

SHAPING THE FUTURE METROPOLIS

THE METROPOLITAN SUBIC AREA



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SUBIC BAY FREEPORT ZONE AND REDONDO PENINSULA

SHAPING THE FUTURE METROPOLIS:
THE METROPOLITAN SUBIC AREA

OUTLINE OF PRESENTATION

Part 1.0 URBANIZATION IN THE PHILIPPINES

Part 2.0 THE METROPOLITAN SUBIC AREA

Part 3.0 MODELS FOR SPATIAL DEVELOPMENT

Part 4.0 LAND USE STRATEGIES FOR THE FUTURE MSA

CONCLUSION

URBANIZATION IN THE PHILIPPINES



KING PHILIP II



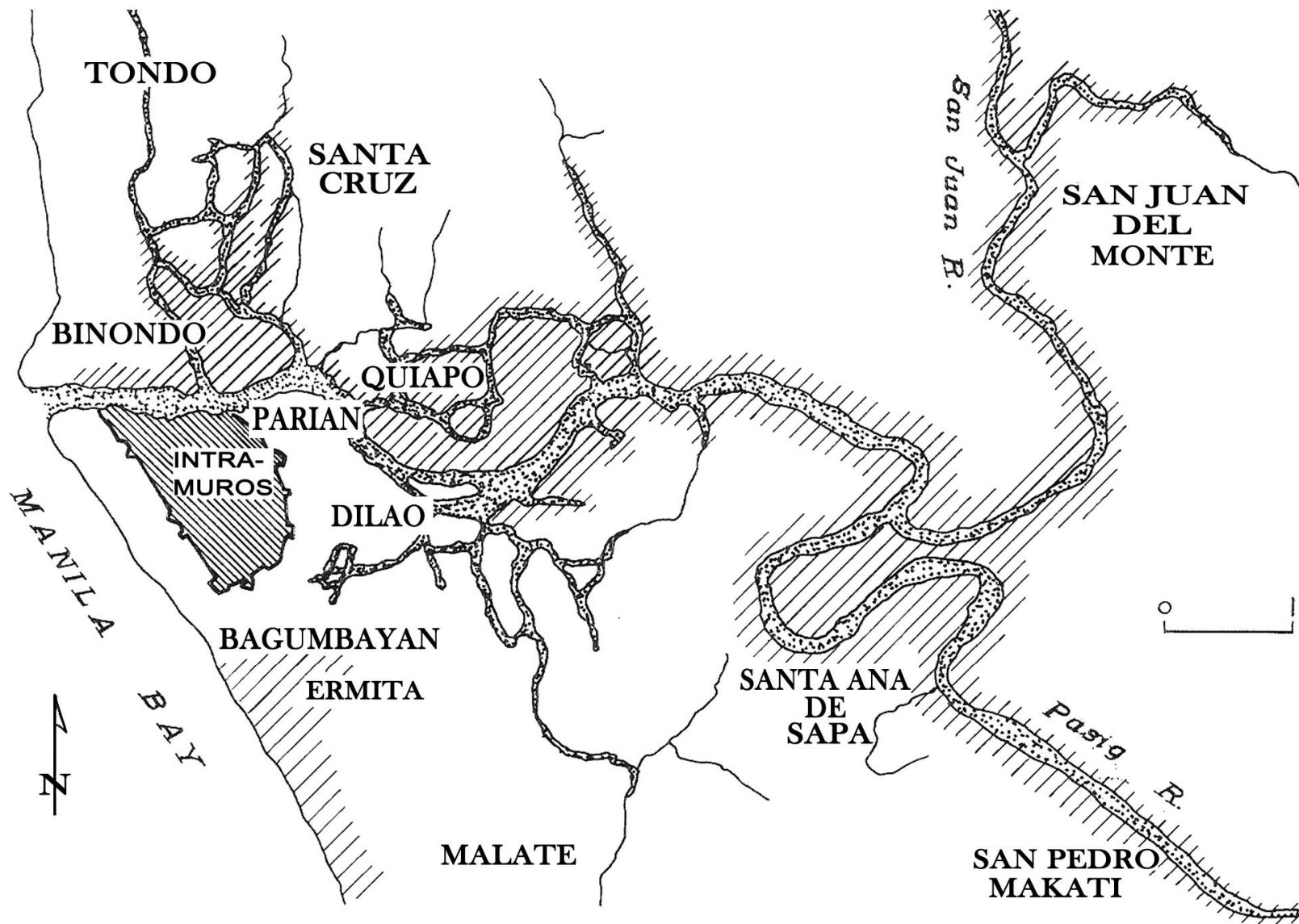
The Spanish Colonial Period (1565-1898)

LAWS OF THE INDIES (*Leyes de Indias*)

- Perhaps, the most significant set of planning guidelines as it became the basis for the layout of many towns in the Americas.
- The “Laws of the Indies” were decreed by King Philip II in 1573.
- The laws guided Spanish colonists on how to create and expand towns in Spanish territories in America and in the Philippines.
- There were about 148 guidelines
- It establishes the church as urban landmark and plaza public space.

