



MUNICIPALITY OF BACARRA  
ILOCOS NORTE

# COMPREHENSIVE LAND USE PLAN

2023-2032

## EXECUTIVE SUMMARY

JUNE 2023

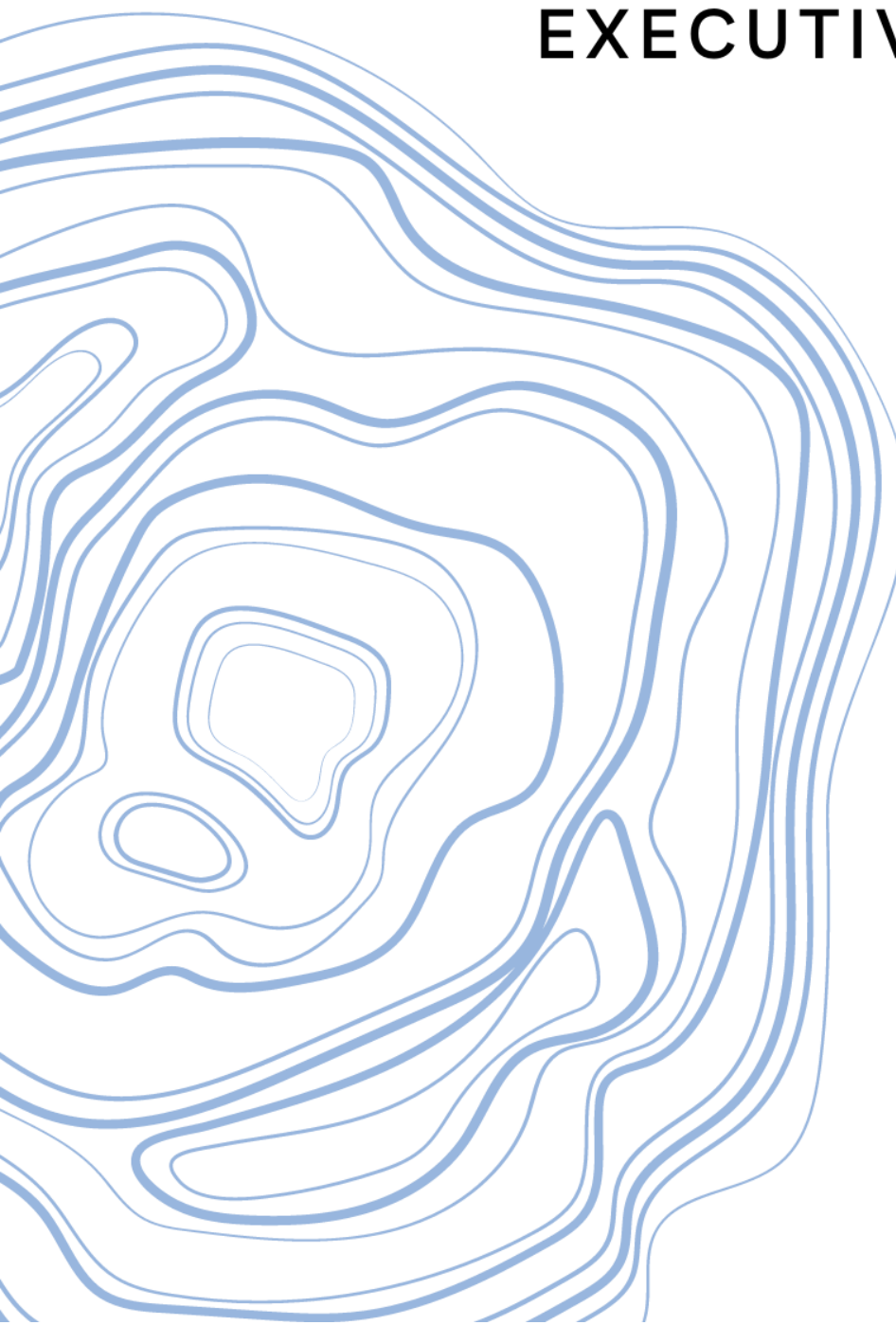


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Bacarra, Ilocos Norte  
Comprehensive Land Use Plan 2023-2032

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## Foreword

The Bacarra Comprehensive Land Use Plan (CLUP) 2023-2032 was crafted pursuant to the Local Government Code of 1991 (Republic Act 7160) mandating local government units to prepare their land use plans and enact a Zoning Ordinance to regulate land uses within the territorial jurisdiction of the Municipality. This CLUP was prepared by the Municipal Government of Bacarra, Ilocos Norte, together with various stakeholders.

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# 1 Vision

***“RANGKADA BACARRA: A progressive agro-commercial and tourism center of Ilocos Region; nurtured by an empowered people, living in a safe and resilient community thriving in a sustainable economy; guided by compassionate leaders inspiring exemplary governance”.***

## 2 Brief Situationer

### 2.1 Physical Profile

Bacarra is located at the northwestern part center of the Province of Ilocos Norte within the coordinates of 120° 36'31.42" to 120°45'37" latitude and 18° 15' 31.42" to 18°17'55" longitude. It is bounded by the north by the Municipality of Pasuquin, by the east by the Municipality of Vintar, by the West by the West Philippine Sea and the south by the City of Laoag. It is approximately 495 kilometers from Manila; 280 kilometers from regional center of San Fernando City, La Union; and 8 kilometers north of the provincial capital – Laoag City. It is about 15 kilometers from the nearest gateway (Laoag International Airport).

The total land area of the municipality is **6565.8656** hectares (including an overlapped area of 336.5962 hectares with Laoag City) (source: DENR Land Management Bureau). It is subdivided into 43 barangays, of which 18 are urban and 25 rural.

The terrain of the whole area of the municipality is generally flat with the western portion predominantly flat lowlands about 1 to 3 meters above sea level, rising gradually to the east with the highest point located in the northeastern portion with an elevation of 60 to up to 199 meters above sea level. The slope category of the municipality generally falls between 0 to 3 percent and is mostly nearly level with the land. As to formation and origin, the land in Bacarra is of recent alluvial deposits.

The municipality has a coastline of around 6 kilometers, with 4 coastal barangays – namely Casilian, Natba, Pipias, and Calioet-Libong. Inland water resources in the locality include the Bacarra River also known as Bislak River, the Paninaan-Cabulalaan Creeks, and the Malilitao Creeks. The largest that is the Bacarra River is connected to the Laoag-Vintar watershed and drains at the West Philippine Sea. The river is a major source of irrigation and livelihood (fishing). It is also one of the main sources of water of the Municipality's well-established communal irrigation system or zanjeras, covering a combined service area of 2,981 hectares at 46 locations, benefitting around 2,680 farmers.

The climate in Bacarra is monsoonal and consists of two pronounced seasons: dry season from November to April and wet season from May to October. Rainfall and number of rainy days is highest during the months of June to September and lowest on October to April.

Given the geological characteristic and geographical situation of Bacarra, it is confronted by several climate stimuli and geological hazards such as typhoons, flooding, storm surge, sea level rise, landslide, and tsunami. The Climate Change and Disaster Risk Assessment or CDRA exercise conducted during the formulation of the Municipality's Comprehensive Development Plan in 2020 and updated for this CLUP determined that increase in temperature, increase in rain volume during the Habagat seasons, increase in number of hot days, decrease in number of dry days, and increase in more extreme daily rainfall and typhoon events beset the Municipality in the next 30 years. As such, the level of risk of communities are likely to increase, especially those located near the sea and rivers who are exposed to a variety of hazards.

## 2.2 Population and demography

The Municipality of Bacarra has a total population of 33,496, 49.97% being male and 50.03% female, with an average growth rate of 0.78% between 2015 and 2020, (source Philippine Statistics Authority). Total number of households is at 8,620 in the same year, with an average household size of the 3.88 family members.

Population density is 5.10 persons per hectare, with the average gross urban density recorded to be 45.15, while in the rural barangays it is 3.81.

