It is composed of tertiary limestone inter-bedded with poorly cemented layers of coral fragments and loose soil, and terrestrial deposits which provide a permeable layer through cracks along the bedded plane that have developed in it.

The permeability, however, can also be aggravated by seepage from polluted waters. For instance, water from the Bahong cave is frothy and have offensive odor, contains traces of garbage and other wastes, and is therefore assumed to come from the Balili River. This indicates that the Bahong cave is a natural outlet connecting the downstream side of the Balili River and the Bahong spring.

The prevalence of limestone rock formation can be observed in many parts of the Municipality particularly, at the southern and parts such as Mt. Pico. Several springs are present at the mountain sides, the occurrence of which suggests that the imperious shade or other tertiary rocks exist with the limestone formations. There, where limestone formations are present, spring exist.

Various springs found in the municipality have been classified into three major types, namely: 1) Piedmont lime land (limestone)- mostly found in the east and south ends of the La Trinidad valley notably, Pico Spring and Balili Spring; 2) Bed in impervious rocks (located in high elevations ranging from 1,200 to 1,385 meters ASL) such as Lubas Spring and Bahong- Alapang Spring; and 3) Fissure (conglomerate area) such as Sadag- Alno. Rock formation is present in Barangay Tawang and some parts of barangays Bineng and Alapang.

Soil

The existing soil types in La Trinidad are classified as follows:

Rough Mountainous Land. These lands are very rough and may be best utilized for wildlife, forest and watershed. These are precipitous escarpments, high cliffs where slope exceed 100 percent. They are found along portions of Alno, Alapang, Bineng, Wangal and Puguis. It has an area of 17.407 square kilometers or 21.54 percent of the municipal total.

Puguis Gravelly Loam. Only one soil type was mapped under this series. It is found in Barangay Puguis and portions of Alno, Alapang, Bahong and Wangal. This is moderately steep to very steep with undulating areas with flood to excessive drainage. Area is 15.199 square kilometers or 18.82 percent of the municipal total. Elevation is from 900 to 1,300 meters above sea level. Organic content is 7.62%.

The surface soil is brown, fine friable gravelly loam. Gravel is about 20 percent by volume. Strong brown and soft when dry and dark brown and slightly sticky when wet. In depth of 0 - 20 centimeters from the surface, the subsoil is reddish brown to yellowish red, fine, granular and friable loam with 7-10 percent gravel by volume, brown and soft

when dry; reddish brown and slightly sticky when wet. In depth of 20-80 percent centimeters from the surface, substratum is yellowish red sandy loam with 15% grovels by volume; brown and soft when dry; dark yellowish brown and slightly sticky when wet.

The crops grown give the following average yield per hectare. Pineapple, 5,000 fruits, cabbage, 2 tons, pechay, 5 tons and rice 25 cavans. The soil type has a danger of soil erosion. All cultivated areas should be properly terraced to hold the surface soil from being washed off. Yield is rather low and should be improved by liberal use of organic and inorganic fertilizers.

Buyagan Clay Loam. Only one soil type was mapped under this series. It is in portions of Poblacion, Betag, Wangal and Puguis. It has good excessive drainage. It covers 4.553 square kilometers or 5.63 percent of the municipal total. Its organic matter content is 6.8%.

The surface soil is reddish brown to yellowish red, coarse to fine granular friable clay loam. Reddish yellow and slightly Hard when dry. Sticky and plastic when wet. In depth of 0-30 centimeters from the surface, the subsoil is yellowish red to red fine granular friable clay loam, reddish yellow and slightly hard when dry; and sticky and plastic when wet. In depth of 30 – 60 centimeters from the surface, the substratum is red fine granular very friable loam, light red and soft when dry, pinkish white concretions with very pale brown light yellowish brown highly weathered parent materials; and non-sticky and non-plastic when wet. Crops grown derive the following average yield per hectare, cabbage 10 tons, sayote 10 tons, pechay 10 tons, and coffee one ton. The hazards are less of soil fertility and soil erosion. Preferably the soil should be planted with fruit bearing trees and be terraced to reduce soil erosion. In both permanent tree and annual crops, liberal application of organic and inorganic fertilizers will insure more produce.

Bineng Loam. Only one soil type was mapped under this series. It is found in portion of Bineng, Alno, Alapang, Poblacion and Wangal. It has an elevation ranging from 900 to 1,400 above sea level and has an area of 7.908 square kilometers or 9.78 percent of the municipal total. External drainage is excessive while internal drainage is fair. Organic matter content is 3.66%.

The surface soil is reddish brown fine granular friable loam. Few pebbles are present. Friable and slightly hard when dry. In depth of 00-20 centimeters from the surface, the subsoil is yellowish red fine granular friable sandy loam; pebbles are present about 10 percent by volume, and slightly hard when dry. In depth 20-60 centimeters from the surface, the lower subsoil is yellowish red, dark yellowish brown medium sub-angular blocky friable sandy loam with rounded pebbles 10% by volume, slightly hard dry; yellowish red when wet. In depth of 60-90 centimeters from the surface, the upper substratum is dark brown, dark yellowish brown medium sub-angular blocky friable sandy loam with pebbles 10% by volume, when dry pale and slightly hard, Yellowish brown when wet. In depth of 90-120 centimeters from the surface, the lower substratum is dark yellowish brown to strong brown medium sub-angular blocky friable clay loam; dry- yellow to brownish yellow slightly hard, yellowish brown sticky and plastic when wet.

Gently sloping areas are terraced and planted with rice while the bean the sloping areas are planted with Baguio beans and coffee with the following average yield per hectare. Rice 20 cavans, Coffee one ton, and Baguio beans one ton. To maintain soil fertility and improve the yield, the appropriate fertilizer should be applied. Strip cropping and cover cropping should be practiced on cultivated sloping grounds to minimize erosion.

Tacdian loam- There is only one soil type under this series. It is found on the east and south side of La Trinidad Valley particularly in some portions of Tawang, Bahong, Cruz, Betag, Balili, Lubas, Ambiong and Pico. Area is 10.489 square Kilometers or 12.98 percent of the municipal total. External drainage is good to excessive. Internal drainage is moderately slow. Elevation ranges from 1,400 to 1,600 meters above sea level. Organic matter content is 4.04%.

Surface soil is dark reddish brown, fine, granular, friable loam with few pebbles 5% by volume. Dark reddish brown to dark brown and very hard when dry. Slightly sticky and slightly plastic when wet. In depth of 0-10 centimeters from the surface. Second layer is dark reddish brown to fine, granular, firm clay loam with pebbles 5% by volume. Dark reddish brown to dark brown and very hard when dry. Slightly sticky and slightly plastic when wet. In depth of 0-10 centimeters from the surface, second layer is dark reddish brown to dark brown, fine granular, firm clay loam with few pebbles 5% by volume; reddish brown and very hard when dry, sticky and plastic when wet. In depth of 10-50 centimeters from the surface, third layer is yellowish red to red firm, silty clay loam with black concretions, white limestone gravel 5% by volume and fragments of highly weathered parent materials; very hard and dark red when dry; sticky and slightly plastic when wet. In depth of 50-120 centimeters from the surface fourth layer is dark reddish, firm clay loam with gravel of limestone 80% by volume, dark reddish brown and hard when dry; yellowish red, sticky and plastic when wet.

The crops grown give the following average yield per hectare. Pechay 10 tons, Baguio beans, 1 ton, gabi, 3 tons, cabbage, 10 tons. This soil type is critical when it comes to erosion. The surface soil is thin and unless it is guarded carefully, the topsoil may be washed off after a few strong rains. All cultivated areas should be terraced properly to minimize soil erosion.

Ambassador Silt loam. Location is confined to portions of Shilan and Beckel. It covers an area of 3.844 square kilometers percent of total municipal area. The relief is moderately steep to very steep with a slope crest of 5-8 percent. Drainage is good. Organic matter content is 9.37 percent.

The surface soil is dark brown, fine granular friable silt loam. In depth of 0-15 centimeters from the surface, the subsoil is yellowish red, fine granular friable silty clay loam; slightly sticky and slightly plastic when wet. In depth of 15-36 centimeters from the surface, the lower subsoil is light red, fine granular friable silt loam with highly weathered percent materials; slightly sticky and slightly plastic when wet. In depth of 36-90 centimeters from the surface, the substratum is yellowish red, fine granular friable silt loam with highly weathered parent materials, slightly sticky and slightly plastic when wet. Pechay, cabbage and set out are the principal crops with an average yield of 3 tons, 5 tons and

10 tons per hectare respectively. The soil type is subject to erosion hazard and special management practices should be applied to minimize soil erosion.

Halsema Loam. the only soil type under the Halsema series. It is located along portions of Shilan, Tawang, Bahong, Lubas and Beckel with an area of 7.650 square kilometers or 9.46 percent of the municipal total. Drainage is moderate to excessive. Internal drainage is moderately slow. Elevation ranges from 1,200 to 1,400 meters above sea level. Organic matter content is 2.18 percent.

The surface soil is dark brown, friable, firm, fine granular loam. Very hard and dark reddish brown, coarse, granular, firm clay loam, dark brown and very hard when dry; sticky and plastic when wet; few gravel 5% by volume are present in this layer. In depth of 21-34 centimeters from the surface, substratum is red, fine, granular, friable silt loam; gravel of about 5% by volume are present; extremely hard and dark red when dry; sticky when wet. In depth is 34-84 centimeters from the surface. Lower substratum is reddish brown, fine granular friable loam; highly weathered parent materials which are weak red to pale brown with black mixture 1-2 mm diameter. Very hard and weak red when dry; sticky and plastic when wet. The crops grown give the following average yield per hectare. Pechay, 10 tons, sayote, 10 tons; cabbage, 10; and sweet potatoes, 10 tons.

The soil type needs ordinary and special farm management practices to conserve the soil fertility and maintain high yield. There is a need for application of organic and inorganic fertilizers and construction of terraces to regulate the flow of water and minimize soil erosion.

La Trinidad Loam. located over portions of Pico, Betag and Puguis. It has an area of 3.908 square kilometers or 4.83 percent of the Municipal area. Elevation ranges from 1,400 to 1,500 above sea level. It is level to nearly level with a depressed portion. Drainage is good but during the rainy season water accumulation in the depressed portion remains stagnant for some time. Organic matter content is 1.17%.

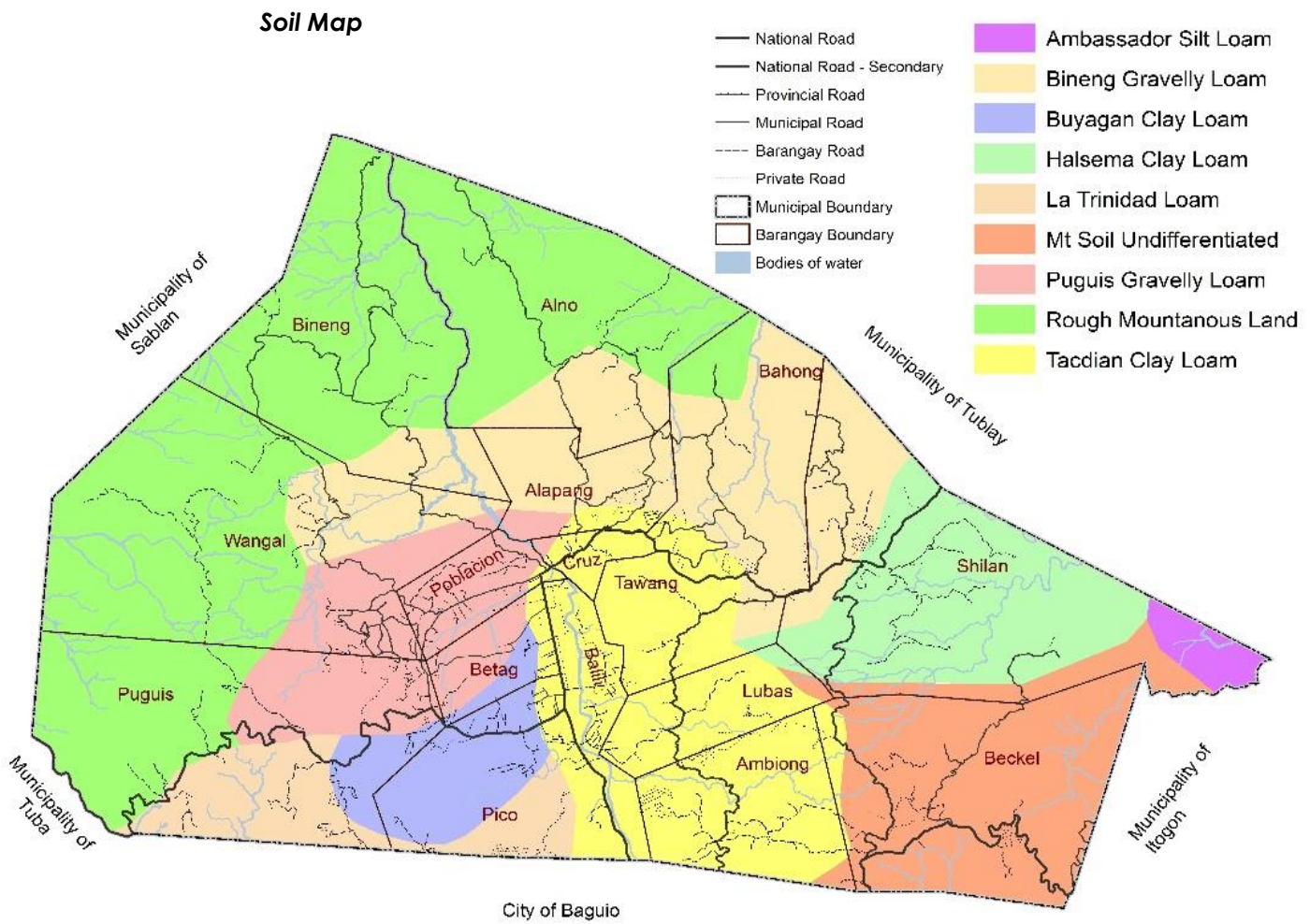
The surface soil is brown to dark brown, fine granular friable firm land. When dry, it is pale brown to light yellowish brown and hard. Slightly sticky and slightly plastic when wet. Depth is 0-22 centimeters from the surface. Subsoil is dark brown, fine granular friable loam. Hard and brown when dry. When wet, it is slightly sticky and slightly plastic. In depth 22-77 centimeters from the surface, lower subsoil is dark brown, fine granular friable sandy loam; hard and brown to dark brown when dry; dark brown to dark yellowish slightly sticky and non- plastic when wet. In depth 77-108 centimeters from the surface upper stratum is reddish brown fine granular friable sandy loam with gravel about 5 percent by volume; when dry, it is soft and dark brown; when wet, it is slightly sticky and non-plastic and brown. In depth is 108-127 centimeters from the surface lower stratum is dark brown, friable loam with a few color mottling; hard and brown; hard and brown when dry; slightly sticky non-plastic brown with few mottling. It is planted to various crops with the following average yields per hectares. Sweet peas, 8,632 kilograms; tomatoes, 20,000 kilograms; and strawberry, 4,369 kilograms.

The soil type is adapted to many other crops. It needs stream bank protection and simple farm management practices to maintain high yield.

Bakakeng Sandy Loam. This soil type occupies most part of Beckel and a portion of Ambiong. It has an area of 9.833 or 12.17 percent of the municipal total. Organic matter content is 4.42 percent.