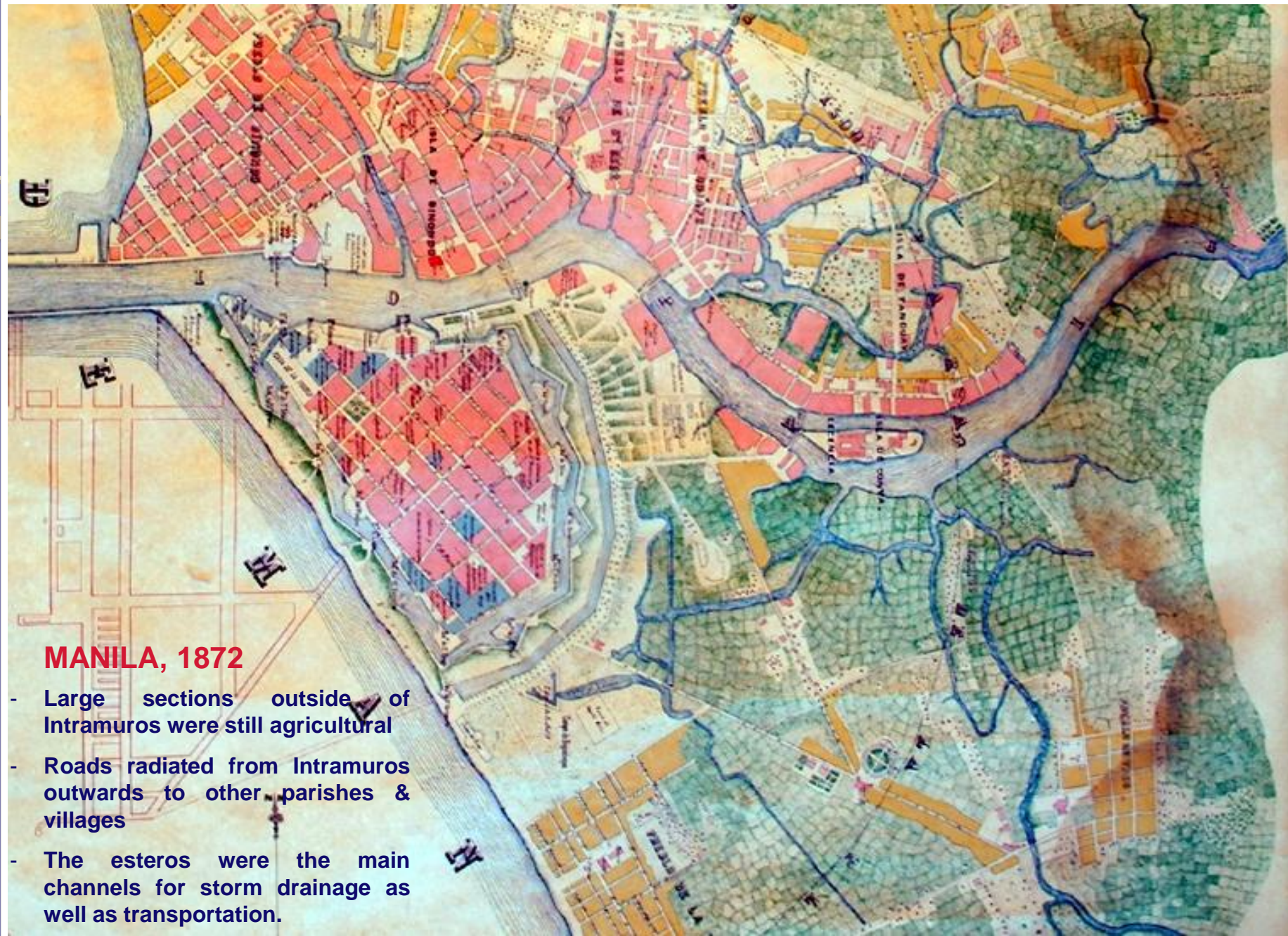


Church & Plaza in Vigan, Ilocos Sur



SPANISH SETTLEMENT IN AND NEAR MANILA, c.1630

-  Pasig River and esteros
- ERMITA** Principal suburbs
-  High density urban area (Intramuros)
-  Low density suburban areas (scattered country estates)



MANILA, 1872

- Large sections outside of Intramuros were still agricultural
- Roads radiated from Intramuros outwards to other parishes & villages
- The esteros were the main channels for storm drainage as well as transportation.

