

# Vientiane Capital Urban Development Master Plan - Proposal -

March 2011

The Project for Urban Development Master Plan Study in Vientiane Capital  
A Brochure of the Final Report  
March 2011

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# What is Urban Development Master Plan?

*The best way to develop Vientiane Capital toward the year 2030*

## Background

Vientiane Capital has high economic and demographic growth potential. It is quite likely that the urban area would rapidly expand toward the suburbs along arterial roads without having enough infrastructure, thus creating the problem of urban sprawl with bad living conditions and inappropriate social services. Then the charms of the city might be lost forever. To counter this problem, appropriate measures must be taken promptly based on a comprehensive urban development plan. In the light of this situation, it is recommended that the local government of Vientiane Capital as well as all its citizens carefully examine the problems which they are confronted with and consider the best way to develop Vientiane Capital toward the year 2030, so that it should be a more attractive and beloved capital for Lao people and foreign visitors as well. This year is a good occasion for the master plan, as Vientiane Capital marks the 450th anniversary of the transfer of the capital to the city.

In response to the request of the Government of Lao PDR, the Government of Japan decided to conduct “The Project for Urban Development Master Plan Study in Vientiane Capital”. Accordingly, JICA undertakes the Study in close cooperation with the authorities concerned of the Government of Lao PDR.

## Objectives

- To formulate an urban development master plan in Vientiane Capital, targeting the year 2030.
- To examine a methodology to improve the effectiveness of the urban development master plan.
- To implement a technical transfer for urban development and planning.

## Target Area

The whole area of Vientiane Capital, 3,920 km<sup>2</sup>



**Target Area**

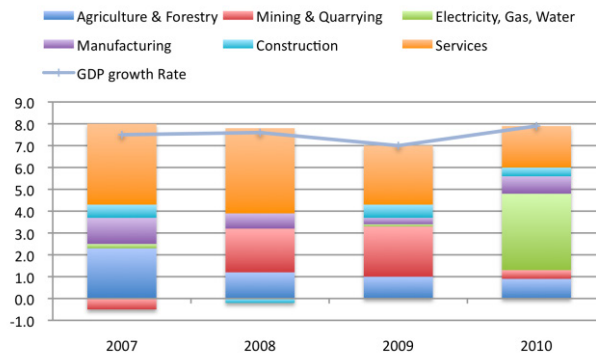
# Current Conditions of Vientiane Capital

The origin of township of Vientiane is on a river bank of the Mekong which still performs as the downtown and city center.

## Socioeconomic

The population of Vientiane Capital was 795,000 in 2009. The annual population growth rate of Vientiane Capital was 3.1% between 1985 and 2005.

The GDP growth rate was 7.6% in 2008. For the economic output, manufacturing, mining quarrying and service sector are major contributors to GDP growth.