Based on the historical growth of population between 2015 and 2020, the projected population of the municipality is computed to increase to 34,848 in 2025 to 36,213 in 2030.

## 2.3 Social services

The Municipality has twenty-six elementary schools and three high schools, where an average of 7,772 students enroll every year. Health services are provided through the Rural Health Unit (RHU) operated by the LGU and augmented by the operation of ten Barangay Health Stations (BHS), and the assignment of one barangay nurse for each of the 25 rural barangays in the Municipality. Services may also be availed at the Dr. Bonifacia V. Albano Memorial Hospital (Bacarra Medical Center), a Private Level 1 Hospital located in Brgy. Libtong, and a number of private clinics located mainly in the Poblacion.

Sanitation services are provided through the implementation of the Zero Open Defecation Program of the DOH, as well as through the municipal-wide garbage collection and operation of the sanitary landfill and materials recovery facility in Brgy. 27A Pungto.

The delivery and provision of social welfare services is the primary responsibility of the Municipal Social Welfare and Development Office (MSWDO), whose key programs include the provision of supplemental parental care to young children, employment assistance, provision of financial, medical, food, funeral, transport, educational, and referral and counselling services through the Aid in Individuals in Crisis Situation (AICS) program, provision of family and community welfare services, provision of programs for disabled and elderly, emergency assistance, and women's development, among others.

Meanwhile, peace and order and public safety services are rendered by the Philippine National Police with its 21 uniformed personnel, augmented by the Office of Public Safety or OPS with 15 personnel, the Bureau of Fire Protection with its 15 firefighters, and the Municipal Coast Guard with its 9 personnel. Several Civil Society Organizations (CSOs) occasionally provide support in the maintenance of peace and order and disaster management activities in the locality.

## 2.4 Local Economy

The Municipality of Bacarra is a third class municipality. The core economic activity is the production sector based on crop production. Its 2,865 hectares of land are planted to rice, corn, vegetables and root crops. Garlic, mungo, tobacco, sugarcane, onions, bell pepper, tomatoes, eggplants are also extensively grown. Some 5,348 individuals are employed in agriculture sector, of which 19.3% are women.

Records from the Business Permitting and Licensing Office (BPLO) show that the total number of business registrations in 2021 was 961, of which six (0.57%) were involved in primary/extractive industry activities; 85 (8.08%) were involved in secondary/manufacturing industry activities, and 961 (91.35%) in tertiary/service industry activities. All of the business establishments were MSMEs, mainly micro (94.48%) and small (4.65%) enterprises, while only six



establishments have declared assets to be categorized as a medium sized enterprise. Most businesses are also owned by residents of the Municipality.

The tourism sector of the Municipality is in its early development stages. Bacarra's share in the overnight tourist market of the province is negligible to none. Most of the tourist traffic in Bacarra are day tourists, with records indicating that the Municipality received more than 20,000 visitors in its tourist attractions in 2019 (Bacarra Church), 98.5% of which were domestic/local tourists. The other site attractions such as the town plaza and beach areas are visited mainly by locals for recreation. A large volume of tourists normally visit Bacarra during the summer months and during the municipal fiesta held every November.

## 2.5 Physical Infrastructure

The road network of the municipality consists of the National Highway (10.78 kilometers), the Provincial Roads (31.59 kilometers), the Municipal Roads (37.07 kilometers), and the Barangay Roads (172.27 kilometers). About 65.9% of the total road network is concrete paved, 3.9% asphalt, 9.9% gravel and 20.3% earthen road. These are inter-connected with 184 bridges to include the Bacarra River Bridge, Bangsirit and Tamucalao Bridges along the Manila North Road.

The primary mode of public transport within Bacarra is by tricycle. As of March 2022, there are about 1,059 active tricycle franchises issued by the Municipality.

About 99.61% of households in the Municipality are connected to the Ilocos Norte Electric Cooperative (INEC), the sole service provider of power in the province. Power is generally stable and available year-round.

The main source of water supply of the people in Bacarra is a five-spring area known as "Dilumot" Spring located in the mountainous part of the Municipality of Pasuquin tapped by the PrimeWater Ilocos Norte (Level III). Primewater has a pumping station is installed at the southern bank of the Bacarra River, a deep well water source in Tamucalao in Buyon, and two reservoir tanks in Brgy. 27A Pungto and 19 Tambidao. The existing Level III system of Primewater only covers the 18 urban barangays, and 15 rural barangays (Ganagan, Sangil, Pasiocan and Buyon, Tambidao, Bani, Corocor, Cabulalaan, Pipias, Cabaruan, Natba, Cabusligan, Pasngal, Pungto, and Cadaratan).

The Paninaan Potable Water Supply System is a Level III type of water supply that is managed by Paninaan Rural Waterworks and Sanitation Association Inc., which taps water from shallow wells in Brgy. Sta. Catalina, Pasuquin, Ilocos Norte. It serves around 72 household connections all located in Brgy. 23 Paninaan.

Level I water supply in the urban barangays consists of 34 units of shallow wells and 147 units of deep well. They are used for laundry, bathing, washing of vehicles, washing floors, and watering of gardens. In the rural areas, this type of source provides the water requirements of the people for drinking, laundry, bathing, and watering gardens. It consists of 894 units of shallow well and 2,847 units of deep well.

There are three mobile telecommunications providers in Bacarra, namely: Smart Communications, Globe Telecom and DITO Telecommunity. They offer telephone, internet and mobile communications services. Meanwhile, providers Philippine Long Distance Company or PLDT and Innove Communications offer internet with landline services. Converge ICT exclusively offers fiber internet solutions to residents. SkyCable and Planet Cable Ilocos provide cable TV services, while Cignal TV offers satellite television services.

## 2.6 Heritage Conservation

The Municipality is blessed with a range of heritage and historically significant structures worthy of protection and conservation. There are two declared national historical treasures in the form



of the Bacarra Church and Belfry and the Natba Watchtower. In addition, the municipal plaza complex including the municipal hall are historically significant, hence are declared as part of the town's heritage complex. Conservation efforts were mainly in conjunction with tourism developments, including the development of the Bacarra Heritage Trail which was launched in December 2022 to combine the heritage structures and buildings in the Poblacion into a visitor trail with interpretative signages and guides for the celebration and promotion of culture and history of Bacarra.

## 2.7 Land Use Distribution and Trends

Majority of the land area of Bacarra consist of agricultural lands. The estimated 4,843.56 hectares of croplands and agro-forest lands are used primarily for agricultural production planted with rice, corn, and high value crops. As such, Bacarra is one of the leading producers in the province for rice, corn, as well as for garlic, pepper, and onion.

Immediately adjacent to the capital city of Laoag, Bacarra is rapidly urbanizing at a pace driven by the steady increase in population driving demand for diverse economic activities. Whilst affected by the COVID-19 pandemic, economic growth is evident especially in the last two years where the Municipality has seen the construction and operation of medium to larger scale commercial businesses, coupled by the aggressive Build, Build, Build Program (now Build, Build More) of the national government, promoting trade and further economic activities in the locality. At present, the municipality's urban (built-up) areas comprise only 782.32 hectares or 11.91% of the total, of which 67.79% (of total built-up areas) are residential, 2.16% are commercial, 4.08% institutional, and 0.24% are industrial in nature.