URBANIZATION IN THE PHILIPINES

AMERICAN COLONIAL PERIOD (1898- 1946)

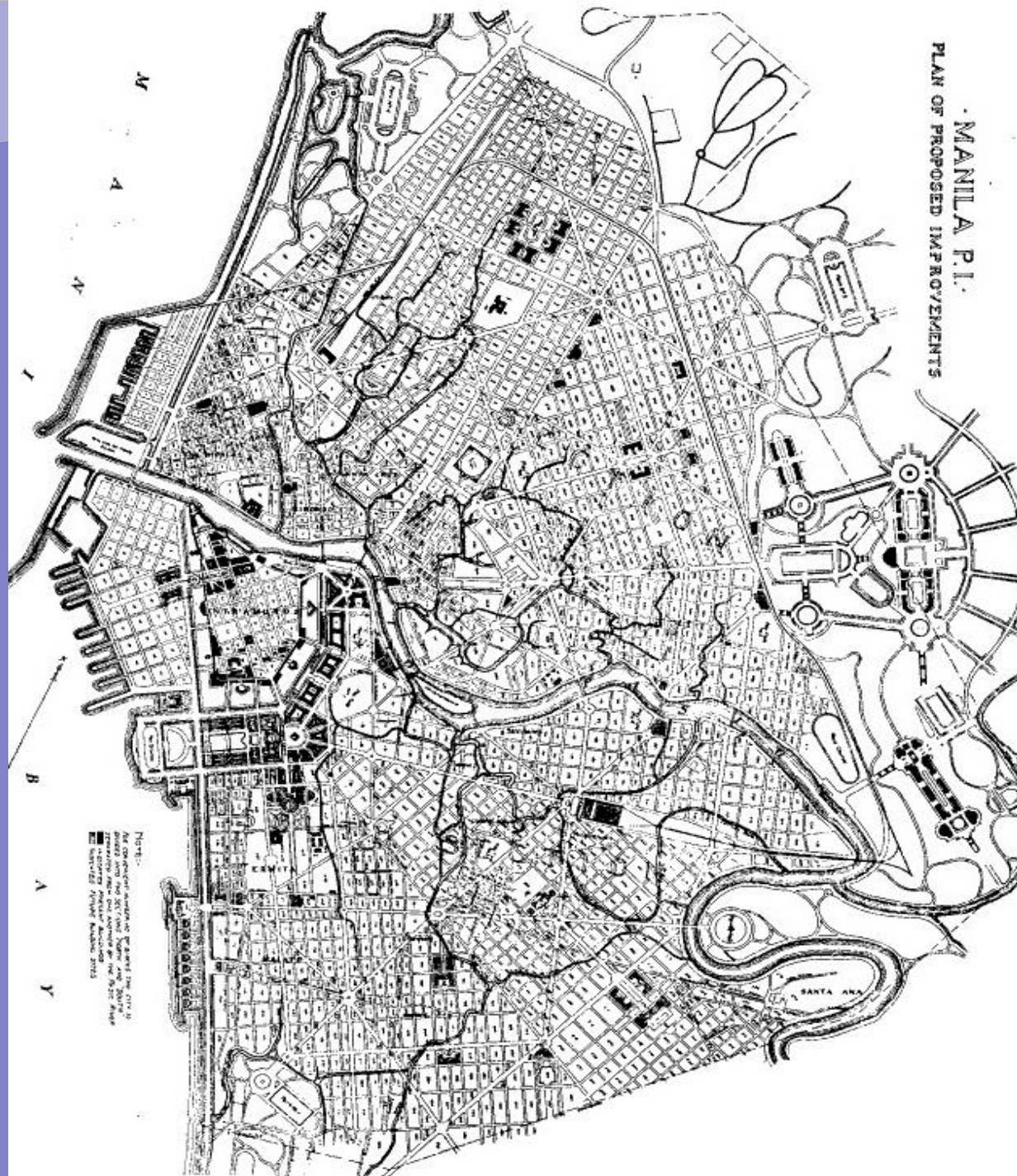


Daniel Burnham

Daniel H. Burnham was commissioned in 1904 to prepare plans for Manila and Baguio City.