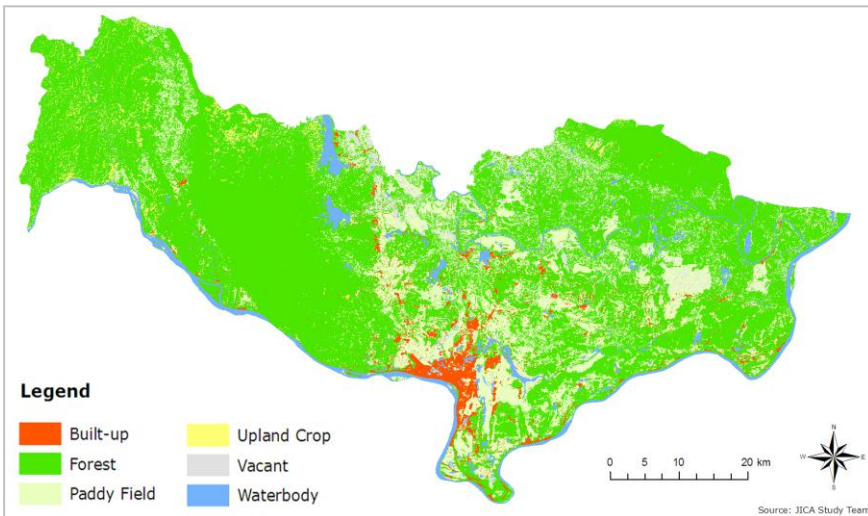


**GDP Growth Rate and Contribution of Industries**

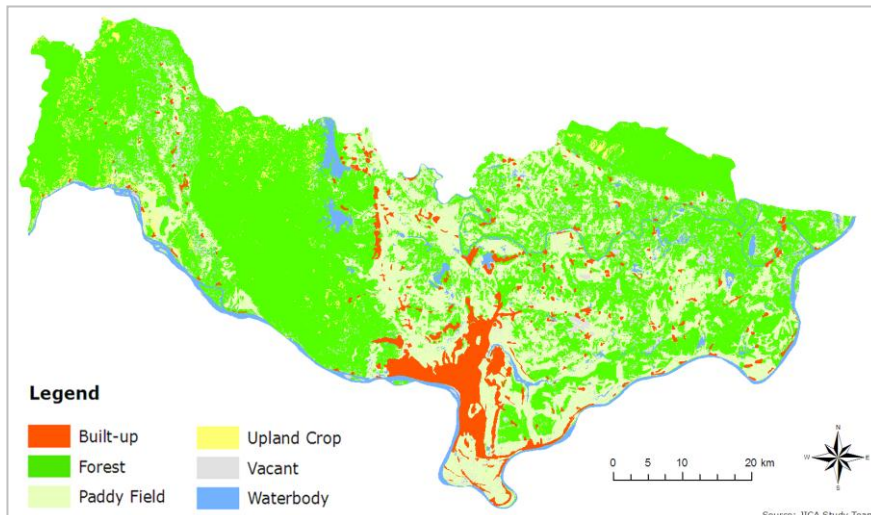
Source: Lao PDR Economic Monitor Mid-Year Update May 2010, World Bank Lao Office

## Land Use

Looking at land use of Vientiane Capital in 2005, a dominant land use type is forest area, which occupied about 68% of total area, followed by 17% of paddy area. Rapid economic development and population growth may have largely affected the land use pattern. The built-up area doubled from approximately 3% of total area in 1995 to 6% in 2005.



**Land Use 1995**



**Land Use 2005**

**Land Use Change (1995-2005)**

	1995		2005		Difference (2005-1995)
	Area (Km2)	(%)	Area (km2)	(%)	
Built-up Area	132.84	3.4%	220.66	5.6%	87.82
Paddy Area	655.11	16.7%	659.93	16.8%	4.81
Upland Crop Area	52.86	1.3%	65.17	1.7%	12.31
Forest Area	2,710.88	69.2%	2,645.56	67.5%	-65.32
Vacant Land Area	221.08	5.6%	113.01	2.9%	-108.06
Water Body Area	147.23	3.8%	215.67	5.5%	68.44
Total	3,920.00		3,920.00		0.00