Surface soil is dark reddish brown to dark red fine granular friable sandy clay loam. Dry, very hard, very sticky and plastic when wet. In depth of 0-25 centimeters from the surface; upper subsoil- red medium granular very firm clay loam; dry, very hard and red and very sticky and plastic when wet; depth is 25-65 centimeters from the surface; lower subsoil- red medium granular loam with black concretions; when dry, it is red to weak red and very hard; it is very sticky and slightly plastic when wet.

In depth 65-140 centimeters from the surface; the substratum is dark red medium granular loam; when dry, it is hard and pale red and when wet, it is very sticky and slightly plastic dark red. The crops with their average yield per hectares are as follows: camote, 5 tons; coffee, 1 ton; Baguio beans, 1 ton; pechay, 3 tons; cabbage, 10 tons and potatoes, 20 tons.

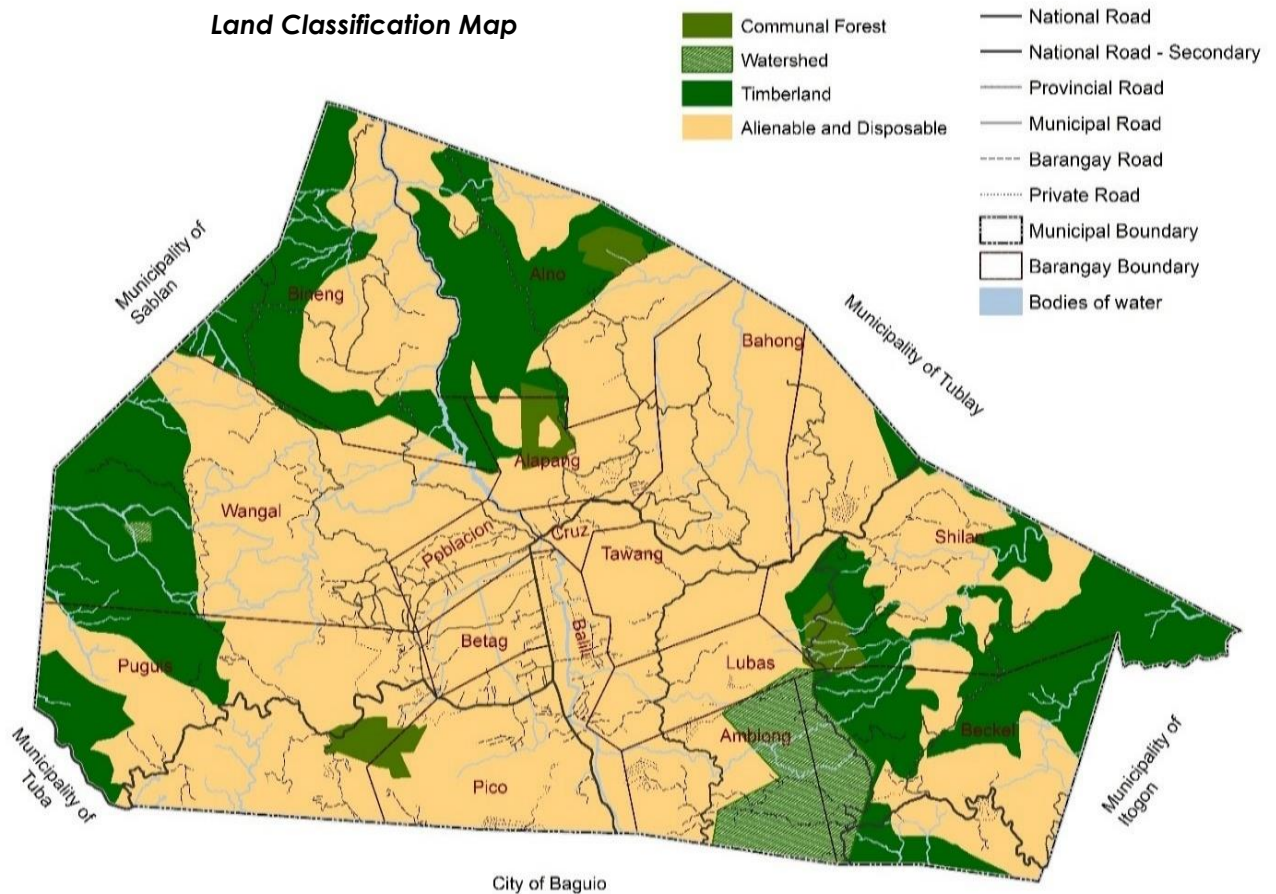


Land Resources

Alienable and Disposable Lands

There are 16.722 square kilometers or 20.65% of the total land area of La Trinidad is classified as forest land and 64.0722 square kilometers classified within the Alienable and Disposable (A&D). Barangay Shilan has the highest area in terms of forest land which is 2.992 square kilometers or 17.9% of the total forest area. This is followed by Barangay Wangal with 2.713 square kilometers or 16.22%. Barangay Alno with 2.605 square kilometers or by 15.58%; Barangay Bineng with 2.251 square kilometers or 13.46%; Barangay Ambiong with 1.484 square kilometers or 8.87% and Barangay Alapang with only 0.707 square kilometers or 4.23%.

The land management Section of the Department of Environment and Natural resources (LMS-DENR) reported that only the area of Barangay Cruz has been approved out of the 16 barangays of La Trinidad. The land area of the fifteen (15) Barangays needs corrections and refinements.



Data Source: Approved Political Map, LMS-DENR CAR

Existing General Land Use

Residential land use accounts for the largest share in urban land use. However, commercial land use is expected to have the highest demand in urban areas given the municipality's growing roles as a commercial, educational and agro-tourism center in the province. Interspersed within residential areas, the commercial area is concentrated along the Baguio-Bontoc national highway. It is expected that most of the residential buildings along this road shall be used for commercial space soon. The urban built up has spread at Poblacion, Puguis, Shilan and Alapang, putting pressure for the population to seek housing sites in their less populated areas.

Special use for irrigation, power and relay stations, sewerage and waste management facilities is likewise expected to increase, as population grows even more rapidly.

Institutional use is principally for schools, welfare homes, orphanages, home for the aged, rehabilitation and training centers, military camp, day care centers. Schools are largely concentrated in urban loop road. While de-concentration efforts have made to site new high schools in the outskirts of the built-up area. And several day care centers are found in all barangays. More populous and larger barangays find the need to site their day care center nearer to the homes of the populace. While private schools now are mushrooming, most, with little space for their students to move around.

If the protection of communal and forested areas in Alapang, Puguis, Wangal, Ambiong, Shilan, Bineng and Alno will continue, squatting in these areas may still be abated. Relief is felt at the Puguis Communal Forest as the municipal government won its case versus individual claimants along the paved *Longlong-Tam-awan* road. The establishment of the actual metes and bounds of the forest in the ground level shall also assist the government in abating professional squatters from entering the protected area.

Special Agricultural & Fisheries Development Zones especially the strawberry and cut flower gardens in Betag, Ambiong, and Bahong must be continually protected to ensure sustainable agricultural development in the municipality. With the advent of the new Trading Post, it is expected that commercial establishment will mushroom into the existing souvenir shops in the area.

Special land uses for future cemeteries and the garbage disposal facility must be carefully sited and regulated. As of this writing, an area has been purchased by the municipal government for a public cemetery in Shilan. In terms of the Solid Waste Management Facilities at Alno, residential houses have mushroomed near the site and are exposed to geological and health hazards posed from the disposal facility. The move to develop parks and recreation facilities, without undue sacrifice to the green environment will provide additional economic opportunities to the municipality.

The following are the present land uses of the Municipality. Each land use is expected to expand considerably in the coming years as the result of population increase and in-migration. In-migration is likely to increase within the planning period as it aims to become

a component city by year 2019, it has now the momentum of achieving its goals and objectives in terms of agriculture, commerce, industry and tourism.

1. **Residential Area** - The existing residential area of the municipality is **779.82 hectares**. The projected land area requirement for the year 2025 is 1096 has. Therefore, 316.18 has been added to the proposal.
2. **Agricultural Area** - From the total land area of La Trinidad (**8079.50 hectares**), more or less forty-two percent (42.82%) or **3,459.34 has.** is being utilized for agricultural purposes. The municipality of La Trinidad will limit land conversion to other land uses as agriculture is one of the contributory factor of economy in the locality.
3. **Forest Area/Timberland** - The total forest area of the Municipality is **435.46 hectares**, **272.37** hectares allotted for **Watershed** Reservation classified as protection forest and **163.09** hectares for **Communal Forests** or production forest and timberland has an area of **2,046.55** hectares. Reduction of forest area is expected due to uncontrolled illegal settlers and issuance of titles within areas for public domain.
4. **Commercial Area** - The public market area is the central business district of the municipality which is included in the Commercial Area of the Municipality which has a total land area of **86.65 hectares**. The projected land area requirement for this purpose is **111.92** hectares which means that the existing commercial land use can supply the needed expansion area for the planning period. This shall be maintained and developed according to its suitability and zoning.
5. **Bodies of Water** - These areas are expected to remain the same within the planning period. Proper implementation and regulation of the National Water Code of the Philippines shall be observed. It covers an area of **89.36 hectares**.
6. **Tourism/Agro-tourism Area** - This land use includes areas where tourist attractions are found like Strawberry Fields, Bahong and Ambiong flower gardens, and other tourist destinations. It occupies an area of **303.39 hectares**.
7. **Institutional** - This land use includes areas occupied by the Municipal Hall, Provincial Capitol, private and public institutions, schools, other social facilities and amenities, churches and other national offices. It has a total land area of **675.08 hectares**.
8. **Roads/Infra Facilities** - The land area occupied by roads, streets and other infrastructures has a total land area of **117.43 hectares** representing **1.45%** of the total land area of the municipality.

9. Other Land Uses

9.a. Cemeteries. There are nine (9) cemeteries in the Municipality of La Trinidad with a total land area of **9.96 hectares**. Although, it is being subsidized by private individuals who have their own cemeteries within their property as it is the practice and tradition of the people living in the Cordillera to bury their dead in an area near their house.

9.b Dump Sites/Sanitary Landfills. The Municipality of La Trinidad has an existing facility located at barangay Alno. It has a total land area of **9.85 hectares**. The proposed land area required until the planning period 2016-2025 is estimated at 12.79 hectares. Hence, the municipality has a deficit of more or less 2 hectares to comply with the land demand during the planning period.

Existing Land Use Categories, 2015

Existing land Use	Area (Has.)	Area (Sq. km.)	Percentage to total
Communal Forest	163.09	1.63	2.02
Watershed	272.37	2.72	3.37
Cemetery	9.96	0.10	0.12
Sanitary Landfill	9.85	0.10	0.12
Agro-tourism	303.39	3.03	3.76
Institutional	675.08	6.75	8.36
Commercial	86.65	0.87	1.07
Residential	779.82	7.80	9.65
Bodies of Water	89.36	0.89	1.11
Parks and Recreational Space	66.61	0.67	0.82
Utilities, Transportation	117.43	1.17	1.45
Forest (timberland)	2,046.55	20.47	25.33
Agricultural	3,459.34	34.59	42.82
TOTAL	8079.5	80.795	100.00

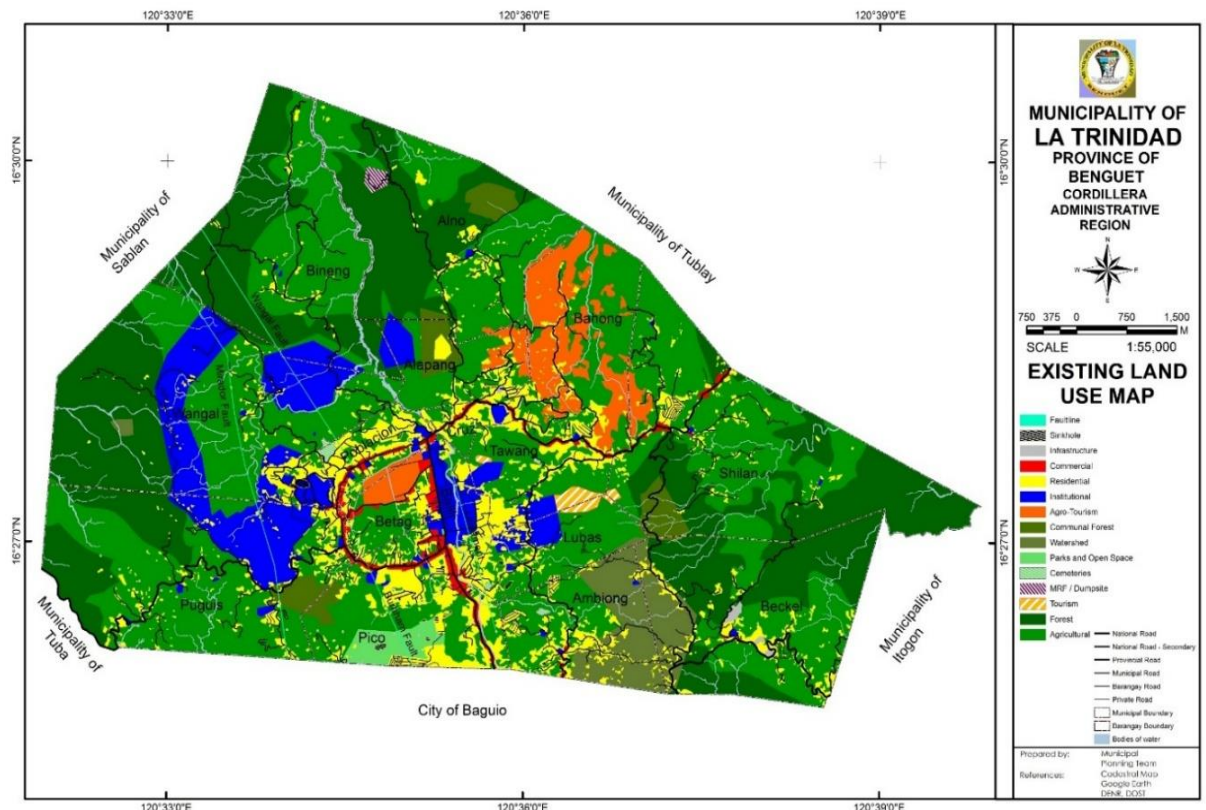
Source: MPDO, GIS computed, Cadastral Survey, LMS-DENR-CAR, NAMRIA

Built-up Area. The built-up area is the area of the residential (9.65%) and commercial (1.07%) or a total of 10.72% of the total land area of the Municipality. With urbanization, it is expected to increase during the next ten years.

Agricultural Land. Approximately 3,459.34 hectares or 42.82% of the total land area of the municipality is classified as agricultural lands. The total cultivated area is 2,993.33 hectares wherein 1,855.75 hectares are estimated as irrigated. With commercial land use putting pressure on agricultural land use, it is also expected that agricultural land will decrease. Those areas cultivated with strawberries and cut flowers shall remain as the Strategic Agriculture and Fisheries Development Zones (SAFDZ) at 259.80 hectares as promulgated in RA 9435 or the Agriculture and Fisheries Modernization Act 1997.

Tourism Areas. The Strawberry Fields and Cut flower gardens are considered areas of significant value for tourism. The municipality has become one of the major tourist destinations not only in the Province of Benguet, but also in the country with its vast cut flower gardens and sprawling strawberry fields. Known as the former "Salad Bowl of the Philippines", it is now known as the "Strawberry Fields of the Philippines" and barangay Bahong as the "Rose Garden of the Philippines". Accomplishments have placed La Trinidad in the Guinness Book of Records as the maker of the largest strawberry cake.