The City Beautiful Style:

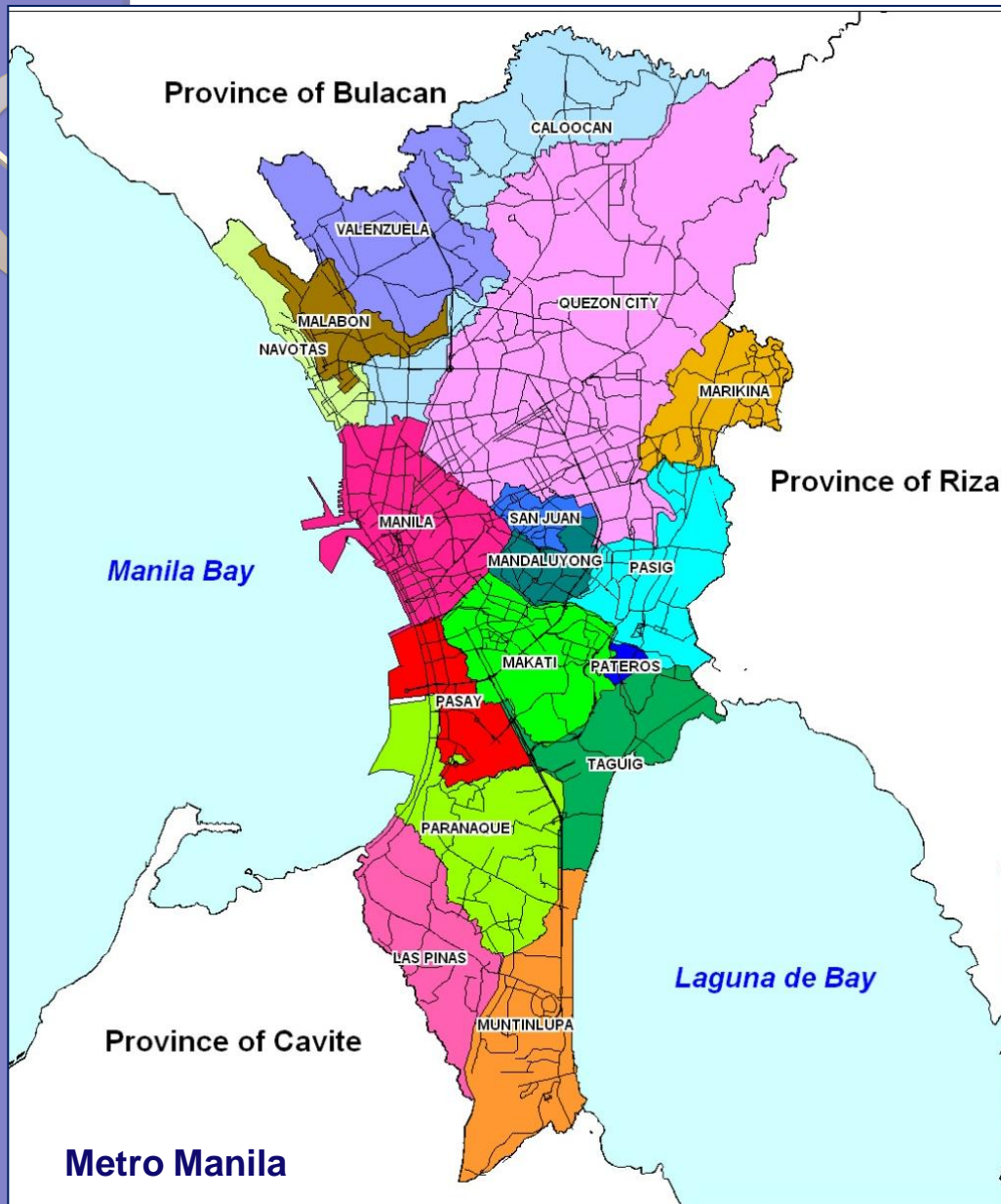
- Symmetrical Layout – Axes for Symmetry
- Grand Vistas and Viewing Corridors
- Radial Boulevards
- Monumental Buildings
- Parks and Gardens