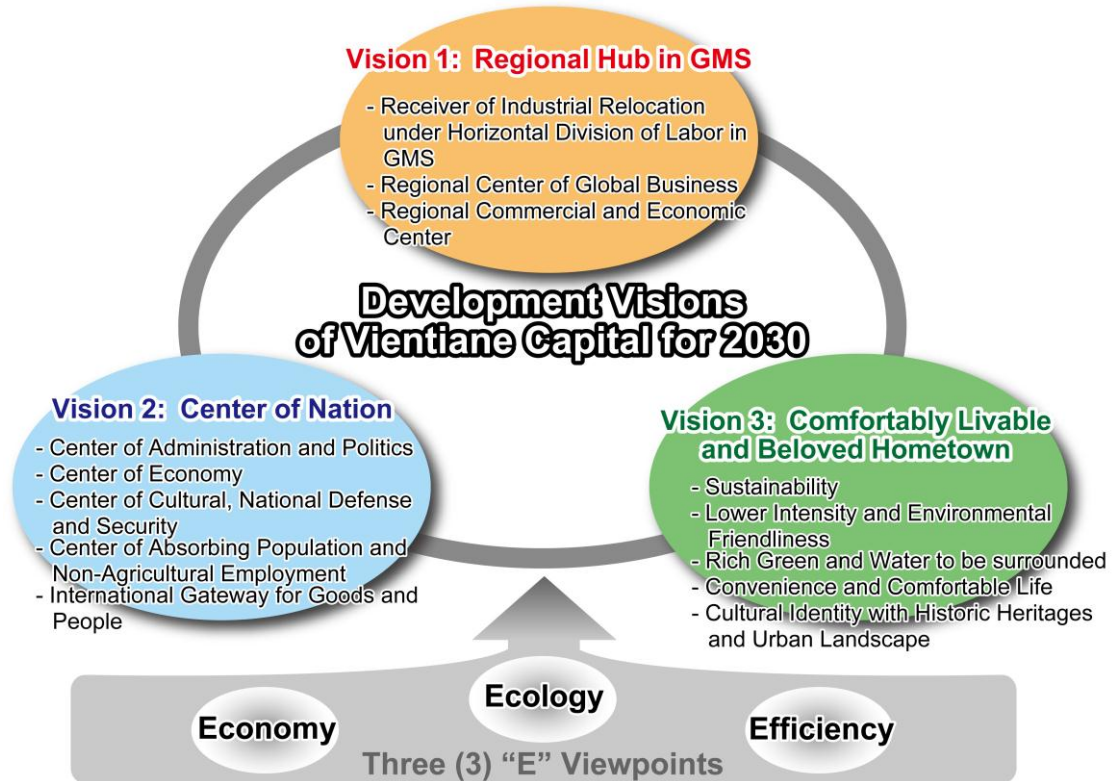


# Development Visions for 2030

*Ideal future images of our city, Vientiane Capital, for 2030*

## Development Visions

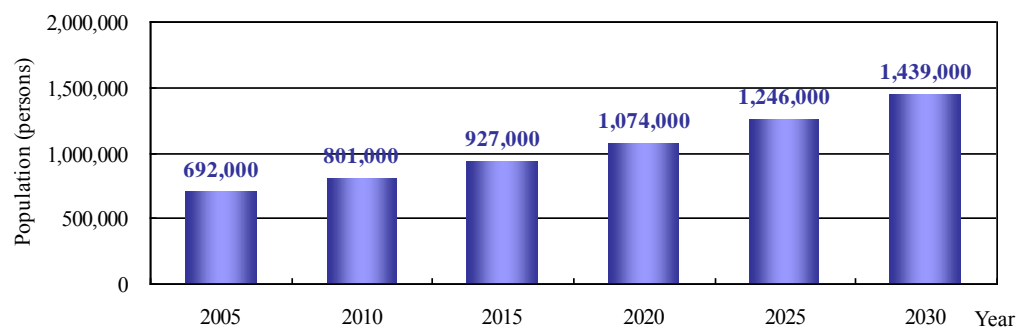
Development visions are ideal future images of a city to be materialized based on the citizens' needs and foresight of the stakeholders and experts.



**Development Visions for Vientiane Capital**

## Socioeconomic Framework

A scenario of demographic development is proposed in comparison with alternatives. In the proposed scenario, population in 2030 will double from the current population, and increase of labor population is 400,000 persons in 20 years. Annual average growth rate of Gross Regional Domestic Products (GRDP) is 8.0% in the same period. GRDP will increase by 4.8 times in 20 years from 2010 to 2030. This will be a high level but at the same time a possible target in terms of urban growth, economic development and infrastructure development. Growth of the economic sectors will be 2.4 times for the primary sector, 6.4 times for the secondary sector, and 4.3 times for the tertiary sector.



**Population Projection of Vientiane Capital**



# A Structure Plan for Vientiane Capital

*Vientiane Capital is required to strengthen its urban economy and improving livability under rapid population growth.*

## Concept of Urban Structure

Vientiane Capital needs to strengthen its urban economic functions, particularly, in commercial and business, industry and logistics, and improve livability at the same time. A concept of “Multi-core structure” is proposed in consideration of location and size of necessary functions to accommodate them. In this sense, three determinants are taken into account:

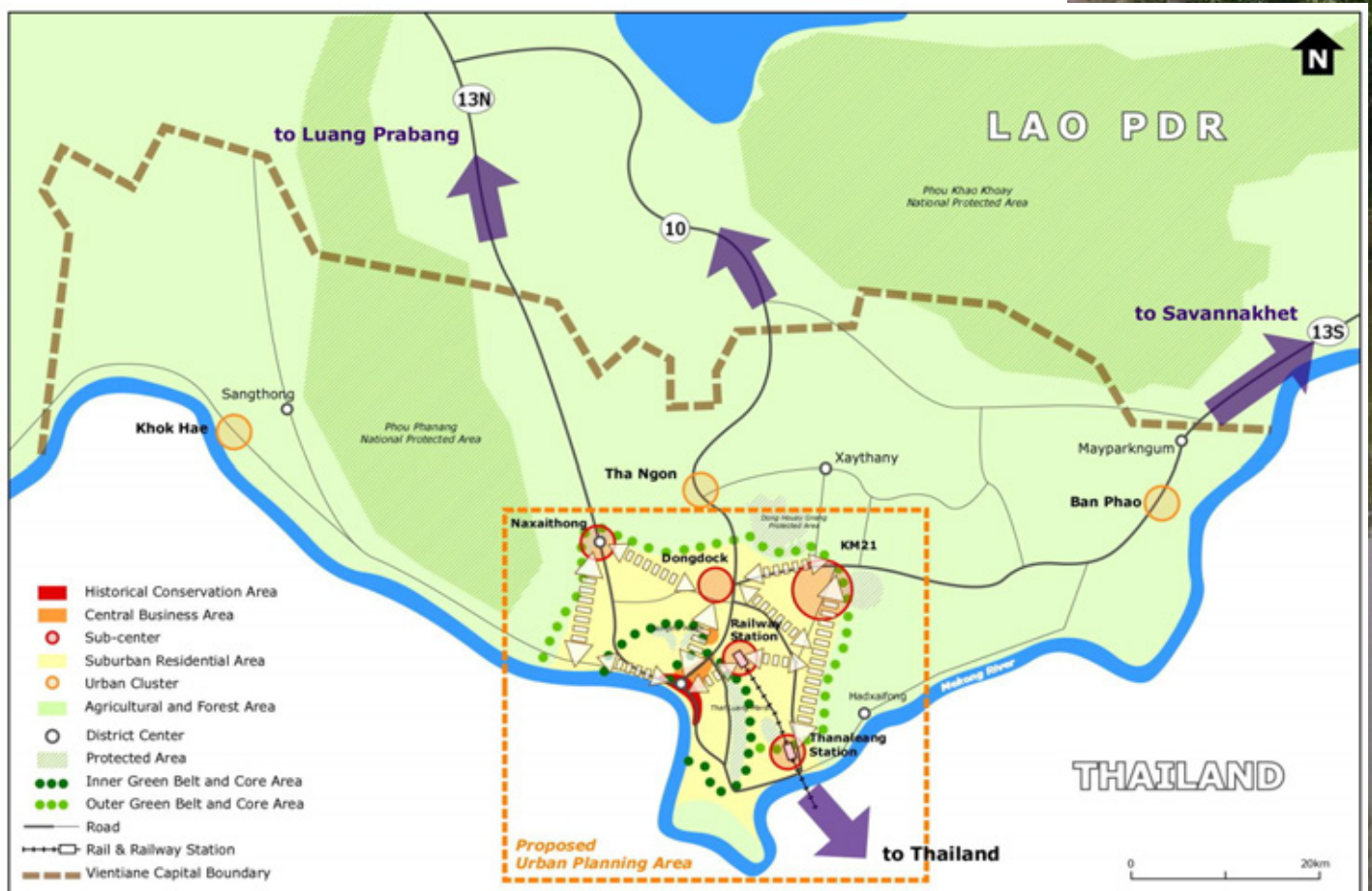
- Centralized pattern or decentralized pattern
- Location of required urban function
- Conservation of natural environment and higher productive agricultural land

## Multi-core Structure

Multi-core structure aims at controlling expansion of existing urban center with creating a few of sub-centers and urban clusters to avoid over-concentration and disordered expansion of the existing urban center.

- Sub-centers: KM21, Thanaleang, Dongdock, Naxaithong and Railway town.
- Urban clusters : Khok Hae, Tha Ngon and Ban Pao

Urban development shall be limited in the designated area and other area will be agricultural or conservation area to be maintained basically with existing land use or conserved.