Forest Land. Forestland occupies a considerable area of 2,046.55 hectares, comprising of approximately 20.47 % of the total Municipal land area. It is classified into timberlands and grasslands as identified by the LMS-DENR-CAR and the NAMRIA. La Trinidad boasts of four (4) Communal Forests at Alapang, Alno, Puguis and Shilan, occupying a total are of 163.09 hectares. The Watershed areas are found in Busol, Ambiong and the Shelpi Watershed in Wangal with a total land area of 272.37 hectares.



Other land uses. Special uses such as cemeteries and sanitary landfill comprise 19.81 hectares. Water bodies comprise 89.36 hectares. Parks and Recreational spaces comprise 66.61 hectares.

Urban Land Use. In 2015, the total urban area is 3,677.96 hectares or 45.52% of the municipality's land area. There are nine urban (9) barangays and seven (7) rural. Residential land use in the urban area occupies 521.92 hectares. Commercial activities are concentrated alongside the Baguio-Bontoc National Highway, occupying an area of 69.80 hectares. Institutional area occupies 602.76 hectares which includes all lands occupied by Government Buildings, schools, hospitals and the Benguet State University. The utilities and transportation network in the urban area occupies 73.78 hectares. Maintenance and expansion of some roads did not comply with the national standards per DPWH rules and regulations.

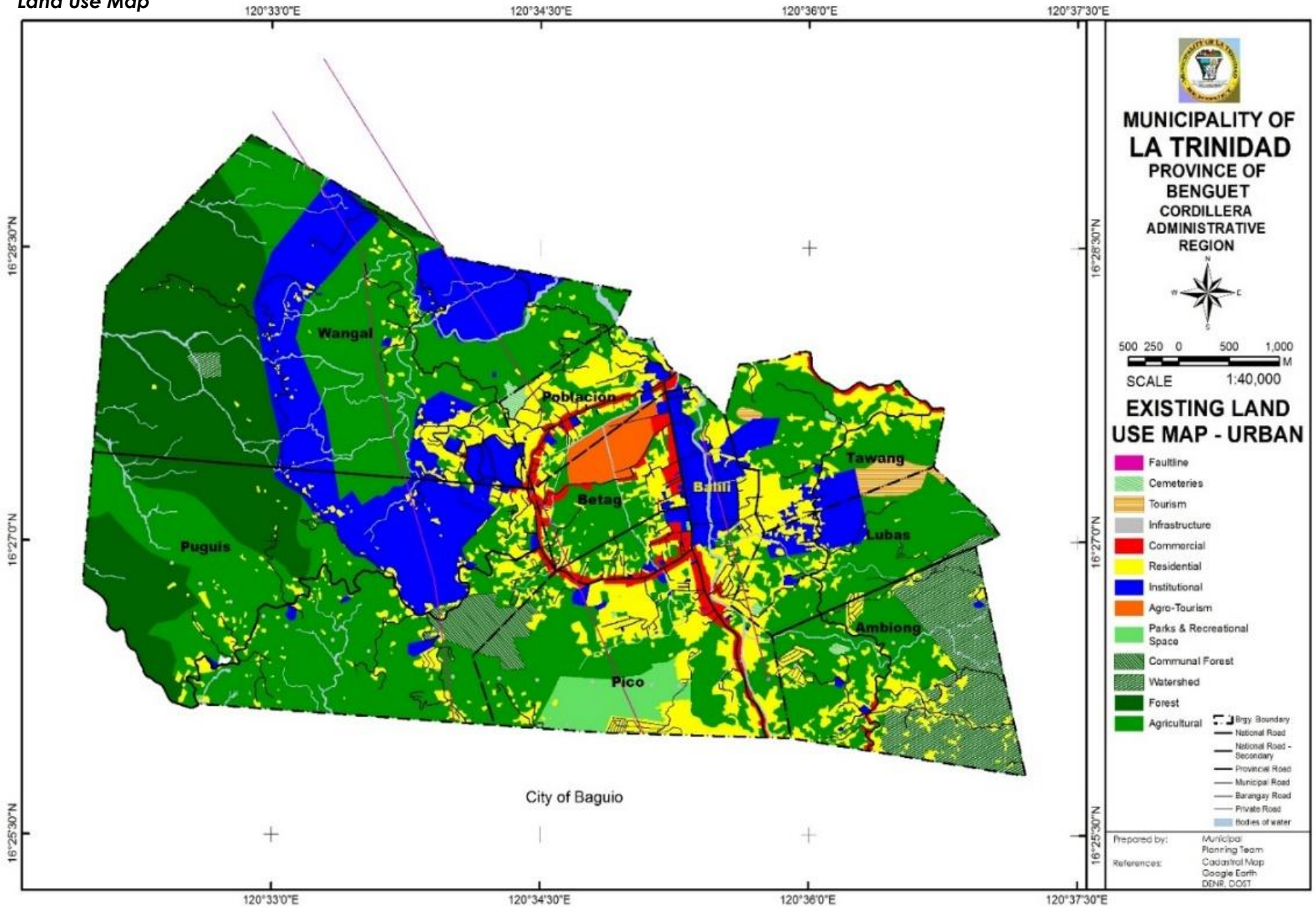
About 38.84% or 1,428.67 hectares of the total urban area are classified as agricultural land. Forest land use is 15.96% or 587.15 hectares, and about 6.33% or 232.92 hectares are communal forest and watershed land use. Land use is expected to change from time to time but should be within the parameters set forth in the approved Zoning Ordinance. Residential land use is expected to increase due to the high demand in housing especially in the valley taking into consideration the proximity of schools, health centers and other necessary facilities.

Existing Urban Land Use, 2015

Existing land Use	Area (Has.)	Area (Sq. km.)	Percentage to total
Agricultural	1,428.67	14.2867	38.84
Agro-tourism	46.27	0.4627	1.26
Institutional	602.76	6.0276	16.39
Residential	521.92	5.2192	14.19
Commercial	69.8	0.698	1.90
Utilities & Transportation Services	73.78	0.7378	2.01
Forest	587.15	5.8715	15.96
Communal Forest	49.58	0.4958	1.35
Watershed	183.34	1.8334	4.98
Parks & Recreational Spaces	66.61	0.6661	1.81
Bodies of Water	38.97	0.3897	1.06
Special Use			
Cemeteries	9.12	0.0912	0.25
TOTAL	3,677.97	36.7797	100.00

Source: GIS computed, Actual GPS readings, Cadastral Survey, LMS-DENR-CAR, NAMRIA

Land Use Map



Water Resources

The Municipality's major water body is the Balili River which runs south towards the north through the eastern edge of the valley. It joins the Payeng River and the confluences of these two rivers which flow towards the Lingayen Gulf.

The Balili River is the main water catchment in the valley which originates from the various creeks and tributaries in Baguio City and flows northward across the municipality to become a tributary of the Naguilian River, which in turn flows out the West Philippine Sea. Twelve major creeks that drain from three (3) directions in the Municipality are tributaries to Balili River. From the source outlet conducted by the HIRDP-JICA has determined that the water at the Balili River is unsuitable for Domestic use and not even recommended for irrigation purposes. Accordingly, it is badly contaminated with sewage. This poses danger to the water aquifer in view of the ground permeability of the valley.

Balili River failed. Balili River has its headwaters at Sagudin River located within barangay Trancoville in Baguio City. Tributary creeks coming from the barangays of Pacdal, Cabinet Hill, New Lucban, Honeymoon, Guisad, and Sto. Niño (formerly Slaughter) nourish Sagudin River. All the aforementioned tributary creeks converge and flows downstream converging with the waters from La Trinidad, Benguet, in what is known as Balili River, passing through Sablan and drains into Upper Naguilian River as one of the major tributaries.

Balili River as per assessment in 1975 is still classified as a "Class A" river. But technically it has "failed to meet the water quality criteria as per assessment as a 'Class A' river. Class A is intended for public water supply, which means that with a little treatment, the water could be used for drinking. Through the years, this condition continuously deteriorated. (EMB, 2010)

Other Rivers and Creeks

The hilly areas of Ampasit and Longlong in the western part of La Trinidad provides a catchment basin of water that supply the Wangal river, which drains northward and joined by various tributaries along the left bank. The Wangal River eventually makes a conflux with the tributaries at Sadiatan in the lower Wangal area and changes its direction to the east, to become a tributary of the Gayasey River, then finally drains northeast to join the Balili River.

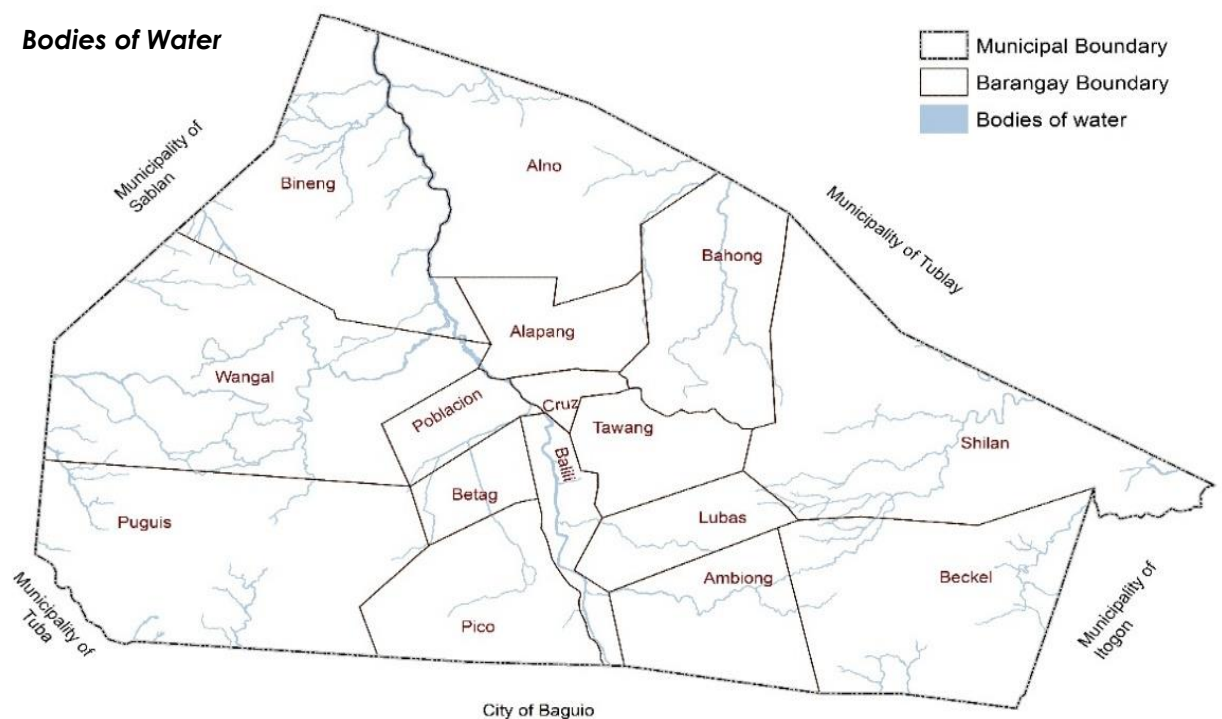
Surface run-off from the slopes of Busol Watershed in the eastern part of La Trinidad are drained by Guitley Creek at the Northern portion which drains off into the Lubas creek and Ambiong North creek at the southern portion. Various tributaries supply the Golon Creek at the central watershed area which flows downstream to Balili River but become dry during the dry season. Both the Lubas Creek and Ambiong North Creek pour out directly into the Balili River that flows northward from the confluence with Ambiong South creek to be later joined by the Tawang Creek along the Watercourse.

Meanwhile, the formation of gentle slopes at the north central part of the municipality can be observed to extend from Cruz to Alapang, Bahong and finally to Alno. These slopes provide a catchment basin drained by several creeks that abound its vicinities. Into the west, flows the Peril Creek and part the Alno creek, while the creeks of Alapang, Bahong, Bahong the creeks of Alapang, Bahong and part of Alno each flow eastward

and eventually drain off into the Payung River. The water from Alapang creek comes from the Balili River through the seepage at the Bahong cave (Dinog Cave).

At the southern part of the municipality rises Mt. Pico (Piripin Bato) where the water run-off from its slopes flows northward to form the creeks of Bayabas, Pico and Puguis. The confluence of these creeks forms the bolo creek which also reaches out into the Balili River. The creeks and rivers nevertheless, do not entirely depend on the surface run-off which ceases to flow during the dry season. River water is also largely contributed by various geological structures. Water would still flow out from different rivers and creeks during the dry months of February and March from various sources and types of geological structures namely: 1) Limestone supplies Balili river and Alapang Creek with water that come from Pico mountain, Tawang, Lubas, Puguis, Baguio district and La Trinidad Valley; 2) Conglomerates- supplies the Wangal river, Bolo creek and Bodiweng Creek with the water from Longlong, Timoy, Sadiatan range and Bineng Spring; 3) Agglomerates- supplies Ambiong North creek with water from the Busol and Ambiong mountains; and 4) Andesitic Sediment- supplies Peril Creek with water from Bagto range.

Other creeks of less determined characteristics also exist and flows into the Balili river such as the Bodiweng and Bineng creeks.



Climate

The climate projections for La Trinidad as shown in the table below was based on the projected changes of different climate variable for 2020 and 2050 from PAGASA (2011) using the observed historical baseline from 1971 to 2000 of every province in the Philippines. The climate projection information includes temperature, rainfall and frequency of extreme events.

Table . Climate Projection for the Municipality of La Trinidad

Climate Variables Seasons	Observed Baseline (1971 – 2000)				Change in 2020 (2006 – 2035)				Change in 2050 (2036 – 2065)			
	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON	DJF	MAM	JJA	SON
Seasonal temperature increase (°C)	19.4	21.9	22	21.2	0.9	1	0.8	1	2	2.1	1.7	1.9
Seasonal rainfall change (%)	47.7	422.3	1734.9	931.8	8.0	0.2	31.6	21.7	-6.0	-26.7	63.1	21.8
No. of days with Temp >35°C	0				0				0			
No. of days (rainfall <2.5mm)	7248				5320				5379			
No. of days with extreme rainfall >150mm	29				39				35			

Source: PAGASA, 2011 *DJF – December, January, February; MAM – March, April, May; JJA – June, July, August; SON – September, October, November*

La Trinidad will experience an increase in temperature for all seasons by 2020 and 2050. The highest increase in temperature will occur during the months of March, April, and May where 1°C is noted for 2020 and 2.1°C in 2050. An increase in rainfall during the months of SON and a significant increase during the rainy season on the months of JJA are also noted.

In the frequency of extreme events based on the climate projection, there will be zero number of days with temperature >35 °C. There will be 5,320 days of <2.5mm rainfall from 2006-2035 while from 2036-2065 there will be 5, 379 days with rainfall <2.55mm. Meanwhile, there will be 39 days with extreme rainfall >150mm from the period of 2006-2036 and 35 days from the period of 2036-2065.

The changes in the climate variables might cause a significant increase in the likelihood of occurrence and severity impacts of hazards in La Trinidad. The consequences of the changes may lead to increase in the level of risk the municipality is exposed to affecting the five exposure units such as population, natural resource-based production areas, critical point facilities, urban use and lifeline utilities.