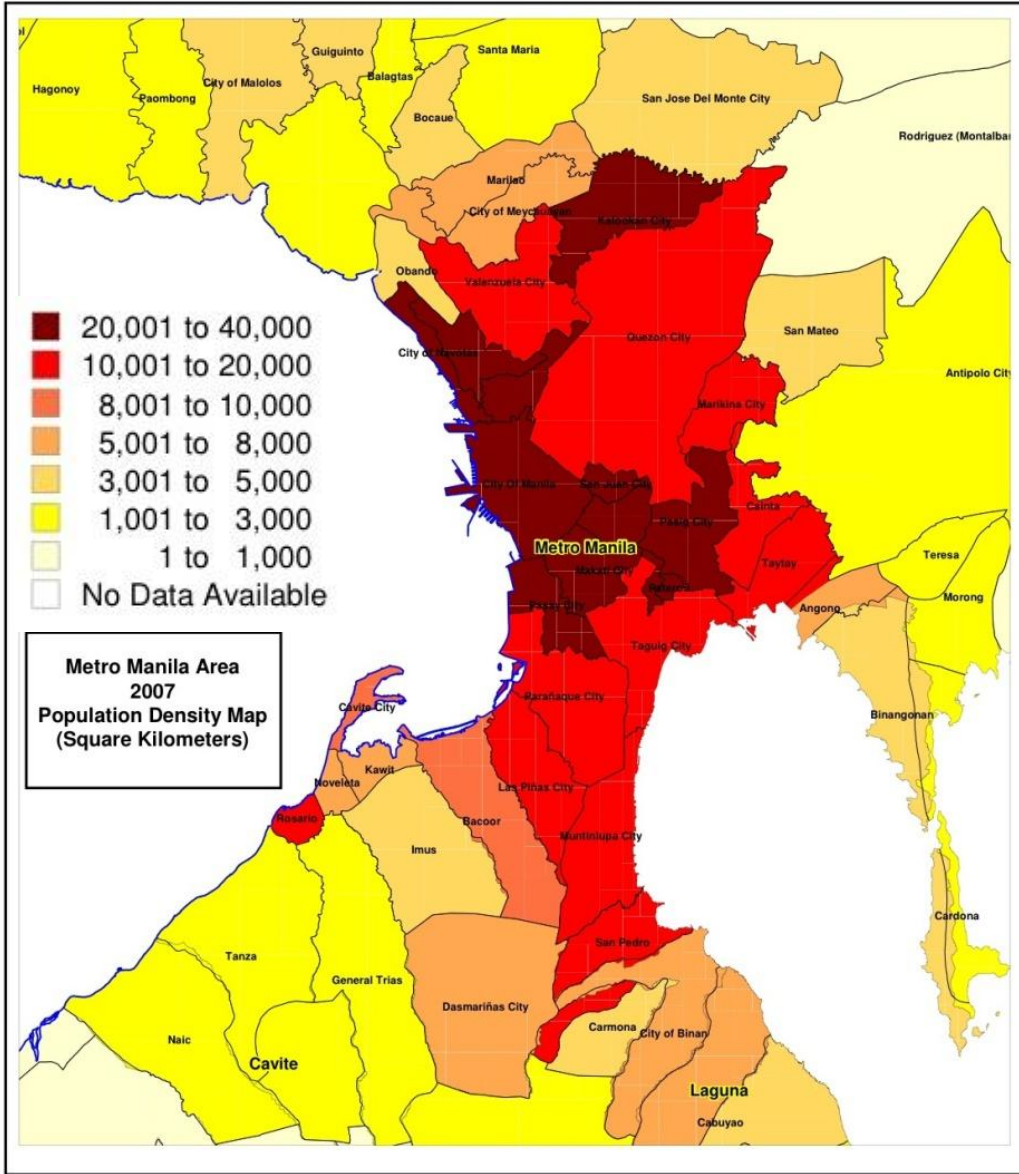
Features of the Burnham Plan for Manila, 1920s

METRO MANILA a.k.a. NATIONAL CAPITAL REGION



- Created in 1975 by grouping 4 existing cities and 13 existing municipalities
- Has a total land area of 636 square kilometers;
- Accounts for 33% of the country's GDP;
- The 17 Local Government Units (LGUs) have their own Mayors;
- Total Population of 11,850,000 (2010 Census);
- Population Density = 18,557/ square km.
- Urban Sprawl has reached the adjacent provinces to the north, east, and south.