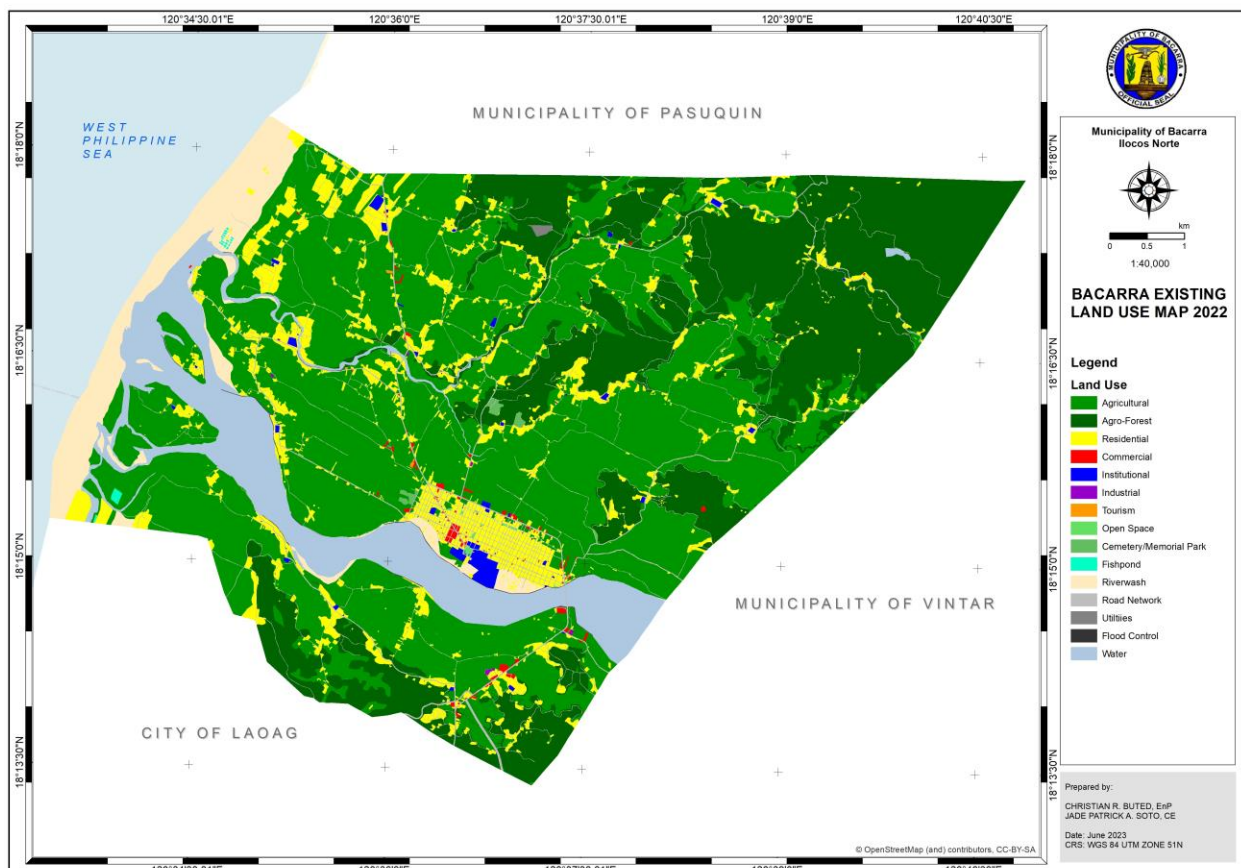


Figure 1: Existing Land Use Map

Table 1. Existing Land Use, 2022

Land Use Category	Area (in hectares)	% to Subtotal	% to Total
<b>Agriculture</b>			
- Croplands	3,134.91	64.72%	47.75%
- Agro-Forestlands	1,708.64	35.28%	26.02%
<b>Built-Up</b>			
- Residential	530.32	67.79%	8.08%
- Commercial	16.87	2.16%	0.26%
- Institutional	31.94	4.08%	0.49%
- Industrial	1.84	0.24%	0.03%
- Tourism	0.81	0.10%	0.01%
- Open Space	2.40	0.31%	0.04%
- Utilities	3.26	0.42%	0.05%
- Road Network	180.32	23.05%	2.75%
- Flood Control	5.96	0.76%	0.09%
- Cemetery/Memorial Park	8.60	1.10%	0.13%
<b>Inland Waters</b>			
Water	616.08	99.42%	9.38%
Fish Pond	3.59	0.58%	0.05%
<b>Other</b>			
Riverwash/Beach	320.33		4.88%
<b>Total</b>	<b>6,565.87</b>		<b>100.00%</b>

Due to unavailability of comparable data, only built-up areas from 2013 to 2022 are compared. Over the last twelve (12) years, the built-up areas of Bacarra increased by 111.81 hectares mainly from the rapid expansion of urban areas due to commercialization and rapid urban growth emanating from the nearby capital city of Laoag.

Table 2. Comparison of Built Up Areas, 2013 and 2022

Land Use Categories	Urban Land Use (2013)		Urban Land Use (2022)		Increase/ Decrease (+/-)
	Area (in hectares)	% to Total	Area (in hectares)	% to Total	
Built-up areas	670.51	10.24%	782.32	11.91%	111.81

Land use trends observed in the municipality for the past years include the following:

- **Increase in built-up areas.** Increase in local population and in-migration from nearby municipalities, provinces and regions due to perceived economic opportunities and proximity to the capital city, Laoag. Barangays of Buyon, Libtong, and Cabusligan are the areas with vast increase of built-up areas.
- **Increase in commercial areas.** New developments and economic activities and facilities in the past years have occurred within the Poblacio particularly in Brgys. 1, 4, and 5; and along the national highway in Brgys. 40 Buyon, Brgy. 21 Libtong, Brgy. 22 Bani, and Brgy. 28 Cabusligan. Further increase in economic activities and commercial developments could be expected as soon as the San Nicolas-Laoag-Bacarra Bypass Road becomes passable and operational.
- **Encroachment of informal settlement.** Informal settlement occurred due to in-migration of informal settler families who have settled along the municipal coast and riverside, most within hazard prone areas. Economic opportunities and unavailability of land push the presence of informal settlers in these danger zones.
- **Increased institutional areas.** Over the past years, institutional areas have increased due to additional school sites and other institutional services and facilities constructed within the locality.

### 3 Development Constraints, Issues and Concerns

**Geography and Terrain and related risks.** Bacarra is a catch basin of the mountains and hills in Pasuquin and Vintar, which drain towards the Cabulalaan River and the Bislak River systems of the Municipality. As such, it is highly prone to flood and landslide events brought about by excessive rainfall or typhoons, which could only be expected to worsen (becoming even stronger and/or more frequent) due to Climate Change. Its coastal areas are also prone to storm surge events, which could cause the water to rise to up to 5 meters, inundating large portion of our coastal communities. Developments must therefore take these into consideration and incorporate the necessary engineering interventions and infrastructure therefore resulting to higher investment costs to accommodate development uses suited for urban expansion.

**Access and Connectivity.** While the existing network of roads link most of the barangays to the Poblacion and the national highway, majority of these roads are narrow while some are paved by compacted gravel, making it difficult to travel on and could be unpassable during the rainy season. Moreover, there is no alternative route available to link the northern and southern portions of the Municipality aside from the Manila North Road, which makes it difficult for the municipality to implement the prohibition of slow moving vehicles along major roads which could significantly reduce traffic, and the occurrence of road accidents and other traffic-related incidents.

**Public Transportation and Mobility.** Public transportation within the Municipality is inadequate, provided only by tricycle services augmented by regular yet limited public utility jeepney services plying a fixed route linking Bacarra (Poblacion) to the Laoag City center and vice versa. At present, there are at least 31 Tricycle Operator and Driver Associations (TODAs) each with a designated parking area, with no clear organization logistically, and without a central terminal cum inter-modal transport terminal. The presence of a strategic terminal, designated bus/jeepney stops, bike lanes, as well as clearly-defined loading and unloading areas especially near areas with heavy foot traffic are necessary to improve pedestrian access and mobility.

**Indiscriminate Conversion of Agricultural Lands.** Data from the DA provide a total declared Network of Protected Areas for Agriculture and Agricultural Development or NPAAAD area in the Municipality to consist 3,278 hectares. However, many of these are not monitored if the entire land area consists productive land. Instances where landowners undertake land filling of their properties prior to securing the necessary permits and clearances from both the local and national government agencies make it difficult to ensure these areas remain to be productive. As such, there must be adopted a clear policy strictly protecting the prime agricultural lands, which include irrigated lands, irrigable, and those identified ideal for crop production.