B. HAZARD ANALYSIS

The Municipality of La Trinidad is exposed to seven hazards specifically landslide, flooding, sinkhole, faultline, liquefaction, earthquake and rockfall. According to the assessment of the

Hazard	Probability		Impact		Average	Rank
	Rate	Remarks	Rate	Remarks		
Rain – induced Landslide	5	La Trinidad has a rugged terrain with moderate to very steep slopes with more than 30-degree gradient.	4	Typhoon Pepeng in 2009 claimed 77 lives, destroyed properties and livelihood. Previous rain-induced landslides incidents in the municipality destroyed lifeline utilities, claimed lives and caused disruption of education	4.5	1
Rain – induced Flooding	5	La Trinidad Valley is a recipient of surface run-off coming from different directions.	4	Damage or loss to the cultivated agricultural areas planted with vegetables and strawberries.	4.5	2
Earthquake	3	There were four existing faultlines traversing La Trinidad namely: Mirador, Lineament, Wangal and Burnham Fault which are all connected to the Digdig Fault.	5	On July 16, 1990, La Trinidad has experienced magnitude the due to the rupturing of the Digdig Fault.	4	3
Emerging and Re-emerging Diseases	5		4	Loss of lives, depletion of resources	4.5	2
Fire	5		4	Loss of lives, property and	4.5	2

As seen in the above probability and impact of the hazard table, rain-induced landslide ranks first followed by rain-induced flooding emerging and re-emerging disease, and fire hazard while Earthquake ranks third. Based on historical records, the events caused loss of lives and properties to the community.

C. HAZARD TO PLAN FOR

Based on the assessment of the hazards, La Trinidad requires having a contingency plan for landslide that shall ensure preparedness for effective response in the affected barangays.

The anatomy of the rain – induced landslide is shown below:

Root Causes	Early warning signs	Triggering Factors	Existing Mitigating Measures
<ul style="list-style-type: none"> • Monsoon rains • Tropical Cyclone • La Trinidad has a rugged terrain with moderate to very steep slopes with more than 30-degree gradient • Scouring Excavation 	<ul style="list-style-type: none"> • Information from the landslide monitoring device • Cracks • Mudflow • Falling rocks/Debris • 	<ul style="list-style-type: none"> • Continuous heavy rainfall • Presence of old and active landslides, tension cracks, bulges, terracets and seepage • Poor to very poor rock mass strength • Intense weathering and soil non-cohesive • Soil instability induced by seepage • Water accumulation • Deforestation 	<ul style="list-style-type: none"> • Engineering intervention measures or slope protection measures such as: <ul style="list-style-type: none"> ✓ Benching ✓ Retaining Wall ✓ Riprap ✓ Gabion Walls ✓ Shotcrete ✓ Drainage ✓ Erosion-control – coconet bioengineering • Tree planting • Dynaslope (Landslide monitoring device) • Text blast • Conduct of community evacuation drills • Provision of IEC materials • Dynoslope alert level protocol • Geotagged houses and buildings • Installation of landslide warning signs • Landslide hazard map

Given that La Trinidad has a rugged terrain with moderate to very steep slopes with more than 30-degree gradient the municipality is considered as highly susceptible to landslide occurrence. The municipality is situated in a valley region where only a small portion is low-lying and generally flat. Thus, majority of the populace must build houses and infrastructures along slopes. According to MGB assessment report last 2017, slope instability is aggravated by human-initiated activities such as the heavy loading on slopes or the modification of slope gradient due to the construction of infrastructures.

MGB also states on their Vulnerability Risk Assessment of La Trinidad in 2014 that the municipality have fairly thick sometimes intense and non-cohesive soil cover. Fairly large areas are identified with relatively unstable ground as evidenced by the presence of soil creep, tension cracks, bulges, and terracets. Instability in some

areas are induced by seepage typical in the forests. Other aggravating factor which can possibly favour landslide occurrences in the area are human initiated activities such as open, poorly managed drainage flow from septic tanks emanating from clusters of residential houses located in elevated terrain. Pressure from human habitation itself is an aggravating factor that contribute stress to available land. This is especially true given that houses in La Trinidad are conspicuously built mostly and practically at the edge of the ridges. If not occupied by residential houses, the rest of the rugged terrains are utilized for upland agricultural cultivation, specifically vegetable and cut flower plantation. Moreover, presence of numerous seepages help induced the weakening of the rocks. One of the notable landslide occurrences in La Trinidad is the Little Kibungan Landslide at Puguis that leads to the installation of the Dynaslope or the Landslide Monitoring Device. This device is a sensor for rainfall-induced slope failure and ground movement. Meanwhile, La Trinidad LGU had established engineering interventions or slope protection measures such as benching, retaining wall, riprap, gabion walls, shotcrete, drainage, and erosion-control – coconet bioengineering. Non-structural mitigating measures such as tree planting, installation of landslide warning signs, information education as well as community evacuation drill to residents and students living at the landslide prone area and distribution of emergency contacts were conducted annually. Recently, the MDRRMO was conducting geotagging of infrastructures and residential houses which will be used to identify affected areas by overlaying it to the landslide hazard map.

D. SCENARIOS

The table below describes the different scenarios that may occur when a typhoon hits La Trinidad causing rain-induced landslide to the different barangays.

Particulars (Can Be Customized)	BAD	WORSE	WORST
General Description of Event	1 Barangay is affected and 25% of the area and total household are partially damaged	4 barangays were affected with 50% damaged household	Landslide affected 4 barangays where 80% of the households are damaged and 80% of the area eroded
No. of Affected Individuals	500	1,182	2,365
No. of Dead	50 (77 died -TY Pepeng)	120	200
No. of Injured	5	8	50
No. of Missing	1	3	30
EFFECTS			
Communication	Weak satellite signal and limited internet access.	Communication facilities are moderately affected.	Communication facilities are totally damaged
Power/Electricity	Power interruption is experienced.	Power blackout is experienced.	Power blackout is experienced.
Transportation	Limited transportation is available	Some roads are not open that lead the transportation enter the area	Main roads going to the affected area were blocked

Response Capabilities	100% of the resources are available and able to respond	50% of the resource were able to respond to the affected area	10% of the response capabilities were affected and cannot respond
Government trust	Presence of government trust is seen to address the concerns in landslides	Some concerns are addressed, and there is still presence of LGU to address concerns	Government trust is not reliable
Others: <u>Livelihood</u>	25% of the source of livelihood is not operational	50% of the source of livelihood is affected	100% of the source of the livelihood destroyed displaced flora and fauna
Others: <u>Education</u>	Classes are suspended for one week	Classes are suspended for 2 weeks	Classes are suspended indefinitely
Others: <u>Water Supply</u>	25% of the water supply/source is contaminated	50% of the water supply/source is contaminated	80% of the water supply is contaminated

The MDRRMC of La Trinidad will have to prepare for the worst-case scenario as described in the above table. In this case, a super typhoon will make landfall in La Trinidad where major landslide occurs on four barangays with 80% affected and damaged households. A total of 1,892 individuals were affected from the four barangays with 200 casualties, 50 injured and 30 missing.

Upon the conduct of Rapid Damage Assessment by the La Trinidad RDANA Team, they reported that the communication facilities are totally damaged, power blackout is noted to all barangays, inaccessible road coming in and out of the barangays that pave the transportation

One of the major landslide occurrences in the municipality was the 2009 Little Kibungan Landslide in Puguis that occurred during the height of Typhoon Pepeng claiming lives of 77 residents including 4 rescuers, destroying their houses and lifeline utilities.

Based on the scenario, it is assumed that the priority barangays are those categorized under the critical landslide susceptibility and the barangays that has landslide history. These barangays are Beckel, Poblacion, Puguis (Little Kibungan Village) and Ambiong (Parapad – Muslim Relocation Site). The Incident Management Team of La Trinidad will be activated with the MDRRMC response groups and those from the private clusters. However, more response capabilities will be needed due to the severity of the impact brought about by the landslide.

Below is the summary of the population affected by the rain-induced landslide including the individuals that will possibly be displaced where an assumption of 1, 845 individuals will be inside the evacuation centers and 520 individuals will be outside evacuation centers or with their relatives:

Table. Affected & Displaced Population

Area Affected	Number of Families Affected	Number of Individual Affected	Displaced Population		Reasons for Displacement
			Number of Individuals inside evacuation Center	Number of Individuals Outside Evacuation Center	
Parapad, Ambiong	118	437	306	131	
Beckel	19	90	63	27	
Puguis	356	1,138	896	242	
Poblacion	215	700	580	120	
Total:	708	2,365	1,845	520	

Meanwhile, the table below is the detailed breakdown of the affected population (GIS computed data as per CBMS 2015):

Table. Breakdown of the Affected Population

Area Affected	Number of Individuals Affected		Infant 0 – 11 year-old		Children 17-year-old & Below		Adult 18 – 59-year-old		Elderly 60-year-old & above		PWD		With Sickness		Pregnant	Others
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
Parapad, Ambiong	214	223	32	27	19	25	134	135	29	36		2	0	0		
Beckel	47	43	4	6	3	5	21	18	19	14	1	3	0	0		
Puguis	492	646	61	78	39	55	339	441	53	72	5	7	0	0	3	
Poblacion	291	409	33	44	31	29	190	268	37	68	7	2	0	0	8	

CHAPTER II: GOAL AND OBJECTIVES

A. Goal

The goal of the contingency plan is to provide effective, efficient, timely, and well-coordinated response mechanism in the event of the occurrence of landslide in the municipality of La Trinidad. Such mechanism shall help to protect lives, properties, and the environment, restore the immediate needs of the affected communities.

B. General Objectives

The general objectives are as follows:

1. To ensure the protection of lives, properties, and environment in the municipality of La Trinidad.
2. To determine the immediate needs and the resources that will meet the needs in the event of landslide.
3. To establish coordination and linkages between and among the stakeholders of the municipality of La Trinidad.
4. To evacuate affected individuals residing in hazard prone areas to a safer place.

CHAPTER III: RESPONSE ARRANGEMENTS

A. RESPONSE CLUSTER

Cluster Identification

The following are the required clusters, with the corresponding lead and member offices that must be activated in response to landslide:

Response Cluster	Lead Agency / Office	Member Agencies / Offices
Food and Non-food Items	General Services Office (GSO)	MSWDO MAssO Mayor's Office MAccO SBO Benguet State University Kings College of the Philippines Epiphany Christian Academy LTVTP – League of Association
Health	Municipal Health Services Office	La Trinidad Fire Station Mayor's Office Benguet State University Drug Store Association of the Philippines-Benguet Chapter
Protection	Benguet State University	LTMPS MHSO Kings College of the Philippines Philippine Army Reservist
Camp Coordination and Management	Municipal Social Welfare and Development Office	MHSO Kings College of the Philippines Benguet State University Mayor's Office La Trinidad Water District LT Jeepney Operators Association
Logistics	Municipal Disaster Risk Reduction and Management Office	BENECO GSO LTFS ACDV Kings College of the Philippines MAccO LT Jeepney Operators Association
Emergency Telecommunications	Municipal Planning and Development Office	MEO MAssO SBO Mayor's Office BENECO GSO KABALIKAT CIVICOM

Education	Epiphany Christian Academy of La Trinidad, Inc.	LTMPs Epiphany Christian Academy Kings College of the Philippines Benguet State University Mayor's Office
Search, Rescue and Retrieval	Accredited Community Disaster Volunteer	LTFS LTMPs LTMJ Philippine Army Reservist MDRRMO MAccO MAssO MPDO GSO Kings College of the Philippines K-9 Unit Mayor's Office LT Contractors Association LT Jeepney Operators Association
Management of the Dead and the Missing	La Trinidad Fire Station	Scene of the Crime Operatives LTMPs MDRRMO MHSO GSO BMS
Law and Order	La Trinidad Municipal Police Station	La Trinidad Municipal Jail Philippine Army Reservist Kings College of the Philippines

Moreover, the Municipality of La Trinidad had a memorandum of agreement to different agencies and associations. The following associations will be augmented to help in the municipality's response when the worst case scenario occurs:

Agency/ Association	Roles and Responsibility
La Trinidad Jeepney Operators Association	To provide transportation services
Drug Store Association of the Philippines-Benguet Chapter	To provide/ donate medicines and/or medical supplies
La Trinidad Contractors Association	To provide Search, Rescue and Retrieval equipment
Kabalikat Civic Communication	To provide communication assistance, use of communication equipment and early warning
La Trinidad Vegetable Trading Post-League of Association	To provide donation of vegetable and other relief goods
Benguet Memorial Services	To provide assistance for the management of the dead

***FOOD AND NON-FOOD ITEMS**

Implementation Plan

Lead: General Services Office

Members: Municipal Social Welfare and Development Office

Epiphany Christian Academy of La Trinidad, Inc

Kings College of the Philippines

Sangguniang Bayan Office

Municipal Accounting Office

Municipal Assessors Office

Benguet State University

Mayor's Office

Municipal Health Services Office

La Trinidad Fire Station

Office of the Municipal Agriculturist

LTVTP League of Association

Scenario:

A super typhoon makes landfall in La Trinidad causing massive landslide at Barangay Puguis, Barangay Poblacion, Barangay Beckel and Barangay Ambiong. A total of 708 households with 2,365 individuals were affected where 580 of them were outside evacuation centers and 1,845 were at the different evacuation centers of the municipality. All affected individuals were in need of hygiene kits, family kits and food. Meanwhile, LGU Response Clusters, volunteers, augmented personnel from Regional Offices and nearby LGUs are currently conducting response operations to all affected individuals, casualties and deaths. The food and non-food items cluster will ensure timely delivery of food to responders and affected individuals.

Objectives:

1. To ensure enough supply of food and non-food items throughout the evacuation and response period.
2. To ensure safe and nutritious food for the evacuees and of the responders.
3. To coordinate with business establishments for possible donations.
4. To maintain regular & updated inventory of food and non-food items.

ROLES AND RESPONSIBILITIES:

The Food and Non-Food Items Cluster aims to save lives by providing food and non-food items to the affected populations during the response phase in the short-term, and to restore at least the pre-disaster level of food security in affected area for the long-term.

1. Undertake the coordinated provision of food and non-food assistance to the affected families.
2. Regularly monitor, in coordination with the Health Cluster (Nutrition) the nutritional status of the affected population, identify gaps in the provisions of food assistance and formulate strategic interventions to address the gaps.
3. Ensure availability of food and non-food stockpiles at all levels.

The Food and Non-food Items Cluster is headed by the General Services Office with eleven (11) member agencies and offices. The following are the specific tasks of each members:

Agency/ Office	Task/s
GSO	<ul style="list-style-type: none"> ▪ In-charge of all the main coordinating function. ▪ Provide transportation to be used in the distribution of food and non-food items to identified evacuation centers.
MSWDO	<ul style="list-style-type: none"> ▪ Provide list of affected individuals inside and outside evacuation center including those with special needs. ▪ Facilitate the distribution of food and non-food to affected individuals at the evacuation center.
ECA	<ul style="list-style-type: none"> ▪ Assist MSWDO in the distribution of food and non-food items to affected individuals inside and outside the evacuation center. ▪ Help in the packing of non-food items to be distributed to affected individuals.
KCP	<ul style="list-style-type: none"> ▪ Provide transportation to be used in the distribution of food and non-food items to identified evacuation centers.
SBO	<ul style="list-style-type: none"> ▪ Assist in the distribution of food and non-food items. ▪ Help in the preparation and cooking of foods for personnel, responders, volunteers and evacuees.
MAccO	<ul style="list-style-type: none"> ▪ Assist in the distribution of food and non-food items. ▪ Help in the preparation and cooking of foods for personnel, responders, volunteers and evacuees.
BSU	<ul style="list-style-type: none"> ▪ Assist MSWDO in the distribution of food and non-food items to affected individuals inside and outside the evacuation center. ▪ Help in the packing of non-food items to be distributed to affected individuals.
Mayor's Office	<ul style="list-style-type: none"> ▪ Assist in the distribution of food and non-food items. ▪ Help in the preparation and cooking of foods for personnel, responders, volunteers and evacuees.
MAssO	<ul style="list-style-type: none"> ▪ Assist in the distribution of food and non-food items. ▪ Help in the preparation and cooking of foods for personnel, responders, volunteers and evacuees.
MHSO	<ul style="list-style-type: none"> ▪ Coordinate and share information on nutritional assessment reports to prioritize food distribution to the affected barangays. ▪ Support to food safety and IEC activities.
LTFS	<ul style="list-style-type: none"> ▪ Provision of water ration for domestic use in the evacuation sites/camp sites. ▪ Assist in the distribution of food and non-food items.
OMAG	<ul style="list-style-type: none"> ▪ Facilitate movement of food from production to affected areas by tapping food trading centers. ▪ Mobilize post-harvest facilities if necessary. ▪ Help in the preparation and cooking of foods for personnel, responders, volunteers and evacuees.