URBANIZATION OF METRO MANILA



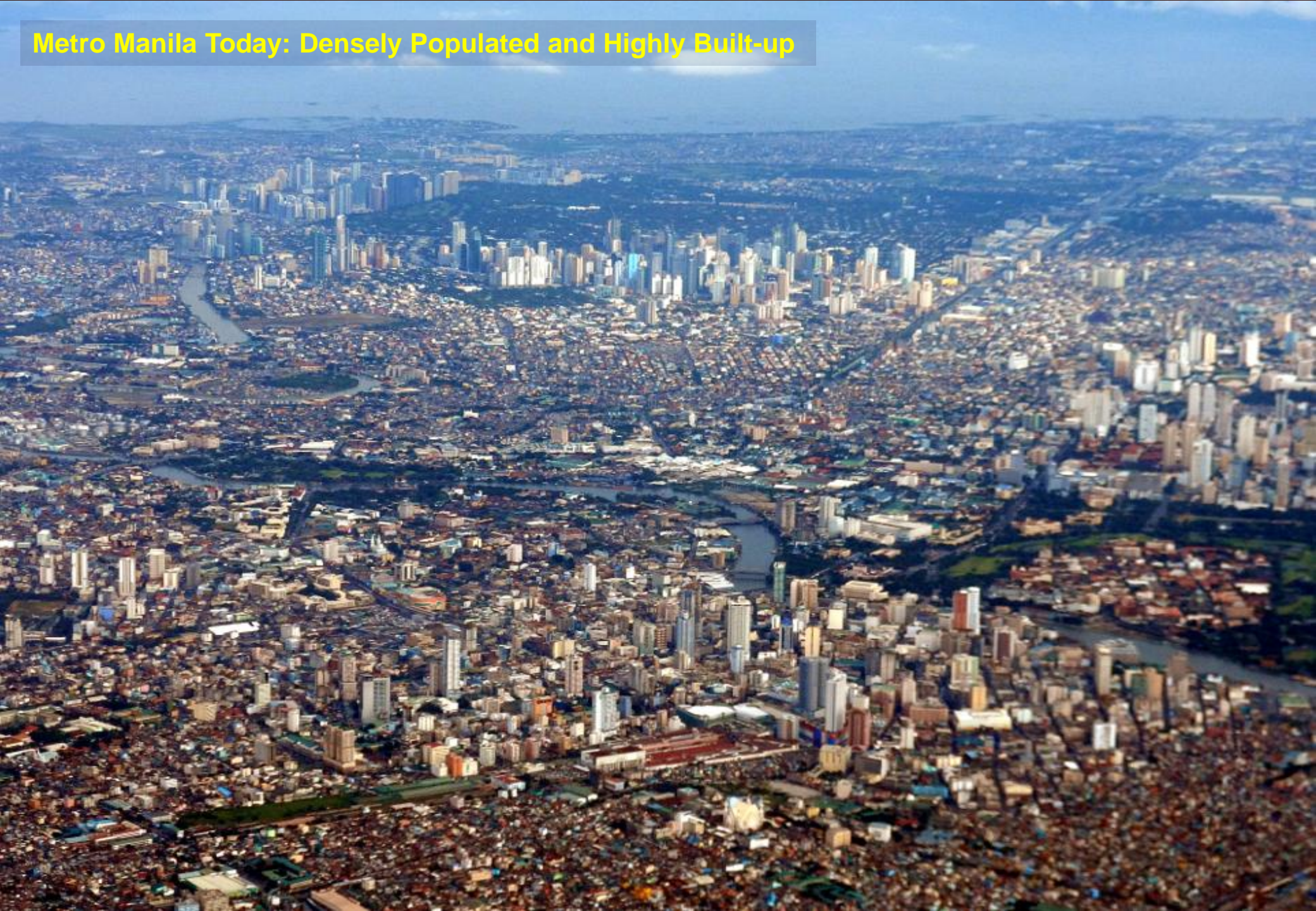
Metro Manila's Urban Sprawl

SHAPING THE FUTURE METROPOLIS



Metro Manila's Radio-centric Pattern

Metro Manila Today: Densely Populated and Highly Built-up



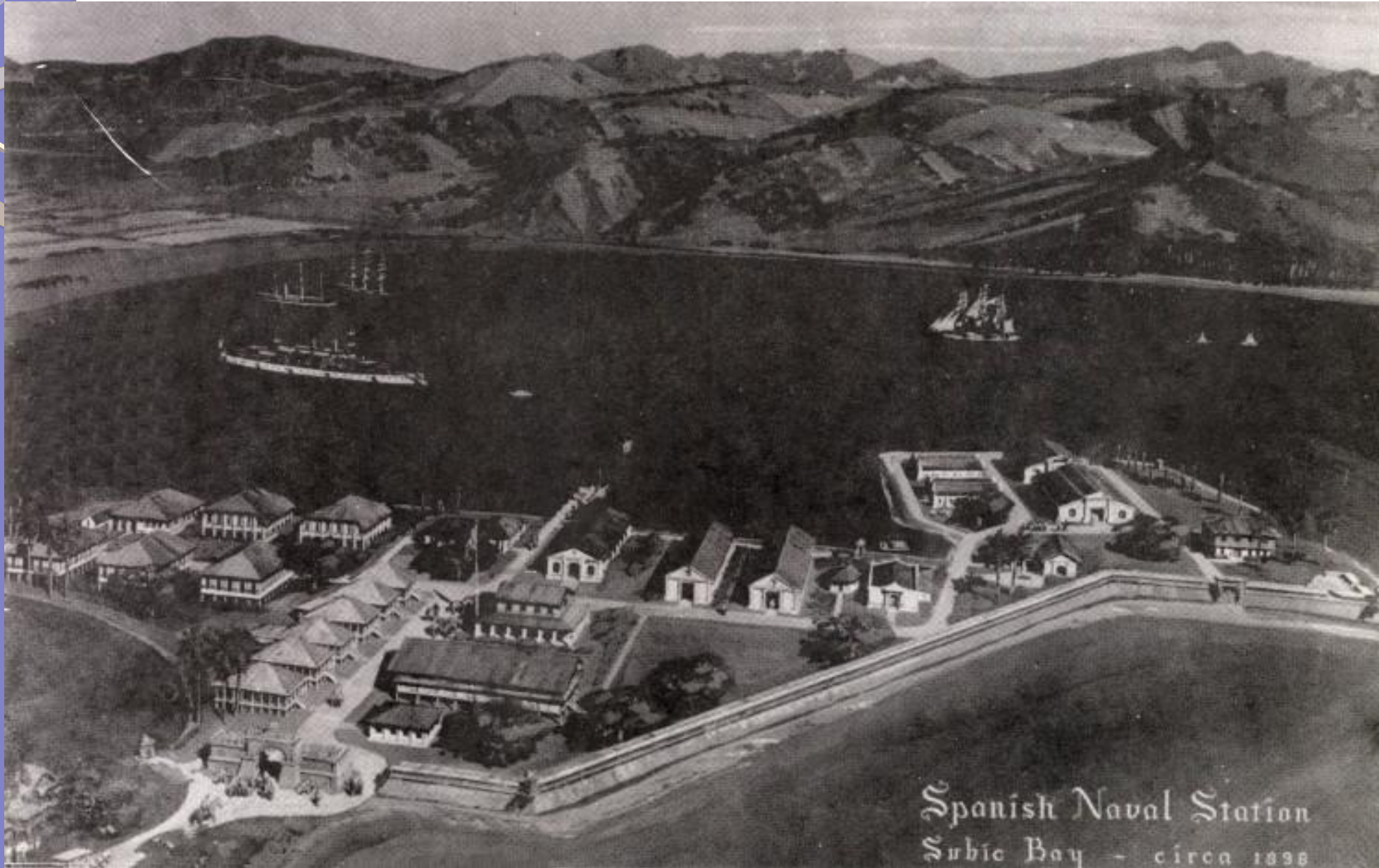
THE METROPOLITAN SUBIC AREA

ADVANTAGES OF URBANIZATION

- **STOPS URBAN SPRAWL, RATIONALIZES LAND USE**
- **CONTROLLED DEV'T PRESERVES AGRICULTURAL and FOREST RESOURCES**
- **CONCENTRATION MAKES SERVICES MORE EFFICIENT**
- **ENERGY, WATER, SHELTER can be DISTRIBUTED MORE EFFICIENTLY**