**Informal settlement communities.** The absence of lands earmarked for residential purposes resulted to the illegal occupation and conversion of vacant lands along the riverside, some within danger areas, into residential use. Not only does this result to their exposure to various health hazards from their poor sanitation and pollution practices their presence within the danger zone makes them vulnerable to risks such as flooding, landslides, storm surge, among others.

**Deterioration of natural resources and biodiversity.** In general, the primary threat to biological diversity is habitat alteration and degradation caused by unsustainable and destructive resource use, development-related activities, and human population pressure. Threats that compromise the sustainability of the physical and biological resources include: population pressure, kaingin farming or shifting cultivation contributing to soil erosion, siltation, pollution, overexploitation of fisheries resources, and continuous use of illegal fishing methods. Some of the causes of these threats and inaction towards these threats can also be traced to the following: limited understanding and appreciation for the value of biodiversity; weak resource management and

governance mechanisms; insufficient enforcement of environmental laws; inappropriate and conflicting government policies and weak institutional mechanisms, reflecting a very low budgetary priority for nature and natural resource conservation; lack of knowledge of the existing biodiversity; and lack of sustainable livelihood for local stakeholders. Inequitable access to resources, lack of public awareness and participation, lack of economic incentives, and poor use and allocation of resources all cause or exacerbate threats to biodiversity.

**Utilities infrastructure.** The coverage of Level II and III water systems within Bacarra is limited to the Poblacion and 15 rural barangays. Other rural communities rely on deep wells, open/dug wells and surface water for their needs. About 99% of households are powered connected to the Ilocos Norte Electric Cooperative or INEC. Information and communication system infrastructure (cell sites) are present in eight (8) locations serving almost all barangays, however, signal strength in some areas (i.e. Brgy. Paninaan, Macupit, Nambaran; and Tubburan) remain intermittent to none, making it difficult to communicate and disseminate information. Waste water treatment is generally absent while solid wastes are channeled to community materials recovery facilities (MRFs) for recyclable wastes, and the Municipal Sanitary Landfill for residual and special wastes. Management of biodegradables have yet to be fully achieved through the activation of the composting and vermicomposting facilities in each barangay and of the Municipality to fully manage solid wastes.

**Social infrastructure services.** Current facilities for protective services, education, health, and recreation are adequate but unable to meet the growing demands of the growing population in Bacarra as are in dire need for upgrading especially its equipment. Additional classrooms for the opening of integrated schools, expansion of alternative learning systems (ALS) and the improvement of special education (SPED) schools, activation of barangay health stations, and operation of the Municipal Fire Station, are among the identified social service facilities that require improvement to nurture competent, healthy, inclusive, and well-rounded communities.

**Production infrastructure.** Despite having vast areas of agricultural lands, post-production facilities particularly for marketing and post-processing are limited. Rice farmers have resorted to selling their produce cheaper by trading with middlemen who may not necessarily provide the best and most viable rates especially for high value crops and vegetables, as such transactions remain grossly unregulated. The provision for additional facilities and making these more accessible to producers is a necessary step to increase agricultural values and yield for farmers. Moreover, processing infrastructure to transform these into export-quality products could significantly increase the peso value of each unit of produce in the Municipality.

**Legal infrastructure.** In 2021, 79% of the budget of the Municipality of Bacarra was derived from internal revenue allotment (IRA) now called national tax allocation (NTA), with which it could only undertake a limited range of projects and programs. Legal infrastructure to promote private sector investments (through the provision of incentives) need to be intensified to augment the commercial/production infrastructure requirements of Bacarra, including tourism and fisheries and agriculture. Moreover, prioritization for land banking for the provision of integrated social and economic services must be pursued to improve service delivery.

## 4 Development Opportunities & Challenges

**Improved Access and Connectivity.** The Municipality stands to benefit, along with the rest of the province, should the proposed PPP project consisting a 270-kilometer highway linking Laoag City to Rosario, La Union pushes through. The construction of the highway project would result to significantly reducing the travel time between Laoag and Manila, thereby reducing transportation costs and travel time, making it more attractive to invest in Ilocos Norte especially in the business

of trade and agri-industry. Coupled by the activation of the Currimao Seaport and the Laoag International Airport, these are seen to considerably boost cargo and passenger movements into the province and particularly the Municipality, as it is naturally positioned to garner the spillover effects of development radiating from the growth center that is Laoag City.

In addition, the continued development/rehabilitation of farm to market roads mainly to improve access for production purposes also open opportunities to better link potential tourism site attractions from the outskirts to each other and to the town center. This also improves the efficiency of service delivery as well as pave the way for improved coverage for potable water and telecommunications services.

**Population Growth and In-Migration.** With the growth of the population base, the Municipality benefits from the larger size of the labor force, resulting to higher productivity and increased consumption. The increase in demand for goods and services will also lead to the maturity of the market and cause the increase and expansion of commerce and trade activities, thereby making it an ideal investment and business destination to bridge the demand gap. Increased investments and businesses in the locality in turn translates to job creation and more income, and the cycle goes of economic growth goes on.

**Agriculture and Fisheries Culture.** Aside from the production values of the agriculture and fisheries industries, its unique production cultures based on its rice and garlic industry, the Bislak River and Bangsirit Creek fishing areas, and the Municipal waters of the West Philippine Sea have potential for tourism. Development of a showroom-cum-market center which illustrates the native processes involved in farming, fish catching, food processing, as well as tools and handicraft making, coupled with site visits or tours in local production areas and demonstration farms could attract markets that primarily seek learning and cultural immersion activities, as well as social entrepreneurship.

**Production Sector in the Center of National Development Strategy.** One of the key strategies for national development under the leadership of Pres. Ferdinand “Bongbong” Marcos Jr. as instituted in the Philippine Development Plan 2023-2028 is the transformation of the production sectors to generate more quality jobs and produce competitive products, for which one of the expected outcomes is to modernize agriculture and agribusiness. Bacarra, as one of the municipalities with the largest share of prime agricultural lands in the province, stands to benefit from this national development strategy and is well-positioned to become an area for value-adding activities through improved agricultural post-production and processing activities. Investments to improving the province’s connectivity and intermodal transport and logistics are also expected as Ilocos Norte’s linkage to the larger metropolitan centers and other overseas markets is pursued during the term of PBBM.

**Innovation.** Innovation is an integral part of the value chain process especially for agricultural produce and by-products to increase competitiveness and the overall worth and income achieved from engaging in economic activities. Promoting a culture of innovation and investment-friendly atmosphere shall be instrumental in the maximizing the comparative and competitive advantages of the Municipality through product upgrading and differentiation.

**Bislak River Dredging Program.** The Provincial Government, in partnership with private sector proponents shall be implementing dredging of the Bislak River that was determined to be heavily silted which contribute to its seasonal swelling during the rainy season and causing flooding along low-lying areas within the urban and rural barangays in Bacarra. The Municipality stands to benefit from the project on multiple fronts, with the provision of dredging services otherwise not possible to be undertaken by the LGU, and through income generated from the dredging fees to



be collected by the province and shared to the Municipality and the affected barangays. Livelihood and environmental management programs shall also be undertaken as part of the CSR efforts of the project.

**Mandanas Ruling.** The Supreme Court (SC) ruled that the just share of LGUs from the national taxes is not limited to “national internal revenue taxes” collected by the Bureau of Internal Revenue (BIR) but includes all collections of national taxes, except those accruing to special allotments for the utilization and development of national wealth, to be included in the computation of the just share of LGUs. In the year 2022, LGUs enjoyed the impact of the ruling increasing the National Tax Allotment (formerly Internal Revenue Allotment) by 23%. However, due to the COVID-19 pandemic, total tax collections were also affected by the economic crisis, LGU’s tax allotments reduced by about 15%. Nevertheless, once the economy has fully recovered, LGUs may once again enjoy the benefits of a larger budget to deliver local government services, including the implementation of programs and activities fully devolved to LGUs by virtue of Executive Order No. 138 dated 1 June 2021 Pursuing the Full Devolution of Certain Functions of the Executive Branch to Local Government Units.