Multi-core Structure of Vientiane Capital

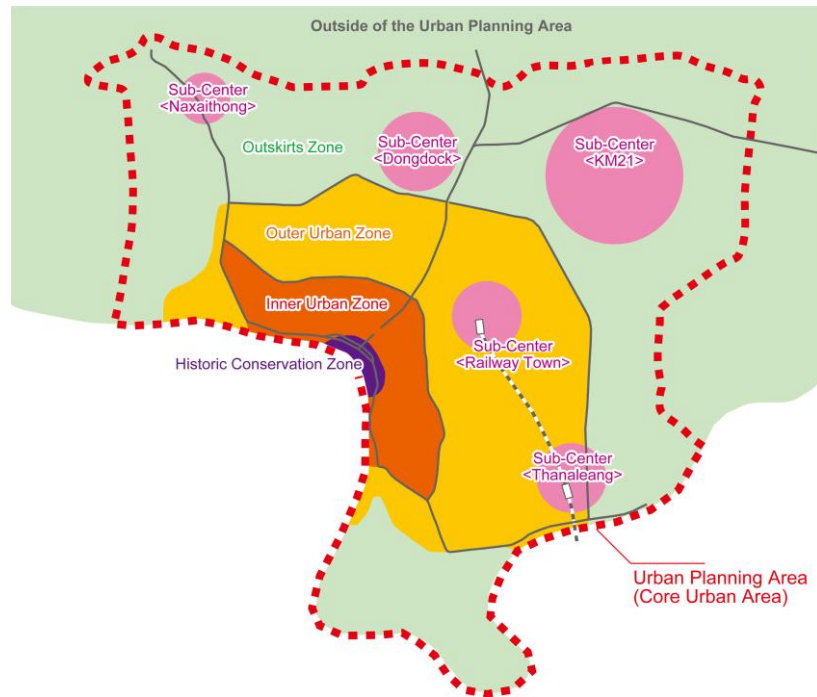


# Land Use Policy

*Vientiane Capital area is categorized into six (6) zones.*

## Land Categorization

The whole Vientiane Capital area shall be categorized into six zones based on the roles under the multi-core structure with careful considerations of the location and the current situations.



**Land Categorization in the Core Urban Area**

### Historic Conservation Zone

This zone is the place of historic and cultural heritage. This townscape consisting mainly of low shop-house buildings is a major tourist attraction.

### Inner Urban Zone

This zone strengthens the urban function of Vientiane Capital as a center of regional economic hub in GMS in addition to the national center of Lao PDR.

### Outer Zone

This zone is the surrounding area of the inner urban and is capable of providing sufficient residential areas with good living environment.

### Sub-center Zone <KM21, Thanaleang, Dongdock, Naxaithong & Railway Town>

This zone is developed as a new urban accumulation to relocate certain urban functions from the urban center and to receive new urban activities.

### Outskirts Zone

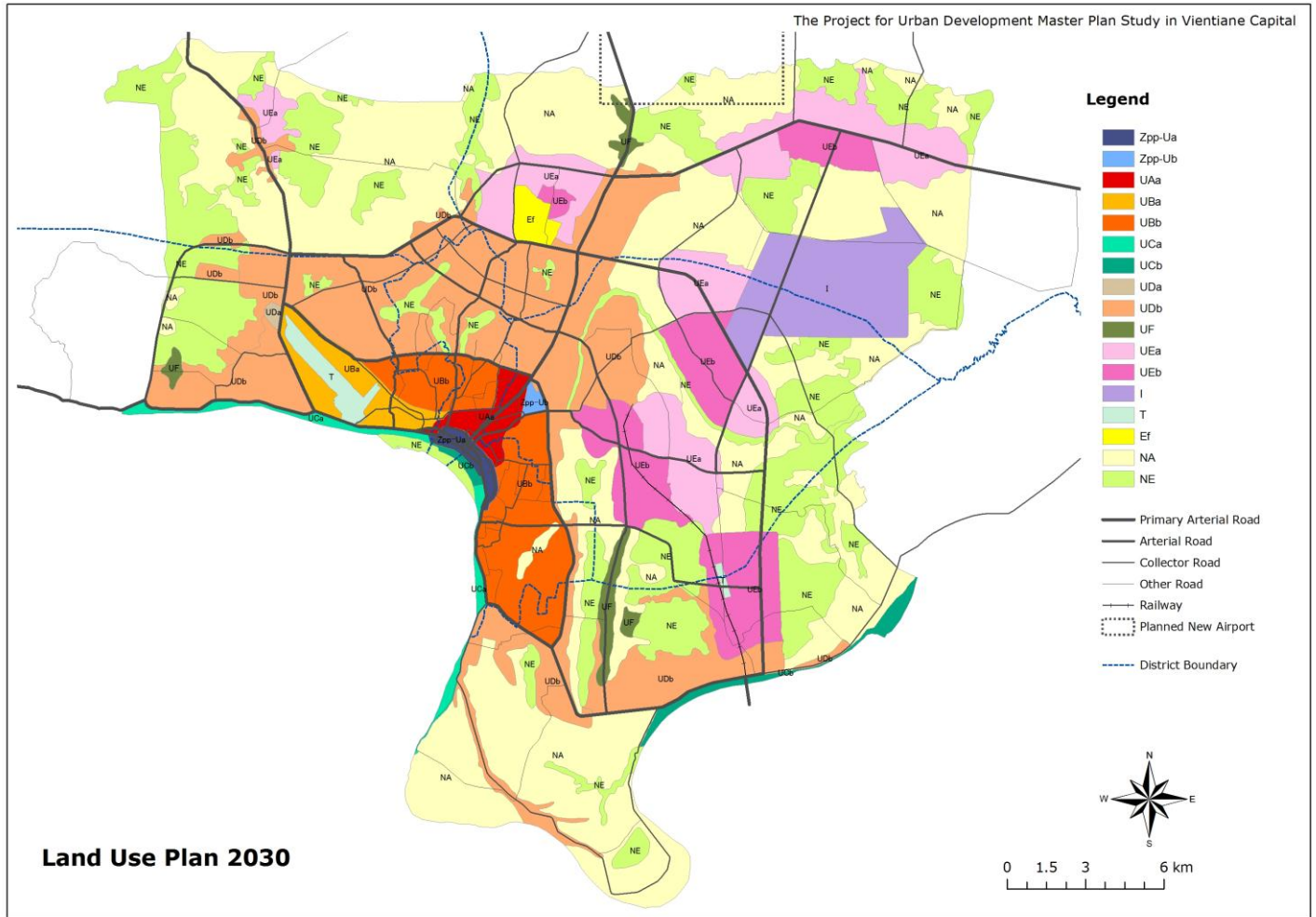
This zone is important from environmental and disaster prevention viewpoints. The zone should be maintained/ conserved as current land use.