PROTOCOLS:

1. Upon activation of the contingency plan, all key representatives of the Food and Non-food Items Cluster headed by Municipal General Services Office will convene at the Emergency Operation Center to undertake coordination work.
2. The Food and Non-food Cluster will follow the cluster approach in operations taking into account that the direction of the operations will be guided based on the information provided by the MDRRMC.
3. All cluster members to observe 12 hours shift to prevent premature exhaustion.

NEEDS AND ACTIVITIES

The following are the needs of the Food and Non-food Cluster as well as the corresponding activities:

Timeframe	Response Activities	Responsible Agencies/Offices
D -2	Preparation of stockpile items needed in the evacuation center	MDRRMO BENECO GSO,LTFS, ACDV,KCP,MACCO
D -1	Maintain Inventory of supplies	
D	Procure identified resources reported by the Camp Management and Coordination Cluster	
D	Distribute resources to the evacuation center	

RESOURCE INVENTORY

The table below shows the existing inventory of the Food and Non-food Cluster:

Resources	Unit	Quantity	Office/Agency	Resource Location	Remarks
Manpower	Personnel		LGU La Trinidad; PROCOR	La Trinidad	
Basin No. 55	Pcs	4			
Basin No. 70	Pcs	4			
Big Pot size no. 4	Pcs	3			
Coffee Maker/ Percolator (36 cups)	Unit	1			
Dish Rack	Pcs	1			
Electric Stove with 2 hotplates, DH	Unit	1			
Electric, Air pot, Big	Unit	1			
Hot & Cold Water Dispenser	Unit	1			
Kalan with stand & Tank with hose	Unit	1			
Kettle, Aluminum, big	Pcs	4			
Laddle, big	Pcs	4			
Laddle, medium	Pcs	3			
Laddle, small	Pcs	3			
Medium Pot size no. 1	Pcs	4			

Medium Pot size no. 2	Pcs	2			
Rice Cooker	Pcs	2			
Serving Spoon	Pcs	15			
Serving Tray	Pcs	13			
Small Pot Size no. 1	Pcs	3			
Small Pot Size no. 2	Pcs	3			
Soup Ladle	Pcs	6			
Stainless bowl	Pcs	74			
Stainless cup	Pcs	97			
Stainless Pitcher	Pcs	7			
Stainless Plate	Pcs	97			
Stainless Spoon	Pcs	108			
Strainer with Handle	Pcs	3			
Super Kalan	Unit	2			
Vat (Kawali) Size no. 1	Pcs	2			
Vat (Kawali) Size no. 2	Pcs	2			
Vat (Silyasi) Size no. 1	Pcs	2			
Vat (Silyasi) Size no. 2	Pcs	2			
Vat (Silyasi) Size no. 3	Pcs	4			
Vat (Silyasi) Size no. 5	Pcs	2			
Halal Certified Foods	Packs	100			For Muslim evacuees and affected families
Halal Certified Kitchen Utensils	Set	50			
Food for Evacuees					
Mattress	Pcs	100			
Bed sheet	Pcs	100			
Pillows	Pcs	100			
Blanket	Pcs	100			
Hygiene kits (Soap, shampoo, toothbrush, toothpaste, towels, tissue, sanitary napkins, diaper)	Set	146		MSWDO Storage Area	To purchase as needed; Request DSWD, DOH
Heavy Duty Burner	Set	8		MSWDO Storage Area	
LPG Tank	Unit	16			
Service Vehicle	Unit				
Food for personnel, volunteers	pax	500			Purchase as needed
Food for evacuees	pax	1,845			Purchase as needed
Formula Milk	box	77			Purchase as needed

NEEDS PROJECTION AND RESOURCE GAP IDENTIFICATION

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
Service Vehicles						

HEALTH

Implementation Plan

LEAD: Municipal Health Services Office

MEMBERS: Municipal Social Welfare and Development Office
Municipal Disaster Risk Reduction and Management Office
General Services Office
Mayor's Office
La Trinidad Fire Station
Benguet State University Nutritionist Students
Association of Pharmacies – Benguet Chapter
Philippine Nurses Association – Benguet Chapter

SCENARIO:

Typhoon makes landfall in La Trinidad, Benguet that brought continuous heavy downpour of rain for more than a week. The week long continuous heavy rainfall caused the occurrence of landslide at Barangay Beckel, Puguis, Poblacion and Ambiong. Local responders were already deployed to conduct search and rescue especially to those who were reported to be trapped inside their residences.

A total of 1,845 were reported to be at the evacuation center where 10 percent were infant, 50 percent of them were children, 20 percent elderly. The Health Cluster will ensure safety and wellness of the evacuees including the responders by providing appropriate and timely health services and psychological debriefing. Also, the health cluster will ensure the evacuees have access to potable water while inside the evacuees.

OBJECTIVES:

1. To provide timely and efficient quality intervention to health care needs to population affected by disaster
2. To Facilitate relief measures and rehabilitation services.
3. Ensure victims safety and the quality and efficiency of emergency care services
4. To provide water and sanitation infrastructure/area of services coupled with promotion of good hygiene practices to reduce risks of water related diseases transmission on other health and nutrition patient

ROLES AND RESPONSIBILITIES:

The Health Cluster aims to ensure access to quality, appropriate and timely health services to the affected population. The following are the roles and responsibilities of the sub-cluster of health:

1. Health
 - a. Manage injuries and acute conditions
 - b. Prevent and control spread of communicable diseases
 - c. Ensure functionality of the Health Referral system
2. Water, Sanitation and Hygiene (WASH)
 - a. Assess WASH conditions in the evacuation center
 - b. Identify possible sources of water
 - c. Conduct water quality surveillance, disinfection and treatment
 - d. Ensure of provision of sanitation facilities, excreta disposal and solid waste management
3. Nutrition
 - a. Conduct Rapid Nutrition Assessment
 - b. Support infant and child feeding
 - c. Manage acute malnutrition cases

- d. Promote proper nutrition in emergencies and disasters
4. Mental Health And Psychosocial Support
- a. Provide Psychological First Aid to the general population
 - b. Refer Psychiatric cases to appropriate mental health facilities
 - c. Protect and promote well-being of responders
 - d. Provide psychological interventions to survivors and vulnerable groups

Moreover, Health Cluster is headed by the MHSO with eight (8) member agencies and offices. The following are the specific tasks of each members:

Agency/Office	Task
MHSO	<ul style="list-style-type: none"> ▪ Deliver the broad spectrum of health interventions aligned with the QUAD cluster services (Medical and Public Health, WASH, Nutrition, and Mental Health and Psychosocial Support).
MSWDO	<ul style="list-style-type: none"> ▪ Provision of facilities within evacuation centers that would be conducive to good health outcomes such as breastfeeding corners, spaces for pregnant and lactating mothers, gender sensitive toilet and bathing facilities, medical consultation area, etc. ▪ Lead the provision of Mental Health and Psychosocial Support services in evacuation centers and refer to the health cluster patients needing specialized care. ▪ Coordinate with Health Cluster regarding milk donations.
Mayor's Office	<ul style="list-style-type: none"> ▪ Provide linkages to stakeholders for provision of health logistics such as water, medicines, etc.
BSU (Nursing)	<ul style="list-style-type: none"> ▪ Provide manpower to assist the Health Cluster operations.
GSO	<ul style="list-style-type: none"> ▪ Provide transportation of medical teams and health logistics.
MDRRMO	<ul style="list-style-type: none"> ▪ Refer health related donations to the health cluster for clearance prior to acceptance. ▪ Provide health cluster access to emergency telecommunications facilities.
LTFS	<ul style="list-style-type: none"> ▪ Provide manpower (EMS personnel) to assist the operations of the Health Cluster. ▪ Assist in the provision and distribution of water supply and cleaning/ clearing of health facilities.
LTMPS (Health Services, Women & Children Protection Center)	<ul style="list-style-type: none"> ▪ Provide security for health cluster teams being deployed at the disaster site. ▪ Refer to the health cluster victims of violence and evacuees or affected individual needing specialized care.
DepEd La Trinidad	<ul style="list-style-type: none"> ▪ Ensure provision of facilities within schools used as evacuation centers that would be conducive to good health outcomes.

Protocols

1. Upon activation of the contingency plan, all key representatives of the Health Cluster headed by MHSO will convene at the Emergency Operation Center to undertake coordination work.
2. The EOC will receive all instructions and updates on request made on ground will be coursed through the Health Cluster where the cluster shall provide resource augmentation upon request.
3. All cluster members to observe 12 hours shift to prevent premature exhaustion.

RESPONSE ACTIVITIES

The following are the activities of the Health Cluster:

Timeframe	Response Activities	Responsible Agencies/Offices
D -1	Notification of Teams in The Event (Meeting) Accounting of teams to be deployed for initial site inspection and assessment	LTMPs,MDRRMO,MSWDO and HEALTH
D -1	Mobilization of Team 1 including MD to the Brgy with more number of evacuees (Check-up, Nut Council, Sanitation activities)	Health, GSO,MSWDO
D +8 hours	Mobilization of Team 2; Deployed to the next barangay	Health, GSO,MSWDO
D +8 hours	Team 3 deployed to the 3 rd barangay for the delivery of health and sanitation services	Health, GSO,MSWDO
D +3	Continuous monitoring and coordination to BLGU,PHO,ACADEME, and other stake holders	MHSO, MO

RESOURCE INVENTORY

The table below shows the existing inventory of the Health Cluster

Resources	Unit	Quantity	Office/Agency	Remarks
Manpower	Personnel	75	MHSO: 7 teams (49 personnel) LTFS: 1 team with 4 members LTMPs: 1 team with 8 members MGSO: 5 drivers MSWDO: 3 personnel MACCO: 3 personnel MASSO: 3 personnel	LTFS Team: EMS personnel; LTMPs Team: 4 nurses
Blood Pressure Apparatus with Stethoscope	Set	22	MDRRMO MHSO	MDRRMO: 6 MHSO: 16
First Aid Kit (big)	set	3	MDRRMO	Complete set
Pulse Oximeter	pcs	25	MHSO: 16 pcs MDRRMO: 9 pcs	
Thermoscan	pcs	5	MHSO: 3 pcs MDRRMO: 2 pcs	

Wheel Chair	unit	5	MDRRMO: 2 wheel chair MSWDO: 3 wheel chair	
Aqua Tab	Boxes	20	MHSO	
Face mask	Boxes	20	MHSO	
Gloves	Boxes	10	MHSO	
Ambulance	Unit	3	MDRRMO; LTFS; LGU	1 LTFS 2 MDRRMO 1 MHSO
Patient Transport	Unit	1	MHSO	1 MHSO
Service Vehicles	Unit	4	GSO, MASSO, MACCO	2 GSO, 1 MASSO, 1 MACCO
Medicines for cough and cold (children)	Boxes	1	MHSO	
Medicines for adult (cough and cold)	Boxes	1	MHSO	
Medicine for hypertension	Boxes	5	MHSO	
Medicine for UTI	Boxes	2	MHSO	

NEEDS PROJECTION AND RESOURCE GAP IDENTIFICATION

The number of resources allocated for one (1) day under the Health cluster will be used for the rest of the response operation. Based on this assumption, the following are the projected needs and resource gaps:

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	75	75	0			
Blood Pressure Apparatus with Stethoscope	22	22	0			
Medicines for cough and cold (children)	10	1	9	Procure medicines or request at PDOHO	PhP 10,000.00	MHSO
Medicines for adult (cough and cold)	10	1	9	Procure medicines or request at PDOHO	PhP 10,000.00	MHSO
Medicine for hypertension	10	5	5	Procure medicines or request at PDOHO	PhP 10,000.00	MHSO
Medicine for UTI	10	2	8	Procure medicines or request at PDOHO	PhP 10,000.00	MHSO
First Aid Kit (big)	5	3	2	Procure First Aid Kit	PhP 10,000.00	MHSO
Pulse Oximeter	25	25	0			
Thermoscan	5	5	0			
Wheel Chair	5	5	0			
Aqua Tab	20	20	0			
Face mask	20	20	0			
Gloves	10	10	0			
Ambulance	3	3	0			
Patient Transport	1	1	0			
Service Vehicles	4	4	0			

PROTECTION

Implementation Plan

Lead Agency : La Trinidad Municipal Police Station

MEMBERS : Benguet State University
 Municipal Health Services Office
 Mayor's Office
 Philippine Army Reservist
 La Trinidad Municipal Jail

SCENARIO:

(Change scenario: protection cluster is in charge of ensuring the safety of the evacuees and displaced individuals)

OBJECTIVES:

1. To ensure the safety and security of the response team by the protection cluster.
2. To ensure that protection is given to the affected individuals during their stay at the evacuation center.
3. To ensure protection services are available 24/7.

ROLES AND RESPONSIBILITIES

The Protection Cluster aims to provide

PROTOCOLS

1. Upon activation of the contingency plan, all key representatives of the Protection Cluster headed by the La Trinidad Municipal Police Office will convene at the Emergency Operation Center to undertake coordination work.
2. The Protection Cluster will follow the cluster approach in operations and the field operations will be guided by the information provided by the MDRRM Council.
3. Protection Cluster is headed by LTMPs with five (5) member agencies and offices. The following are the specific tasks of each members:

Agency / Office	Task
LTMPs	<ul style="list-style-type: none"> ▪ Coordinate and assist Food and Non-food Items Cluster for security deployment to avoid chaos. ▪ Ensure confidentiality of all cases investigated.
LTMJ	▪
MHSO	▪
Philippine Army Reservist	▪ To conduct area security in support to LTMPs.
BSU	▪
KCP	▪

4. The

NEEDS AND ACTIVITIES

The following are the needs of the Health Cluster as well as the corresponding activities:

Timeframe	Response Activities	Responsible Agencies/Offices

CAMP COORDINATION AND MANAGEMENT

Implementation Plan

LEAD: Municipal Social Welfare and Development Office

MEMBERS: La Trinidad Fire Station
La Trinidad Water District
La Trinidad Municipal Police Station
Municipal Health Services Office
Office of the Municipal Agriculture
Benguet State University
Epiphany Christian Academy of La Trinidad, Inc.
Kings College of the Philippines
DepEd - La Trinidad District

SCENARIO:

A Super Typhoon made landfall in the Municipality of La Trinidad, Province of Benguet causing four major landslides to Barangays Beckel, Ambiong, Puguis and Poblacion. A total of 2,365 individuals are affected where 1,845 individuals are inside the evacuation center and 520 are outside the evacuation centers. Some of the evacuees are sick and traumatized from the recent landslide, the Camp Coordination and Management Cluster conducts needs assessment, medical public health and protection services as well as psychological first aid.