**Economic Impacts of the COVID-19 Pandemic and Global Crisis.** The Municipality was not spared from the impacts of the pandemic, which prompted the implementation of various restrictions affecting economic activity that truncated the Philippine economy by as much as 9.6% in 2020, which ultimately resulted to foregone income, temporary/permanent closure of establishments, layoffs and unemployment. Two years since the outbreak, the economy has rebounded, however, inflation pressures are at an all-time high following the ongoing conflict in western Europe, among other global crisis events.

## 5 Functional Roles of the Municipality

In consideration of the role that Bacarra currently plays in the delivery of basic services to its constituents, the position that it plays in the provincial, regional, and national development context, and its future function in forwarding its local and regional development agenda through maximizing its development opportunities and managing and mitigating its development constraints, this section explores the functional roles of the Municipality going forward.

**Secondary Growth Center.** Bacarra is immediately adjacent to the provincial capital and regional center that is the City of Laoag, and soon-to-be directly linked to the booming Municipality of San Nicolas, Ilocos Norte by virtue of the completion of the San Nicolas-Laoag-Bacarra Bypass Road. In the short term, Bacarra could be expected to supplement the food production and human resource requirements of the two towns, and in the medium to longer term, coupled with the steady growth of the population and in-migration from those working in the CBDs of Laoag and San Nicolas, the Municipality stands to mature and sustain an economy supporting a mini-Central Business District cum Commercial Hub of its own.

**Tourism Service Center.** Moreover, Bacarra is a natural expansion area for tourist service facilities currently mainly located in Laoag City and San Nicolas. Tourist service facilities include tourist accommodation facilities such as hotels, tourist inns, or resorts, food and beverage services, visitor information, financial facilities (bank and money changers), site attractions and entertainment services to satisfy the needs of tourists. The present development of local site attractions such as the Bacarra Heritage Trail (BHT) based on the National Cultural Treasure Bacarra Church and Belltower as well as Coca Creek Agri-Ecotourism Site to match industry standards and requirements shall pave the way for the entry of larger tour groups through industry promotion and linkage. There is likewise an opportunity for the recovering events industry of the

province, with demand for open spaces and covered or closed-door venues for special events such as weddings, as well as for meetings, incentives, conferences and exhibitions (MICE).

**Center of Sustainable Production.** Bacarra is blessed with fertile land resources ideal for farming and agriculture. Evidence to this is the identification of at least 3,278 hectares of all farmlands in the Municipality as prime agricultural lands, and as such protected for their importance in achieving national food security and the global battle against hunger. As protected agricultural lands, their management is based on the principle of sustainable production and consumption, which allows users to sow resources to meet their basic needs but in controlled and regulated methods so as to maintain the regenerating capacity of resources, to provide enough for this generation and the generations to come.

Through the promotion of sustainable production values, practices and technologies in its public and private programs and projects, Bacarra could become the center of sustainable production in Ilocos Norte. This not only ensures that community demand for resources are adequately met and economic production activities are undisrupted, but, as a prime mover in the sustainable production movement, be a choice area for investments including opportunities for agri-business and community-based tourism.

Overall, the protection and conservation of natural resources is paramount to ensure that these remain available for the benefit and enjoyment of the next generations of Bacarreños.

**Center for Human Resource Training and Development.** The Municipality of Bacarra is the fifth most populated town in the province, next only to the Cities of Laoag and Batac, Dingras, and San Nicolas. While there are currently no collegiate level education facilities in the Municipality, it takes pride to host one of the largest secondary schools in the province – the Bacarra National Comprehensive National High School – together with Cadaratan National High School, produces some 600 senior high school graduates every year, all skilled and readily employable to join the work force. Combined with one of the most active employment training and livelihood development programs in the province – the NICOMEDES program – Bacarrenos are highly skilled and motivated to deliver positive outcomes in the work place. The fruition of the long-time plan to establish a State-of-the-Art Training Center equipped with facilities to international standard shall enable Bacarra to further hone and upgrade the skills of its workforce and human resources to make them globally competitive and employable in various industries, local or abroad.

## 6 Development Goals and Objectives

To achieve the Municipality's long-term vision, the following physical goals and objectives were determined for purposes of the implementation of this plan.

### Goal 1

#### **Vibrant and inclusive economy for sustainable development**

Objectives:

- To expand investment and employment opportunities
- To improve income, production and productivity of agriculture, agri-industries, and commercial areas
- To promote new farming technologies, and diversify crop production
- To provide strategic farming support infrastructure and equipment
- To increase value-add of commodities through product development and innovation among MSMEs
- To stop the illegal conversion of prime agricultural lands



- To enhance tourism value and unique experiences for tourism
- To improve the Central Business District and create new areas/zones for business and investments

**Goal 2**  
**Safe and conserved natural environment**

Objectives:

- To protect and improve the quality of land and water resources
- To prevent over extraction and pollution of groundwater resources
- To provide effective solid and liquid waste management systems
- To regulate development along coastlines, riverbanks, estuaries and creek embankments
- To increase vegetative cover including mangroves, tree parks, and public plazas
- To adopt technologies and steps to mitigate or reduce the effects of disasters.

**Goal 3**  
**Accessible and reliable social services**

Objectives:

- To provide adequate and fully-equipped learning facilities
- To ensure clean and safe potable water for residents
- To improve access to decent shelter and housing
- To provide access to safe and healthy food sources
- To improve health care facilities and delivery systems
- To provide effective 24/7 police protection services
- To improve pedestrian access and mobility
- To provide inclusive recreational facilities and open spaces
- To provide comprehensive care and social welfare services to those in need
- To ensure access to adequate fire emergency services in all areas in the Municipality

**Goal 4**  
**Calamity-resilient, safe and quality infrastructure**

Objectives:

- To provide and improve safe access road infrastructures
- To complete slope protection, flood control facilities along waterways
- To establish alternate route crossing Bislak River
- To expand the service area for potable water supply
- To improve public transportation service
- To improve Internet connectivity in all barangays

## 7 Development Thrust & Spatial Strategies

The preferred development strategy, Agri-Commercialization, is a two-pronged strategy involving (1) improving mechanisms to enhance agriculture and fisheries, while pursuing (2) urban development through commercialization. Tourism development shall be incorporated and pursued in areas of interest and where resources are abundant, especially those with unique heritage and historical values. These development thrusts shall be undertaken in parallel and in complementation of each other. Each component will include the following growth nodes and corridors:

## **Component 1: Agriculture and Fisheries Development**

### Primary Core

1. Municipal Agri-Commercial Techno-Hub (Buyon)

### Secondary Nodes:

1. Natba Fish Landing Center
2. Pasngal-Cadaratan Agri-Business Corridor
3. Pasiocan-Buyon New Agri-CBD

## **Component 2: Urban Regeneration and Commercialization**

1. Poblacion Old Market and Environs
2. Bacarra Heritage Trail
3. New Bacarra Government Center
4. Bislak Riverbank Development

The first component focuses on boosting agriculture and fisheries production, through improving post-production support and facilities to increase value-add, and enhancing logistical elements such as transportation and ICT to support trade and commercial expansion.

To organize and improve the logistical and marketing needs of farmers and fisherfolks, the Bagsakan Center in Brgy. 40 Buyon shall be activated. Mechanisms and enabling infrastructures shall be provided for the Bagsakan Center to truly function as the central place for traders and farmers to trade their produce on wholesale prices, providing a layer of security for farmers from bogus traders buying at low price points.

The construction of a Farmer's Center, equipped with showrooms, training halls and equipment for skills trainings on new technologies and techniques, as well as livelihood development, is envisioned to improve the income of farmers and their families. The Farmer's Center is envisaged to also include an Incubation Center to support innovation in post-production processing and product development initiatives for MSMEs to boost the value-add for local products. The ideal location shall be in Brgy. 40 Buyon, within close range from the Public Market/Bagsakan Center, Municipal Agriculturists' Office, the Dayo Livestock Auction facility, and the Multi-Pass Rice Mill, altogether to form the Municipal Agri-Commercial Techno-Hub.