### Urban Cluster Zone <Tha Ngon, Khok Hae & Ban Pao>

This zone is developed to local economic and service center serving surrounding villages as well as to distribute population from the urban center.

# Land Use Plan 2030

The future land use plan of the core urban area in 2030 is proposed here.



## Land Use Plan 2030

### Detailed Zones of Land Use Plan 2030

Zones	Description of Zone	Coverage ratio (%)	Height of Building (m)	Plot Ratio (COS)
ZPP-Ua	- Historical town conservation zone	75%	12	2.0
ZPP-Ub	- Ancient site conservation zone	50%	7	0.7
UAa	- Administration and trade central zone	60%	26	4.0
UAb	- New central zone	60%	26	4.0
UBa	- Urban inner zone within aircraft flying zone	60%	***	1.5
UBb	- Urban inner zone	60%	20	3.0 *
UCa	- Mekong River bank zone with aircraft flying zone	50%	10	1.0
UCb	- Mekong River bank zone	50%	10	1.0
UDa	- Urban Surrounding Zone with aircraft flying zone	40%	7	0.7
UDb	- Urban Surrounding Zone relevant to agricultural activities	50%	15	2.0 *
UDc	- Urban Surrounding Zone and suburb	50%	15	2.0 *
UF	- Village surrounded by rice field	40%	10	1.0
UEa	- Urban expansion zone	50%	23	3.0 *
UEb	- Urban expansion zone (Sub-center)	50%	23	3.0 *
I	- Industrial zone	40%	15	1.5
T	- Transport zone	**	**	**
Ef	- Education zone	**	**	**
Em	- Military zone	**	**	**
Eh	- Public health zone	**	**	**
NA	- Agricultural zone	**	**	**
A	- Rice field has been surrounded by build up area	**	**	**
NE	- Public preservation zone	**	**	**

\* Special Plot Allowance Case

\*\* As these subdivide/specific land use zones are not for residential use, building construction is permissible at minimal.

\*\*\* Referring to relevant organization.



# Infrastructure Development

A basic strategy for infrastructure development and urban landscape improvement are proposed. Some results of the examinations are shown as follows;

## Road and Transport

Two important ring roads, namely the inner and outer ring roads, must be completed by 2030, together with one more ring road and two important radial roads.

## Water Supply

The service ratio is set at 97% of total population in 2015 and 100% in 2020, and the capacity development for sustainable implementation is essential.

## Sewerage/ Wastewater

Wastewater treatment system should be provided in the long term to prevent deterioration of water environment.

## Drainage

Retarding ponds such as marshes and river channels should be protected as much as possible and appropriate gates and pumps shall be provided as necessary.

## Solid Waste

The generation is projected to increase rapidly and waste collection rate will be increased to 100% by 2030.

## Parks and Greenery

For parks and greenery new parks will be created mainly in newly urbanized area to reach 10 times of the current level by 2030.

## Urban Landscape



### *The future image of Guest house area*

- Building design (height, roofs, window roofs, exterior materials, color, and fences)
- Setback area design (pavement, plants and street furniture) etc.



### *The future image of Lang Xane avenue*

- Building design (height, color and shape)
- BRT (Bus rapid transit)
- Roadside design (large tree, flower, pavement and street furniture) etc.