OBJECTIVES:

1. To ensure safety of the evacuees and camp coordination and management cluster personnel.
2. To identify relatives or families to accommodate evacuees.
3. To facilitate orderly movement of families to safe, secure and accessible evacuation center.
4. To ensure availability of resources in the timeliness of the response.

ROLES AND RESPONSIBILITIES

Camp Coordination and Management Cluster aims to provide assistance and augment all requirements for the management and evacuation of individual's families affected by the disasters. Specific roles and responsibilities are as follows:

1. Ensure the availability of identified safe, secure and accessible evacuation centers for emergencies and disasters.
2. Ensure establishment of disaggregated listing and profiling of affected families in evacuation centers.
3. Ensure all affected families and evacuees are provided with basic humanitarian needs compliant with the SPHERE standards such as but not limited to food with enough nutritional values, potable water, clothing, family items, hygiene kits and other essential non-food items.
4. Ensure that basic medical public health and protection services are available 24/7.
5. Ensure that animals such as pets and livestock have designated areas.
6. Continue to seek opportunities for recovery, rehabilitation and developmental tasks as post response activities are undertaken, in case of prolonged stay.

PROTOCOLS:

1. The Camp Coordination Management Cluster will follow the cluster approach in operations guided by the information provided by the MDRRMC.

2. Upon activation of the contingency plan, all key representatives of the Camp Coordination and Management Cluster headed by MSWDO will convene at the Emergency Operation Center to undertake coordination work.
3. Camp Coordination and Management Cluster is headed by the MSWDO with thirteen (13) member agencies and offices. The following are the specific tasks of each members:

Agency/Office	Task/s
MSWDO	<ul style="list-style-type: none"> ▪ Monitoring on the status of all evacuation centers being used. ▪ Ensure availability of timely and accurate data/reports for information dissemination to cluster partners and as basis in provision of augmentation of assistance. ▪ Coordinate with the Logistics Cluster and Food and Non-Food Items Cluster on their needs and the evacuees needs. ▪ Coordinate with evacuation center managers if there are reported protection issues inside evacuation centers. ▪ Seek opportunities for recovery, rehabilitation and developmental tasks as post response activities are undertaken, in case of prolonged stay.
Epiphany Christian Academy of La Trinidad, Inc.	<ul style="list-style-type: none"> ▪ Provide safe emergency shelter to affected individuals (3 days for short term and up to 15 days for long term). ▪ Assist MSWDO in getting detailed profile of evacuees including the needs of vulnerable groups specially children and those with special needs. ▪ Orient evacuees on schools' rules and regulations as evacuation center. ▪ Monitor classrooms used as evacuation center.
Kings College of the Philippines	<ul style="list-style-type: none"> ▪ Provide safe emergency shelter to affected individuals (3 days for short term and up to 15 days for long term). ▪ Assist MSWDO in getting detailed profile of evacuees including the needs of vulnerable groups specially children and those with special needs. ▪ Orient evacuees on schools' rules and regulations as evacuation center. ▪ Monitor classrooms used as evacuation center.
Benguet State University	<ul style="list-style-type: none"> ▪ Conduct psychosocial intervention for affected children ▪ Provide safe emergency shelter to affected individuals (3 days for short term and up to 15 days for long term). ▪ Assist MSWDO in getting detailed profile of evacuees including the needs of vulnerable groups specially children and those with special needs. ▪ Orient evacuees on schools' rules and regulations as evacuation center. ▪ Monitor classrooms used as evacuation center.
MHSO	<ul style="list-style-type: none"> ▪ Conduct medical public health and protection services ▪ Conduct hygiene promotions.

LTFS	<ul style="list-style-type: none"> ▪ Provision of water ration for domestic use in the evacuation centers. ▪ Orient the evacuees on fire safety tips. ▪ Render additional services as requested.
OMAG	<ul style="list-style-type: none"> ▪ Technical assistance in the treatment of sick animals. ▪ Assist in the condemnation and disposal of dead animals.
MTO	<ul style="list-style-type: none"> ▪ Provide personnel to assist at the evacuation center
SBO	<ul style="list-style-type: none"> ▪ Provide personnel to assist at the evacuation center
MGSO	<ul style="list-style-type: none"> ▪ Provide personnel to assist at the evacuation center
Mayor's Office	<ul style="list-style-type: none"> ▪ Provide personnel to assist at the evacuation center
La Trinidad Water District	<ul style="list-style-type: none"> ▪ Provision of water ration for domestic use in the evacuation centers.
DepEd – La Trinidad District	<ul style="list-style-type: none"> ▪ Provide safe emergency shelter to affected individuals (3 days for short term and up to 15 days for long term). ▪ Assist MSWDO in getting detailed profile of evacuees including the needs of vulnerable groups specially children and those with special needs. ▪ Orient evacuees on schools' rules and regulations as evacuation center. ▪ Monitor classrooms used as evacuation center.
LTMPS	<ul style="list-style-type: none"> ▪ Ensure police assistance and WCPC desk to maintain safety and order by deploying 50-50 male-female 24-hour patrol to evacuation centers.

4. A twelve hour shift shall be observed to prevent premature exhaustion.

NEEDS AND ACTIVITIES:

Timeframe	Response Activities	Responsible Agencies/Offices

RESOURCE INVENTORY

The table below shows the existing inventory of the Camp Coordination and Management Cluster:

Resources	Unit	Quantity	Office/Agency	Resource Location	Remarks
Manpower	Personnel		LGU La Trinidad; PROCOR	La Trinidad	
Evacuation Center: -MDRRMC					
Evacuation Center - Municipal Gymnasium					
-Lednicky Hall					
-Ambiong Elementary School					
-Puguis Elementary School					

NEEDS PROJECTION & RESOURCE GAP IDENTIFICATION

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
Service Vehicle						
Evacuation Center				MOA with DepEd and other facilities		

LOGISTICS

IMPLEMENTATION PLAN

LEAD: Municipal Disaster Risk Reduction and Management Office

MEMBERS: Municipal Treasury Office
Municipal Budget Office
Municipal Social Welfare and Development Office
BENECO
General Services Office
La Trinidad Fire Station
Accredited Community Disaster Volunteer
King's College of the Philippines
Municipal Accounting Office
Sangguniang Bayan Office
Local Finance Committee

SCENARIO:

Typhoon makes landfall in the municipality of La Trinidad. This leads to the occurrence of massive landslides in the different barangays causing isolation, inaccessible roads, power and communication shut down; there are 200 casualties, 50 injured and 30 missing while more than 1, families were evacuated at the identified evacuation centers. To be able to cater all the needs of the different clusters that will manage the incidents, the logistics cluster ensures the availability of funds and the timely delivery of emergency resources and rescue equipment.

OBJECTIVES:

1. To ensure the timely delivery of emergency resources and rescue services to the affected area in the municipality;
2. To facilitate access to common logistics facility and supplies;
3. To track deployed resources.

ROLES AND RESPONSIBILITIES:

The Logistics Cluster aims to provide an efficient and effective logistics coordinating structure that will harmonize the activities of all clusters and all clusters and encourage regular information-sharing among all stakeholders and other partners. The following were the functions of the Logistics Cluster:

1. Allocate and provide funds (as per RA 1021, Section 72 of PD 477 and 5% Local Disaster Risk Reduction and Management Funds);
2. Revise and review budgetary operations to cope with the disaster;
3. Study ways and means to provide emergency financial support for operations
4. Solicit relief assistance for victims;
5. Procure, provide and maintain Resources and MDRRMC tools and equipment during and immediately after the disaster;
6. Ensure that there is an efficient mechanism for immediate delivery of service, food, shelter and medical supplies;
7. Inventories, consolidation of resources available among partners and cluster members;
8. Tracking of deployed items
9. Update assessment of roads, warehouses stocks, transport capacities to from and within the affected areas;
10. Perform other functions as may be appropriate.

PROTOCOLS:

1. Upon activation of the contingency plan, all key representatives of the Logistics Cluster headed by MDRRMO will convene at the Emergency Operation Center to undertake coordination work.

2. The Logistics Cluster is composed of ten offices where MDRRMO will lead the operation of the cluster and will undertake all major coordinating functions. The following are the task of the logistic cluster members:

Agency	Task/s
MDRRMO	<ul style="list-style-type: none"> ▪ Ensure cooperation and coordination among members of the response clusters including information and knowledge sharing and management. ▪ Manage provision of supplies, materials, tools and equipment during and immediately after the onset of landslide. ▪ To track the deployed tools, equipment.
BENECO	<ul style="list-style-type: none"> ▪ Provide materials, tools and equipment during and immediately after the onset of the landslide.
GSO	<ul style="list-style-type: none"> ▪ Provides transportation and manpower to ferry and fetch responders to the affected areas, transport casualties to hospitals, to the affected areas, transport casualties to hospitals and transport residents to safe evacuation areas. ▪ To provide manpower to conduct road clearing (if needed)
LTFS	<ul style="list-style-type: none"> ▪ Provide transportation, manpower, water and rescue equipment that will be used immediately after the onset of landslide.
ACDV	<ul style="list-style-type: none"> ▪ Assist the MDRRMO in the provision of supplies, materials, tools and equipment during the onset of landslide.
KCP	<ul style="list-style-type: none"> ▪ Provide Transportation, resources, and manpower ▪ Solicit relief assistance for victims
MTO, MBO, MACCO, SBO, LFC	<ul style="list-style-type: none"> ▪ Check funds availability to procure, supply and maintain tools and equipment. ▪ Revise and review budgetary operation to cope with the incident. ▪ Study means and ways to provide emergency financial support for the operation.
MSWDO	<ul style="list-style-type: none"> ▪ Augment food and non-food items and supplies of Camp Management to the affected area. ▪ Employ a tracking system for the send and received items

3. The Logistics Cluster will follow the cluster approach in operations taking into account that the direction of the operations will be based on the information provided by the other clusters and MDRRM Council.
4. All communicated requests from other clusters shall be directed to the Cluster lead through the EOC, the designated focal person of the Logistics Cluster shall:
- a. Determine the prioritization and identify its sources
 - b. Facilitate administrative requirements for the transport of resources and coordinate the availability of mobilized assets
 - c. Provide feedback to requesting agency
 - d. Prepare status reports for deployed resources.
5. A twelve hour shift shall be observed to prevent premature exhaustion.
6. For Transportation Request:
- a. Requesting agency shall submit to the cluster lead a written request indicating detailed items with corresponding specifications including the name and contact number of the receiving cluster.

- b. Prioritization shall be determined by the cluster lead based on the requirement in the affected area or based on the result of initial assessments.

NEEDS AND ACTIVITIES:

Timeframe	Response Activities	Responsible Agencies/Offices
D -5	Coordinate among the logistics members	MDRRMO BENECO GSO,LTFS, ACDV,KCP,MACCO
D -5	Conduct inventory of supplies, materials, tools and equipment	MDRRMO, LTFS, GSO, BENECO
D-5	Consolidation of resources among partners and cluster members	
D -5	Revise and review budgetary operation to cope with the incident	LFC MBO MTO MACCO
D -5	Check funds availability to procure, supply and maintain tools and equipment	MACCO
D -4	Purchase of materials, tools and equipment to be needed	MDRRMO
D	Provide materials, tools, vehicle services and equipment needed by the different response clusters	MDRRMO, LTFS, GSO, BENECO, ACDV
D	Tracking of deployed items	MDRRMO, LTFS, GSO, ACDV
D +1	Solicit Relief assistance for victims	KCP

RESOURCE INVENTORY

The table below shows the existing inventory of the Logistics Cluster

Resources	Unit	Quantity	Office/Agency	Resource Location	Remarks
Manpower	Personnel		LGU La Trinidad; PROCOR	La Trinidad	
Service Vehicles	Unit				
Ambulance	Unit				
Backhoe Loader	Unit				
Rescue Vehicles	Unit				
Fuel					
Laptop	Unit				
Printer	Unit				
Projector	Unit				
Handheld Radio					
Rescue Vest					

Needs Projection and Resource Gap Identification

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
Service Vehicles						
Laptop						

EMERGENCY TELECOMMUNICATIONS CLUSTER

IMPLEMENTATION PLAN

LEAD: Municipal Planning and Development Office

MEMBER: Municipal Engineering Office

Municipal Disaster Risk Reduction and Management Office

La Trinidad Fire Station

La Trinidad Municipal Police Station

Mayor's Office

BENECO

KABALIKAT Civic Communication

SCENARIO:

The Super Typhoon makes landfall in the municipality of La Trinidad, Benguet causing massive landslide at barangays Ambiong, Puguis, Poblacion and Beckel. The super typhoon also toppled down trees, electric post and telecommunication facilities shutting down communication and power supply making it difficult for the response cluster to coordinate with one another and report to the EOC. The Emergency Telecommunication Cluster will establish a system of communication in order for all response teams to carry out their respective mandates safely and efficiently.

OBJECTIVES

1. To ensure Safety and Security of the Response Teams for the whole duration of the operation.
2. To provide a timely, resilient and predictable information and communications technology support to improve the following:
 - a. Response and coordination among response organizations
 - b. Decision-making through timely access to critical information
 - c. Common operational areas for disaster response
 - d. Communication system standards and operating procedures
 - e. Standards based architecture for HADR Operators
 - f. System architectures for compliances and interoperability
3. To strengthen ICT capacities.

ROLES AND RESPONSIBILITY

The Emergency Telecommunications Cluster is required to install, operate and maintain a system of communication that have an effective and timely emergency telecommunications services to support other clusters in carrying out their respective mandates safely and efficiently.

1. Provide communication, electronics, and information system support services.
2. Assess the ICT requirements and provide the means to facilitate the flow of information to and from different sources involved in the response operations.
3. Provide communication reconnection access to facilitate telecommunications link/connections for response activities between EOC, IMT and higher levels of government (PDRRMC, RDRRMC, and NDRRMC) through the Rapid Emergency Telecommunications Team (RETT).
4. RETT to serve as the rapid deployment team that will be the main focal for the Cluster and will mobilize all available assets to cover all necessary emergency telecommunication requirements.
5. Provide basic communication support services and shared voice radio network system.