The activation of the Community Fish Landing Center (CFLC) in Brgy. 36 Natba shall also be instrumental in reviving the fisheries sector of the Municipality based on the Cabulalaan and Bislak River fish cages, and offshore fishing in Brgys. Calioet-Libong and Natba. In order to do so, a fish-to-market road must be established to improve fisherfolk's access to the CFLC, and make use of the existing cold storage and marketing facilities available at the building.

To guide the expansion of the emerging business centers at the northern part of the Municipality in Brgy. 29 Pasngal to Brgy. 30 Cadaratan, as well as in the south in Brgy. 39 Pasiocan to Brgy. 40 Buyon, earmarking an area for commercial expansion for agribusinesses is strategized. In the medium to longer term, upon the full activation of the proposed improvements of access and connectivity, including the construction of the 270-kilometer highway linking Laoag City to Rosario, La Union, and the revitalization of the Laoag International Airport and the Currimao Seaport, as are seen to considerably boost cargo and passenger movements into the province. The Municipality is naturally positioned to garner the spillover effects of development radiating from the growth center of Laoag and rapidly urbanizing San Nicolas. Land consolidation to form a contiguous area for agricultural trade and commerce in these two sites will make these an attractive location for investments in commerce and agribusiness.

The second component focuses on accommodating the demand for urban services in relation to population growth and commercialization. Considering that the concentration of population and development are in the Poblacion and expanding along the lines of the Pan-Philippine Highway as a growth corridor, and that the spread of settlements within these rural areas require a degree of organization to protect prime agricultural lands from illegal conversion, it is imperative to properly distinguish lands which should be safeguarded and protected, and maximize the utilization of lands that are urbanizable. This can be undertaken by 1) re-zoning of the Poblacion area to accommodate medium rise developments; 2) greenfield and brownfield development within the Municipal Hall and Plaza complex and Old Market environs; 3) development of low- to medium-rise residential new town estates to address housing backlog and housing needs going forward; and 4) pedestrianizing the Poblacion including the improvement of pathwalks, park systems, and transportation hubs, to reinvigorate the Poblacion as an ideal place to live in. Necessary improvements in terms of flood control facilities, drainage, solid and sewerage treatment facilities, and other disaster mitigating infrastructure must be put in place to safeguard not only lives and property but the surrounding environment. Heritage conservation shall also be incorporated in any improvements made in the Poblacion considering the many heritage and historical structures to be preserved and promoted in the area.

Moreover, in order to manage conversion of prime agricultural lands into urban uses, urban expansion requirements within the rural barangays shall be directed to locate along major thoroughfares (particularly along the National Highway development corridors) to accommodate low to medium rise mixed-use developments, with preference to enterprises involved in commercial-agribusiness activities.

With the recent and ongoing construction of alternate routes to skip the Laoag City Proper traffic by way of the Farinas bypass road in the south southwest and the San Nicolas-Laoag Bypass Road in the southeast, traffic build-up may increase at the Buyon intersection especially for vehicles headed northward once the latter is activated and passable. This warrants the further planning for the intersection, including the possible construction of an interchange or a roundabout to manage traffic flow.

In addition, the construction of an alternate route crossing Bislak river and going into and out of the town proper is proposed to ease the traffic flow at the Tambidao Junction. The alternative route with bridge is proposed to branch out from the Farinas Bypass Road towards the southern end of the Pasiocan-Sangil-Ganagan provincial road, going north towards the Pasiocan Elementary School, and going further north crossing Bislak River and connecting to the proposed New Government Center in Brgy. 1 Sta. Rita. This alternate route shall serve as the main route going into and out of the town proper.

To organize public transport services in the Municipality, steps shall be taken to construct strategic transportation infrastructure within the Municipality, including the provision of a Central Terminal (preferably within the government center in the Poblacion), parking areas within the commercial areas, as well as bus/jeepney stops along the major thoroughfares of the Municipality. The completion of the Local Public Transport and Route Plan shall be important in organizing the current system for local public transportation (tricycle operations) within the town, which is highly fragmented and general.

Finally, Non-NPAAAD areas mainly located in the east and northeast portion of the Municipality, it is envisaged that opportunities for renewable energy such as wind or solar power farms are explored.

The resulting Structure Map to illustrate the Development Concept is provided below.

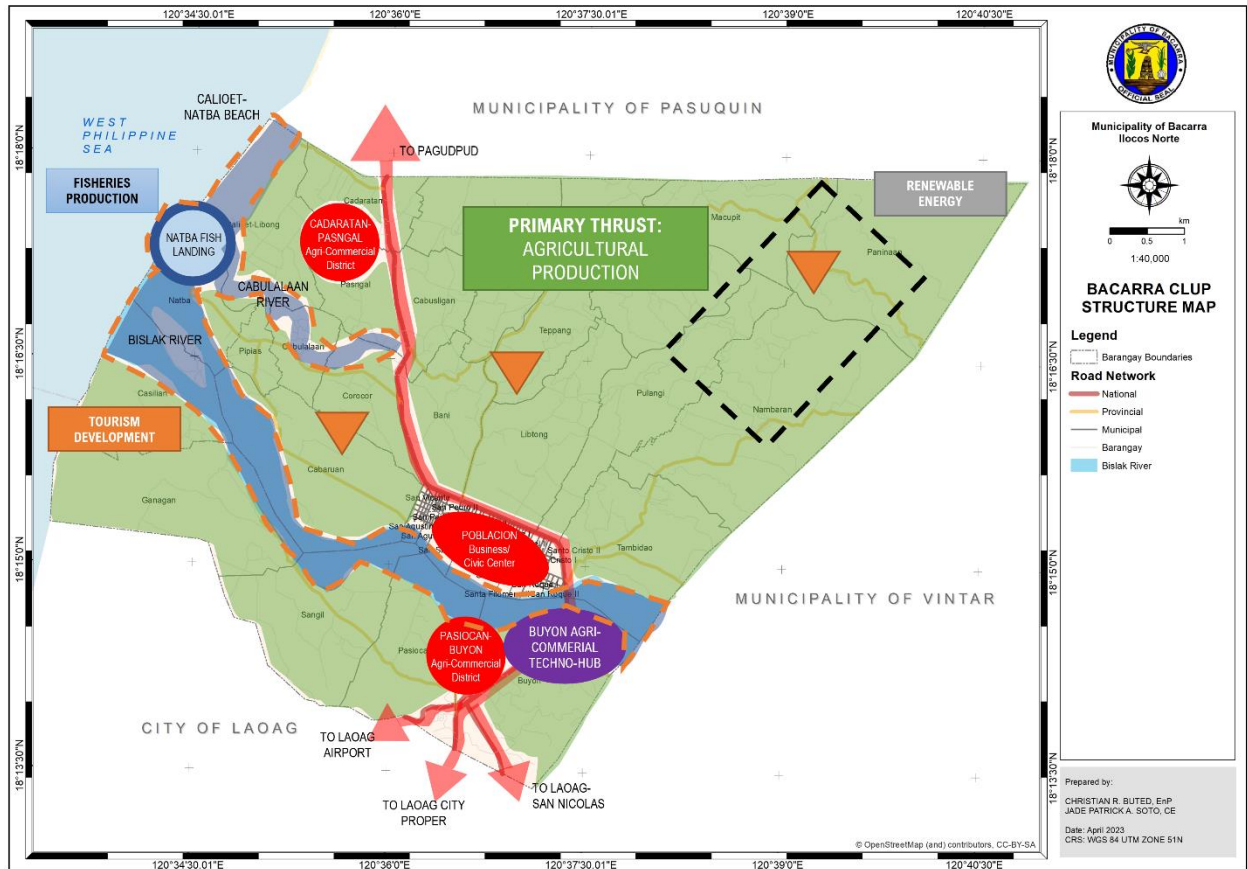


Figure 2: Structure Map

## 8 Proposed Land and Water Uses and Zoning Ordinance

### 8.1 Proposed Land Use and Zoning Maps

To effectively chart the municipality’s future spatial development and growth, the municipality is hereby classified into the following land uses as shown in the Official Land Use Map:

Table 3. Proposed General Land Uses, CLUP 2023-2032

Land Use Categories	Proposed (has.)	% of Total
<b>Agricultural</b>		
- Protection Agricultural	3,408.11	51.91%
- Production Agricultural	64.23	0.98%
- Agro-Forestry	1,276.59	19.44%
Agri-Industrial	49.57	0.76%
Residential	521.39	7.94%
Socialized Housing	19.03	0.29%
Commercial	41.54	0.63%
Industrial	2.15	0.03%
Institutional	53.07	0.81%
Parks and Recreation	9.15	0.14%
Cemetery/Memorial Park	8.61	0.13%
Buffer/Greenbelt	32.19	0.49%
Tourism	1.08	0.02%
Utilities, Transportation and Services	9.71	0.15%
Inland Waters	610.24	9.29%
Foreshore	246.42	3.75%
Fish Sanctuary	6.26	0.10%
Aquaculture	11.89	0.18%
Road Network	194.65	2.96%
<b>Total Land Area</b>	<b>6,565.87</b>	<b>100.00%</b>
Municipal Fishing Grounds	9,000.00	100.00%
<b>Total Municipal Waters</b>	<b>9,000.00</b>	<b>100.00%</b>

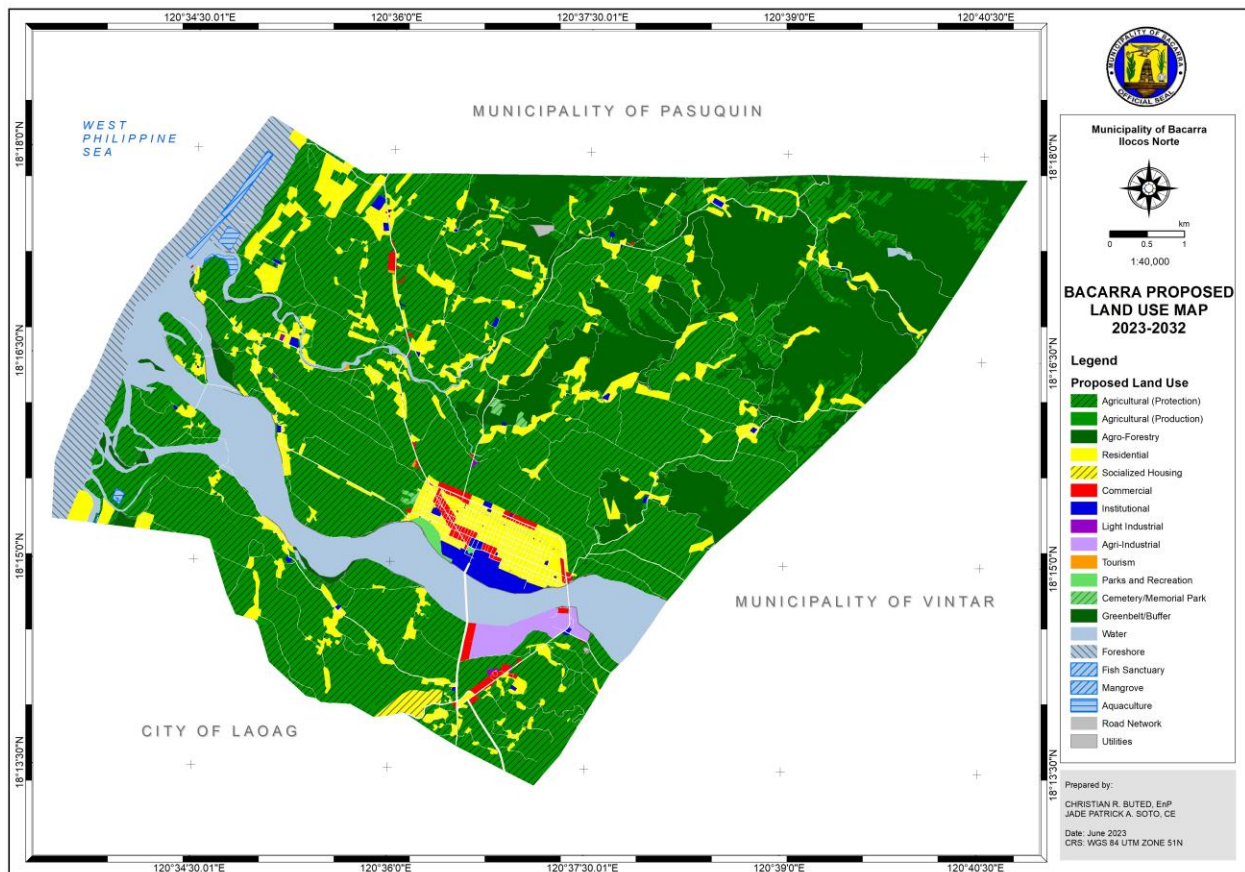


Figure 3: General Land Use Map

## 8.2 General Land and Water Use Policies

**Other Land Uses.** The land uses enumerated in this 2023-2032 CLUP are neither exhaustive nor all-inclusive and as maybe recommended by the Local Board of Appeals (LZBA), allow other uses not previously defined here. This is possible if they are compatible with the allowable uses and that they are not expressly prohibited by this Plan’s accompanying Zoning Ordinance. Allowance of further uses shall be based on the intrinsic qualities of the land and the socio-economic potential of the locality with due regard to the maintenance of the essential qualities of the zone.

**Legal Easement.** Banks of rivers and streams and the shores of the seas and lakes through entire length and within a zone of three meters in urban areas, 20 meters in agricultural areas, and 40 meters in forest areas, along their margins, are subject to the easement of public use in the interest of recreation, navigation, floatage, fishing and salvage, and are declared as No Build Zones.

**Competing Uses.** In cases wherein compatibility problems on land utilization arise between adjacent functional classes or use-zones, decisions should be in favor of the overriding considerations on health, sanitation and general public welfare of the population and conservation, preservation of the environment/ ecological balance of the area.

**Protection of Agricultural Lands.** Restrict to the minimum conversion of prime agricultural lands to non-agriculture uses in cases of extreme necessity and/or in cases wherein such conversion far outweighs the existing economic advantages brought to the community in general; is in compatibility with adjacent functional use zones of nearby major growth center in an area-wide basis; and is in conformity with existing laws, rules and regulations regarding agricultural land conversion; and upon proper review, evaluation, recommendation and approval of concerned authorities (DA, DAR, DHSUD, among others).



**Environmental Management.** All land uses, developments or constructions shall conform to the noise, vibration, smoke, dust, dirt and fly ash, odors and gases, glare and heat, industrial wastes, sewage disposal, fire and safety hazards, traffic, off-street parking and loading facilities, storm, drainage, pollution control, and other similar environmental standards of the National Building Code, the Clean Air Act, the Clean Water Act, Ecological solid Waste Management Act and other applicable laws, rules and regulations of this Plan and accompanying Ordinance.

**Water Uses.** The utilization of the water resources for domestic and industrial use shall be allowed provided it is inconsonance with the development regulations of DENR, provisions of the water code, fishery laws and the revised forestry code of the Philippines, as amended and provided further; that is subjected to an environmental impact assessment prior to the approval of its use. Other uses like recreation, fishing and related activities, floatage/transportation and mining shall also be allowed provided it is in consonance with the provisions of the water code, fishery laws and the revised forestry code of the Philippines, as amended. Such bodies of water shall include rivers, estuaries, streams, creeks and seas.

### 8.3 Zoning Ordinance

These assigned land uses and zoning were formulated in line with the considerations presented in the CLUP. The specific designation on allowable uses and other building regulations, if any, are elaborated in the accompanying Zoning Ordinance.