PROTOCOLS:

1. Upon activation of the contingency plan, all members of the Emergency Telecommunications Cluster headed by the Municipal Planning and Development Office shall convene at the EOC to undertake coordination work.
2. The Emergency Telecommunications Cluster is headed by MPDO has six (6) member agencies with the following functions:

Agency / Office	Task/s
MPDO	<ul style="list-style-type: none"> ▪ Provide directory services containing the contact information of the different key players. ▪ Dispatch the Rapid Emergency Telecommunications Team (RETT) as per instruction of the MDRRMC. ▪ Coordinate with the Rapid Emergency Telecommunications Team (RETT) on the ground for updates and operational requirements.
MDRRMO	<ul style="list-style-type: none"> ▪ Programming of radios belonging to individual responders, organizations and other key players in the affected areas. ▪ Install and maintain internal ICT system between clusters and individuals independent from local public services. ▪ Conduct repair and maintenance activities as needed.
LTMPS	<ul style="list-style-type: none"> ▪ Assist the DRRMCs in managing the spectrum by discouraging employment of unauthorized communications equipment. ▪ Provide manpower, technical and equipment assistance for communication between disaster site and MDRRMCs.
MEO	<ul style="list-style-type: none"> ▪ Facilitate the clearing operations of the affected roads and bridges to open traffic immediately and assists the LGUs to reinstall communication and other local infrastructure facilities. ▪ Conduct Rapid Damage Assessment for road and bridges. ▪ Submit RDANA reports to MDRRMO.
LTFS	<ul style="list-style-type: none"> ▪ Assist in communication between affected areas and MDRRMC. ▪ Assist MDRRMO through the use of public address system.
Mayor's Office	<ul style="list-style-type: none"> ▪ Provide regular updates on the updates of response activities of the affected areas in coordination with MDRRMC.
General Services Office	<ul style="list-style-type: none"> ▪ To provide service vehicles to transport the deployed Emergency Telecommunication Cluster members
BENECO	<ul style="list-style-type: none"> ▪ To provide electronic services. ▪ To provide personnel to help

Kabalikat Civicom	▪To provide communication assistance, use of communication equipment.
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3. ETC will deploy Rapid Emergency Telecommunications Cluster (RETT) upon the request of the IMT through the EOC.
4. Each RETT team shall work in pairs when deployed on the ground to conduct rapid assessment.
5. RETT will be dispatched to the areas cut off from communication in coordination with the Logistics Cluster. The RETT will serve as rapid deployment team, focal of the Emergency Telecommunication Cluster and will mobilize all available assets of the AFP, PNP, BFP and PCG situated in the locality to cover all necessary emergency telecommunications requirement.
6. Prioritize innovations and use of existing information management tools to help response clusters and humanitarian workers carry out operation efficiently and effectively.
7. Deactivation of the RETT will be upon full normalcy of the telecommunication system services of the affected barangays as assessed and confirmed by the MDRRMC.

Needs and Activities

The following are the needs of the Emergency Telecommunications Cluster as well as their corresponding activities:

Timeframe	Response Activities	Responsible Agencies/Offices
D-5	Coordinate among the logistics members	MDRRMO BENECO GSO,LTFS, ACDV,KCP,MACCO

Resource Inventory

Resources	Unit	Quantity	Office/Agency	Resource Location	Remarks
Manpower	Personnel	10	LGU La Trinidad; PROCOR	La Trinidad	
Service Vehicle	Unit		GSO		
Drone Camera	Set	3	MDRRMO. Mayor;s Office, LTMPS		
Earpiece	Unit	2	MDRRMO		
Handheld Radio	Unit	5	MDRRMO		

Mobile Antenna Larsen	Unit	3	MDRRMO		
Power Supply – 20 amps	Unit	1	MDRRMO		
Radio Repeater System	Unit	1	MDRRMO		
Rubberduck Antenna Diamond	Unit	11	MDRRMO		
Satellite Phone	Unit	3	MDRRMO		
Solar Panel – 150 watts – 12 volts	Unit	1	MDRRMO		
Speakerphone for handheld radio	Unit	1	MDRRMO		
UHF Radio	Unit	11	MDRRMO		
Telephone	Unit	1	MDRRMO		
Laptop	Unit	1	MPDO		

Needs projection and Resource Gaps Identification

The number of resources allocated for one day under the

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
Service Vehicle						
Drone Camera	4	3	1			
Earpiece		2				
Handheld Radio	5	5	5	Procurement of additional Handheld radios	Php 15,000.00	LDRRMF
Mobile Antenna Larsen		3				
Power Supply – 20 amps		1				
Radio Repeater System		1				
Rubberduck Antenna Diamond		11				
Satellite Phone		3				
Solar Panel – 150 watts – 12 volts		1				
Speakerphone for handheld radio		1				
UHF Radio		11				
Telephone		1				
Laptop	4	1	3	Office/Agency member to use their own laptop		

EDUCATION

Implementation Plan

LEAD : Epiphany Christian Academy of La Trinidad, Inc.

MEMBERS : La Trinidad Municipal Police Station
Municipal Health Services Offices
Kings College of the Philippines
DepEd La Trinidad District

SCENARIO

A Super Typhoon makes landfall in the municipality of La Trinidad where schools and work was suspended by the Local Chief Executive. The Super Typhoon causes massive landslide at Barangay Ambiong, Beckel, Poblacion and Puguis affecting 708 families. The municipal and barangay evacuation centers cannot accommodate all the affected individuals, thus schools were used as evacuation center. To ensure total of 1,845 individuals were inside the evacuation center

OBJECTIVES

1. To ensure the safety and security of the response team by the education cluster.
2. To ensure that continuous education has taken place during the operation.
3. To facilitate and assist in the conduct of education activities.

ROLES AND RESPONSIBILITIES

The Education Cluster aims to ensure safety of learners and personnel. It also aims to provide continued access to quality education to all affected learners. The Education Cluster shall ensure that agencies and organizations responding to an emergency can take a coordinated approach and work alongside existing education structures to meet the education needs of the affected population. The Cluster also aims to:

1. Conduct impact and needs assessment on affected teaching and non-teaching personnel, learners and educational properties;
2. Provide proper education to displaced children in the evacuation center;
3. Conduct psychological de-briefing to victims;
4. Ensure continuous education of children;
5. Assess recovery needs of displaced persons and provide necessary assistance;
6. Render technical assistance to disaster victims securing loans.

PROTOCOLS

1. Upon activation of the contingency plan, all key representatives of the Education Cluster headed by Sangguniang Bayan Office will convene at the EOC to undertake coordination work.
2. The lead agency of the Education Cluster is the Epiphany Christian Academy of La Trinidad, Inc. with the following member agencies:

Agency/Office	Task
Epiphany Christian Academy of La Trinidad, Inc.	<ul style="list-style-type: none">▪ Coordinates with other response clusters for their MDM requirements.▪ Submit report▪ Responsible on the activities prepared for Education, closely coordinate with MSWDO on the schedule of activities.▪ Work with KCP on the donation of materials to be used▪ coordinate with BSU for psychosocial intervention

SEARCH, RESCUE AND RETRIEVAL

Implementation Plan

LEAD: Accredited Community Disaster Volunteer

MEMBERS: La Trinidad Fire Station
La Trinidad Municipal Police Station
K9 Unit
La Trinidad Municipal Jail
Mayor's Office
BB-Picag
Municipal General Services Office
Municipal Treasury Office
Municipal Assessor's Office
Municipal Accounting Office

Scenario:

A Super Typhoon makes landfall in La Trinidad leading to major landslide occurrences at Barangays Ambiong, Beckel, Puguis and Poblacion. The strong winds uprooted trees and topple down electric post and telecommunication facilities. Roads and bridges are impassable due to road cuts and eroded slope protection.

Out of the 2,365 affected individuals of 708 families, there are 200 accounted deaths, 50 injured, and 30 missing individuals. While, the local responders are already deployed, majority of them and their families are victims themselves. Furthermore, debris is all over the area making SRR operations difficult to perform.

Objectives

The SRR Cluster shall provide support for an effective, efficient, organized and systematic search, rescue and retrieval operations to disaster affected areas upon order to minimize loss of lives and casualties. The SRR

Roles and Responsibilities

The SRR Cluster will respond in the affected areas to minimize the loss of lives and casualties. The SRR Cluster will have two components:

- a. Coordination of all SRR teams deployed at the affected areas.
- b. Retrieval of the dead.

The lead agency for the SRR Cluster is the La Trinidad Accredited Community Volunteer with the following member agencies:

Agency/Office	Task
ACDV	<ul style="list-style-type: none">▪ Convene the SRR Cluster.▪ Provide SRR Teams for deployment to the affected areas.▪ Collect status reports and requests of the deployed SRR Teams on the ground▪ Submits status, requests and proposed actions to the MDRRM Council to integrate all activities at the Operation Center.
MDRRMO	<ul style="list-style-type: none">▪ Monitor situation from the ground through the LDRRMC OPCEN.▪ Receive request for SRR Augmentation▪ Issuance and dissemination of deployment orders

	<ul style="list-style-type: none"> ▪ Deploy SRR augmentation groups in coordination with the Cluster Head.
LTFS	<ul style="list-style-type: none"> ▪ Provide Special Rescue Unit for deployment in the affected areas. ▪ Assist in collapse structure operations ▪ Support other tasks as requested by the Responsible Official or MDRRMC Chairperson.
LTMPS	<ul style="list-style-type: none"> ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead. ▪ Support other tasks as requested by the Responsible Official or MDRRMC Chairperson.
K9	<ul style="list-style-type: none"> ▪ Provide K9 dogs and K9 personnel for deployment to the affected areas in coordination with the SRR Cluster Lead.
BB-Picag	<ul style="list-style-type: none"> ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead
Mayor's Office	<ul style="list-style-type: none"> ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead
MGSO	<ul style="list-style-type: none"> ▪ Provide vehicles to transport SRR Teams to be deployed to affected areas. ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead
MASSO	<ul style="list-style-type: none"> ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead
MACCO	<ul style="list-style-type: none"> ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead
MTO	<ul style="list-style-type: none"> ▪ Provide SRR Teams for deployment to the affected areas in coordination with the SRR Cluster Lead

Protocols:

1. Upon activation of the contingency plan, all key representatives of the Search Rescue and Retrieval Cluster headed by the ACDV will have to convene at the Emergency Operation Center to undertake coordination work.
2. All SRR Teams will provide their own logistical requirements.
3. The ACDV as Cluster Lead will coordinate all support and requirements of the SRR Cluster in their activities to augment the requirements at the affected areas during disaster.
4. SRR Teams to coordinate with the SRR Cluster Lead for proper endorsement to the Incident Command post on ground.
5. Each response team shall:
 - a. Check in to the established Incident Command Post and receive instructions under the supervision of the Incident Management Team.
 - b. Observe twelve hour shift to prevent premature exhaustion.
 - c. Utilize the principle of triage to determine the order of priority to respond to casualties.
 - d. Shall work in pairs, there should always be a second rescuer to stand behind to provide physical support and monitor safety. Working in pairs also provides opportunity for rotations and rest.
 - e. Account all treated/responded victims by recording important details such as name, age, sex and address.
 - f. Transport victims who do not need hospitalization to the nearest evacuation area as instructed by the IMT.
 - g. Retrieve and endorse human remains to the Management of the Dead and Missing Cluster for proper documentation and disposal. Only a doctor can officially declare a victim dead.
 - h. Report all actions taken to the IMT for subsequent reporting to the EOC.

6. The SRR cluster shall provide additional SRR resource augmentation to the IMT upon request of the Incident Commander. The principle of efficiency and effectiveness shall always be observed.
7. Priority shall be given to the very young (0 to 7-year-old), old (60-year-old and above), pregnant and persons with disability. The severely injured with life threatening condition but with high chance of survival are to be responded first, followed by the less severely injured. Next will be the walking wounded and the last will be those with remote survival.
8. The casualties shall be handed-over to the Health Cluster for proper treatment and management while the dead will be handed-over to the Management of the Dead and Missing Cluster.
9. For the entire duration of the operations, the existing means of communications shall be utilized whatever is applicable. However, the Emergency Telecommunication Cluster will be activated once communication is cut-off from the affected areas.
10. All SRR teams shall conduct after SRR operations de-briefing, prepare and submit operation report to the SRR Cluster Lead.
11. Demobilization will be done upon orders.

RESPONSE ACTIVITIES

The following are the needs of the SRR Cluster as well as the corresponding activities required:

Timeframe	Response Activities	Responsible Agencies/Offices
D-2	Coordination meeting among SRR Cluster members	ACDV All SRR Cluster
D-2	Conduct Action Planning	ACDV All SRR Cluster
D-2	Alert SRR Teams for possible deployment for SRR Operations	ACDV All SRR Cluster
D-2	Monitor and assess the situation	MDRRMO
D	Convene the SRR Cluster	ACDV
D	Provide SRR teams for deployment to the affected areas	All SRR Cluster
D	Monitor situation in the ground through the OpCen	MDRRMO
D	Submit responses and operation report to the MDRRMO	ACDV
D+1	Continuous monitoring of situation on the ground	MDRRMO
D+1	Provide SRR teams for deployment to the affected areas	All SRR Cluster
D+1	Search, rescue and retrieval operation to affected areas	All SRR Cluster
D+1	Conduct after SRR operations de-briefing, prepare and submit operation report to the SRR Cluster	All SRR Cluster
D+1	Submit responses and operation report to the MDRRMO	ACDV
D+2	Continuous monitoring of situation on the ground	MDRRMO
D+2	Provide SRR teams for deployment to the affected areas	All SRR Cluster
D+2	Search, rescue and retrieval operation to affected areas	All SRR Cluster
D+2	Conduct after SRR operations de-briefing, prepare and submit operation report to the SRR Cluster	All SRR Cluster
D+2	Submit responses and operation report to the MDRRMO	ACDV
D+3	Continuous monitoring of situation on the ground	MDRRMO
D+3	Provide SRR teams for deployment to the affected areas	All SRR Cluster
D+3	Search, rescue and retrieval operation to affected areas	All SRR Cluster
D+3	Conduct after SRR operations de-briefing, prepare and submit operation report to the SRR Cluster	All SRR Cluster
D+3	Submit responses and operation report to the MDRRMO	ACDV
D+4	Continuous monitoring of situation on the ground	MDRRMO
D+4	Provide SRR teams for deployment to the affected areas	All SRR Cluster
D+4	Search, rescue and retrieval operation to affected areas	All SRR Cluster

D+4	Conduct after SRR operations de-briefing, prepare and submit operation report to the SRR Custer	All SRR Cluster
D+4	Submit responses and operation report to the MDRRMO	ACDV

RESOURCE INVENTORY

The table below shows the available resources of the SRR cluster:

Resources	Unit	Quantity	Office/Agency	Remarks
Manpower	Personnel		MDRRMC & Volunteer Groups	
Acetylene Cutter	Unit	1	MDRRMO	
Angle Grinder – DEG 125-P 230V	Unit	1	MDRRMO	
Ax (big)	Pcs	6	MDRRMO	
Bolo	Pcs	7	MDRRMO	
Breaker TE-1500 AVR 230V with Pointed Chisel	Unit	1	MDRRMO	
Breaker, rock/concrete	Unit	1	MDRRMO	
Chainsaw, STIHL. MS 720	Unit	1	MDRRMO	
Chainsaw, Multi Cut Rescue 20° 70.7cc	Unit	1	MDRRMO	
Chainsaw, STIHL MS 380	Unit	2	MDRRMO	
Compressor	Unit	1	MDRRMO	
Diamond Cutter, DCH 300 230V with Diamond Cutting Disc	Set	2	MDRRMO	
Grub hoe	Pcs	4	MDRRMO	
Japanese Hoe	Pcs	15	MDRRMO	
Jaws of Life	Set	1	MDRRMO	
Ladder, Heavy Duty	Unit	1	MDRRMO	
Lifting Bag & Inflation Hose	Set	1	MDRRMO	
Picks	Pcs	6	MDRRMO	
Pointed Chisel – TE-SP SM 36	Unit	1	MDRRMO	
Rotary Saw, Steel & Masonry, STIHL	Unit	1	MDRRMO	
Shovel	Pcs	110	MDRRMO	
Sledge Hammer with Handle – 8lbs	Pcs	4	MDRRMO	
Straight Bar (Bareta)	Pcs	7	MDRRMO	
Submersible Pump 3Hp with hose & accessories (4" in diameter)	Unit	2	MDRRMO	
Tent	Unit	3	MDRRMO	
Tolda, Sacolene (12x100m)	Rolls	2	MDRRMO	
Water Pump	Unit	1	MDRRMO	
Wheel Barrow	Unit	2	MDRRMO	
Fully Equip Rescue Vehicle	Unit	2	MDRRMO; LTFS	
Vehicles	Unit			
Airway kit ALS	Set	5		
Airway Kit EMT	Set	5		
Emergency Blanket	Pcs	30		
First Aid Kit with Bag	Set	5		
Stretcher	Unit	2		

Stretcher, Scoop (Alloy)	Unit	1		
Stretcher, SKED	Unit	1		
Trauma Kit	Set	5		
Splint, Spine	Unit	5		
Head Immobilizer Block	Unit	9		
Handheld Radio	Unit	10		
Logbook	Pcs	2		
K9 Dogs	Dogs	5	Mayor's Office; BFP; PNP	
K9 Handlers	Personnel	5	Mayor's Office; BFP; PNP	

Needs Projection and Resource Gap Identification

The number of resources allocated for one (1) day under the SRR cluster will be used for the rest of the response operations. Based on the assumptions, the following are the projected needs and resource gaps:

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
K9 Handlers						
Service Vehicle						

MANAGEMENT OF THE DEAD AND MISSING CLUSTER

IMPLEMENTATION PLAN

Lead: La Trinidad Fire Station

Members: Scene of the Crime Operatives
La Trinidad Municipal Police Station
Municipal Health Services Office
Municipal Social Welfare and Development Office
Benguet Memorial Services

SCENARIO

A Super Typhoon will make landfall in the municipality affecting four (4) barangays namely Puguis, Ambiong, Beckel and Poblacion. Out of the 2,365 affected individuals, 200 were dead, 50 injured and 30 missing. In order to ensure proper identification and disposition of the dead, management of the missing individuals and management of the bereaved family, the Management of the Dead and Missing Cluster will be activated and deployed.

OBJECTIVES

1. To ensure an efficient, timely and well-coordinated action in managing the dead and the missing person.
2. To ensure that legal norms are followed, and guaranteeing that the dignity of the deceaseds and their families is respected in accordance with their cultural values and religious beliefs.
3. To establish a resource-sharing mechanisms among the members of the MDM cluster

ROLES AND RESPONSIBILITIES:

The Management of the Dead and the Missing aims to provide assistance in the proper identification and disposition of the remains in a sanitary manner with cautious to prevent negative psychological and social impact to the bereaved and the community. The MDM Cluster has four major activities:

- a. Disaster Victim Identification
- b. Final Arrangement of the Dead
- c. Management of the missing person
- d. Management of the bereaved family

PROTOCOLS:

1. Upon activation of the Contingency Plan, the MDM Cluster shall convene to undertake coordination work.
2. The lead agency of the MDM Cluster is the La Trinidad Fire Station with the following member agencies:

Agency/Office	Task
LTFS	<ul style="list-style-type: none">▪ Coordinates with other response clusters for their MDM requirements.▪ Submit status, requests and proposed actions to the MDRRMC to integrate all activities at the Operation Center.▪ Submits the MDM Cluster reports to MDRRMC
SOCO	<ul style="list-style-type: none">▪ Identification of the declared dead bodies.

	<ul style="list-style-type: none"> ▪ Coordinates and manages the requirements of identifying and burial of all dead victims with the MDM Cluster.
LTMPS	Provide personnel that will assist the SOCO in the identification of dead bodies.
MHSO	<ul style="list-style-type: none"> ▪ Assist in the coordination of casualties for proper medical health treatment and the dead for proper identification and burial. ▪ Issue Death Certificate based on the certificate of identification issued by the SOCO and PNP
MSWDO	Assist in providing resources and technical assistance to the bereaved families.
MDRRMO	<ul style="list-style-type: none"> ▪ Monitors the situation on the ground from the OPCEN ▪ Receives request for MDM augmentation ▪ Issuance and dissemination of deployment orders ▪ Consolidate and prepare report for submission
GSO	<ul style="list-style-type: none"> ▪ Provides vehicles to be used in transporting the dead bodies at the morgue.
BMS	Provide funeral service to the dead.

3. The Municipal Health and Services Office physician will declare if the
4. LTFS
- 5.

RESPONSE ACTIVITIES

The following are the needs of the MDM Cluster as well as the corresponding activities required:

Needs	Activities/Arrangements to Meet the Needs	Responsible Office	Timeframe
Manpower			

RESOURCE INVENTORY

The table below shows the available resources of the MDM cluster:

Resources	Unit	Quantity	Office/Agency	Resource Location	Remarks
Manpower	Personnel		LGU La Trinidad; PROCOR	La Trinidad	
Vehicle	Unit				Separate vehicle for
Body Bag	Pcs				
Face mask	Box	100	MDRRMO		
Gloves	Box				
Waterproof Label	Pcs				
Handheld radio	Unit				
Logbook	Pcs				

Camera	Unit				
Coffin	Unit				BMS in-charge
Disinfectant	Set				
Laptop	Unit	2	MDRRMO; LTFS	La Trinidad	
Printer	Unit	2	MDRRMO; LTFS	La Trinidad	

Needs Projection and Resource Gap Identification

The number of resources allocated for one (1) day under the SRR cluster will be used for the rest of the response operations. Based on the assumptions, the following are the projected needs and resource gaps:

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
Service Vehicle						

LAW AND ORDER

Implementation Plan

LEAD:

MEMBERS

SCENARIO

OBJECTIVES

ROLES AND RESPONSIBILITIES

PROTOCOLS

RESPONSE ACTIVITIES

RESOURCE INVENTORY

NEEDS PROJECTION AND RESOURCE GAP IDENTIFICATION

Resource	Need	Have	Gaps	Activities/Sources to Fill the Gaps	Cost Estimates (Fill up only when appropriate)	Source of Fund (Fill up only when appropriate)
Manpower	10	10	0			
Service Vehicle						

B. EMERGENCY OPERATION CENTER

The Municipality of La Trinidad's Emergency Operation Center is the repository of information and main hub for coordination of the Municipal Disaster Risk Reduction and Management Council. It serves as the main communication link for all responding units, receives emergency and non-emergency calls, monitors the security and surveillance cameras, dispatches calls to concerned responding units, receives data and reports from responding units.

Location: Municipal Lobby, Municipal Hall

Landline: 422 – 2601 (Mayor's Office)
422 – 5621 (MDRRMO)

Contact Numbers: 0966 917 8342
0920 729 6516

E-mail address: mdrrmofficedelatrinidad@gmail.com
mayorslt@yahoo.com

Facebook Page: DRRM De La Trinidad
Mayor's Office – La Trinidad

EOC Structure: The EOC shall be operated by the following personnel

The following are the primary and alternate of the EOC management team with their contact information:

POSITION	NAMES AND AGENCY/ OFFICE/ ORGANIZATION	CONTACT INFORMATION
EOC Manager	Hon. Guiller A. Galwan Ms. Myanne B. Salda	09 0948 602 0474
Operations Coordinator	Engr. Patrick Concepcion Mr. Roderick Charles Chua	
Planning Coordinator	Engr. Vicente C. Perez Jr. Engr. Benedict P. Pineda Ms. Melanie S. Sahoy	
Logistics Coordinator	Mr. Junree C. Dogcio Ms. Irene M. Tagtag	
Finance/ Coordinator Admin	Mr. Norman D. Antero Mr. Leo Leygo Ms. Imelda E. Grupo	

Activation: The EOC shall be activated upon the issuance of alert level from the Municipal

C. INCIDENT COMMAND SYSTEM (ICS)

The Municipal Incident Management Team that will carry out the tactical operations of the clusters is as follows:

Incident Command Post: Municipal Ground / Municipal Gymnasium

Staging Area: Municipal Gymnasium

Staging Area: Municipal Lednicky Hall

Base: Municipal Ground / MDRRM Office

Camp: Puguis, Poblacion, Beckel, Ambiong

Helispot: Benguet State University Oval / Wangal Grand Stand

Helibase: Tactical Operations Group 1 (TOG 1), Loakan, Baguio City.

ICS Structure: The

The following are the primary and alternate of the Incident Management Team with their contact information:

Position	Names and Agency/ Office/ Organization	Contact Information
Incident Commander	Mr. Yoshio P. Labi CINS Mark Anthony P. Dangatan FSI Victor T. Sayapen	
Public Information Officer	Mr. George T. Babsa-ay Ms. Angela J. Tiongco	
Liaison Officer	Ms. Leica R. Bagbagen Ms. Melanie S. Sahoy Ms. Lorena P. Allidem	
Safety Officer	Mr. Reisty Glenn C. Awal SFO2 Cassiano M. Damilo	
Operations Section Chief	JO David Bolcio Mr. Jerwell S. Alones SFO2 Samuel Navarro	
Planning Section Chief	Engr. Felipe P. Esnara Jr Mr. Dave B. Montes Engr. Julius U. Mandac	
Logistics Section Chief	Mr. Ray Jordan B. Montes Mr. Dwight A. Daodao Mr. Ireneo Alfaro Jr.	
Finance/ Admin Section Chief	Mr. Ken R. Nabus Mr. George Pawid	

D. INTEROPERABILITY

The Municipal Disaster Risk Reduction and Management Council as a collegiate body and through the leadership of the Chairperson will take the helm of the operations and will provide all decisions and instructions for a timely and appropriate assistance to the affected population. Upon issuance of alert for an incoming tropical cyclone, all Response Cluster will be activated and will report directly for briefing and pre-disaster preparations.

The MDRRMC as the main agency to respond and manage all disaster operations has the ultimate responsibility for any decision and action affecting the difference between saving or losing more lives in the aftermath of any disaster. All members of the MDRRMC will be oriented to the tenets of the contingency plan and the system installed in support of this plan which will be the main task of the head of the Operations Center.

The MDRRMC and the Operation Center serves as the main Command Center for all the LGU's response clusters. The EOC is composed of focal persons responsible for all coordination needed to be done to commence the operations of each Response Cluster. The EOC manager has the following responsibilities:

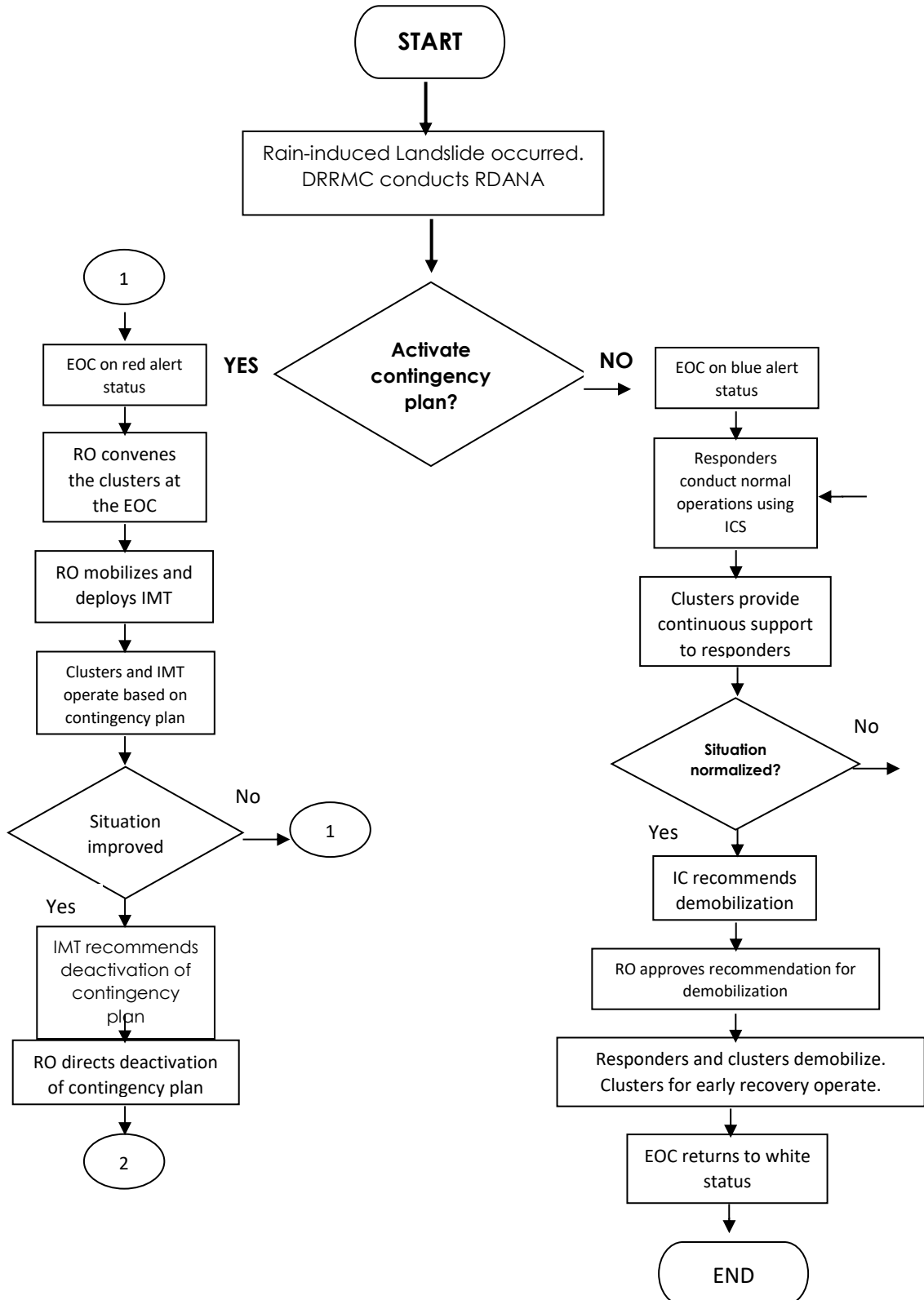
- a. Coordination of all requests coming from all Response Cluster member;
- b. Collation of situational reports from the 16 barangays;
- c. Dissemination of Press Releases and Official information to the public as sanctioned by the Chairperson;
- d. Provide administrative and secretariat assistance and support to the MDRRMC

The Chairperson of the Municipal Disaster Risk Reduction and Management Council shall supervise the activities and strategic decisions of the clusters. These decisions shall then be communicated to the Incident Commander through the Emergency Operation Center. The IC, on the other hand, shall report the tactical activities to the EOC going to the clusters.

CHAPTER IV: ACTIVATION, DEACTIVATION AND NON-ACTIVATION

A. Activation and Deactivation

The procedures for activating and deactivating the contingency plan shall adhere to the flowchart below:



The contingency plan for Landslide Hazard shall be activated based on the findings of the conducted Rapid Damage Assessment and Needs Analysis Team. The Emergency Operation Center is on Red Alert status, the Responsible Official convenes the clusters at the EOC. The Responsible Official mobilizes and deploys Incident Management Team where the clusters and IMT operate based on the contingency plan.

If the situation improved, the Incident Management Team recommends the deactivation of the contingency plan, then the Responsible Official will direct the deactivation of the Contingency Plan for Landslide Hazard.

ANNEX 1. Working Group

Purpose: The Working Group shall be the focal body in charge of the refinement, finalization, testing, evaluation, packaging, updating and improvement of the contingency plan under the supervision of the Local DRRM Officer III Mr. Yoshio P. Labi and LDRRM Officer II Engr. Felipe P. Esnara Jr. The group shall work closely with the planners of the municipality for the attainment of the CP objectives.

Functions:

1. Facilitate the refinement and finalization of the contingency plan to include testing, evaluation, packaging, updating and improvement;
2. Develop work plan for the completion and updating of the contingency plan;
3. Organize consultation meetings with the planners and relevant subject matter experts regarding the development of the contingency plan; and
4. Facilitate the presentation and endorsement of the contingency plan to the Chairperson, MDRRM Council and Local Sanggunian for comments, recommendations, approval and adoption.

Composition:



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