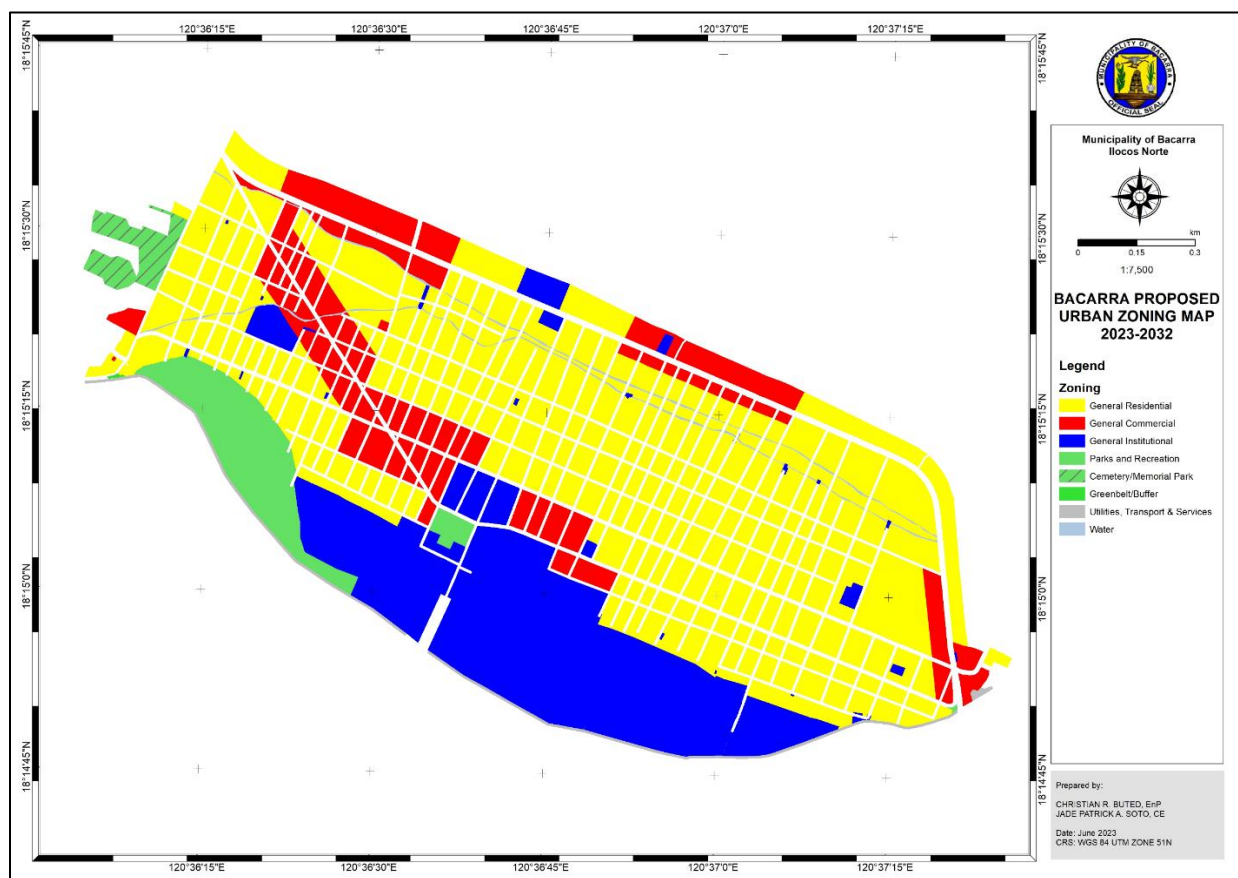


Figure 4: Urban Zoning map

Table 4. Proposed Urban Zoning, CLUP 2023-2032

Zone Classification	Proposed (in hectares)	% of Total
General Residential Zone (GR-Z)	91.98	54.08%
General Commercial Zone (GC-Z)	22.70	13.35%
General Institutional Zone (GI-Z)	39.96	23.50%
Utilities, Transport and Services Zone (UTS-Z)	1.89	1.11%
Parks and Recreation Zone (PRZ)	9.14	5.38%
Cemetery/Memorial Park Zone (C/MP-Z)	2.87	1.69%
Buffer/Greenbelt Zone (B-G/Z)	0.03	0.02%
Water Zone (WZ)	1.51	0.89%
<b>Total Urban Area</b>	<b>170.089</b>	<b>100.00%</b>

## 8.4 Proposed Major Spatial Programs and Projects

### 8.4.1 Environmental Protection

- Construction of Sewerage and Water Treatment Facility in the Poblacion
- Establishment/Rehabilitation of Centralized MRF
- Construction of special waste containment facility
- Safe closure and rehabilitation of Sanitary Landfill waste cell
- Construction of flood control/river wall along Bislak River and Cabulalaan River
- Construction and rehabilitation of drainage canals
- Urban greening and tree planting
- Promotion of organic and bio-fertilizers in agricultural production

### 8.4.2 Settlements Sector

- Rehabilitation of Bacarra Municipal Hall
- Development of Bacarra Newtown mixed use institutional area to include the construction of New Fire Station, Evacuation Center, International Skills Training Center, OTOP Showroom/Commercial Area, Central Transportation Terminal cum Municipal Motorpool, Hotel and Meetings and Conventions Facility, Public Sports Center, and low to medium-rise housing
- Development of Bacarra Heritage Trail
- Pedestrianization of Poblacion including the installation of signages, designation of parking spaces and loading and unloading bays
- Construction of Bahay Pag-Asa/Center for Social Services
- Establishment /expansion of children's playground, parks in each barangay including installation of PWD-friendly play equipment
- Construction and upgrading of classrooms and facilities (e.g. 21st century, tech-voc, SPED, ALS)
- Construction of Socialized and Economic Housing Project
- Expansion and installation of water hydrants for fire suppression
- Establish/expand municipal and barangay open parks
- Establishment of Bio Intensive Gardens in each barangay
- Expansion of Youth Center
- Construction of state-of-the-art Emergency Operations Center (EOC)
- Land banking for expansion of social services and facilities

### 8.4.3 Production Sector

- Improvement and full activation and operation of Bagsakan Center
- Construction of agriculture warehouse with cold storage facility
- Construction, rehabilitation of post-harvest facilities
- Construction of Farm to Market Roads (Pasiocan to Sangil, Pasngal, Cabusligan-Bani-Alamaam, Buyon-Camungao)
- Concreting of Farm to Market Roads



- Construction of animal shelter
- Implementation of crop zoning
- Activation of Natba Community Fish Landing Center
- Construction of Farmers Center cum Incubation Center
- Canal lining/concreting of irrigation canals (main and tributary canals)
- Rehabilitation/full repair of the Old Market Building
- Development of Pasngal-Cadaratan and Pasiocan-Buyon Agri-CBD
- Agri-industrial development in Brgy. 40 Buyon
- Development of Tourist site attractions visitor facilities and amenities (Bislak River picnic area, Calioet-Libong beach, Natba Beach, Coca Creek Agro-Ecotourism Site, Macupit-Paninaan OTOP Showroom, Cabaruan Demo Farm Showroom, Libtong Demo Farm Showroom, Natba Community Fish Landing Center)

#### 8.4.4 Infrastructure Services

- Construction of Pasiocan to Brgy. 1 Sta. Rita Alternate Bridge
- Construction of Pipias-Taguipuro Access Road
- Construction of Taguipuro-Casilian Access Road/Bridge
- Construction of Casilian-Ganagan Access Road
- Construction of RCDG bridge (Cadaratan-Pasngal, Cadaratan-Libong, Teppang-Duripes)
- Installation of solar streetlights
- Construction of Motorpool
- Construction of Repeater Towers for Telecommunication Signal
- Construction/Expansion of Level II or Level III water supply
- Construction of Rainwater Harvesting facilities (SWIP, Small Farm reservoirs)
- Construction of Solar-powered potable water supply systems
- Construction of roads and bridges connecting barangay service roads
- Rehabilitation and improvement of service roads and bridges
- Development of renewable energy (solar, wind farms)