Table 1 Profile of Metropolitan Areas in the Philippines

Metropolitan Area	Component Local Government Units	Land Area (square kilometer)	Population (2007)	Pop. Density (per sq.km.)
Metro Manila	Cities of Manila, Caloocan, Las Pinas, Makati, Malabon, Mandaluyong, Marikina, Muntinlupa, Navotas, Paranaque, Pasay, Pasig, Quezon, San Juan, Taguig, Valenzuela; Pateros Municipality	638.55	11,553,427	18,093
Metro Cebu	Cebu City, Carcar, Compostela, Consolacion, Cordova, Danao, Lapu-Lapu, Liloan, Mandaue, Minglanilla, Naga, San Fernando, Talisay	1,016.00	2,314,897	2,278
Metro Davao	Davao City, Digos, Panabo, Island Garden City of Samal, Santa Cruz, Carmen, Tagum	3,798.95	2,046,181	539
Proposed Metro Subic Area	Olongapo City, Subic, Castillejos, Dinalupihan, Hermosa, Morong	1,001.59	519,190	518

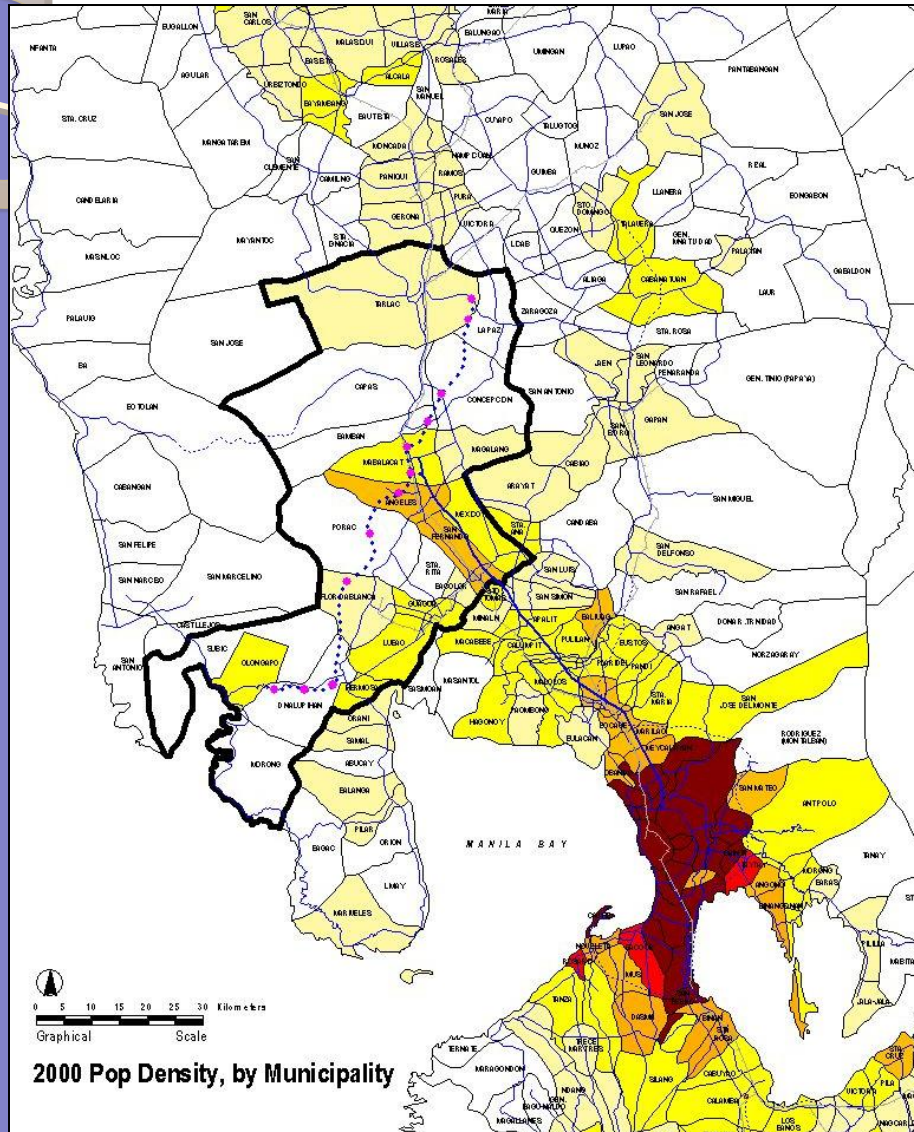


1898 Spanish Naval Station in Subic Bay



FIGHTER JETS OVER CUBI POINT, SUBIC NAVAL BASE, 1959

Metro Manila is the most densely populated area in the Philippines. Central Luzon offers new urban centers that can be planned better.



THE URBANIZING REGIONS



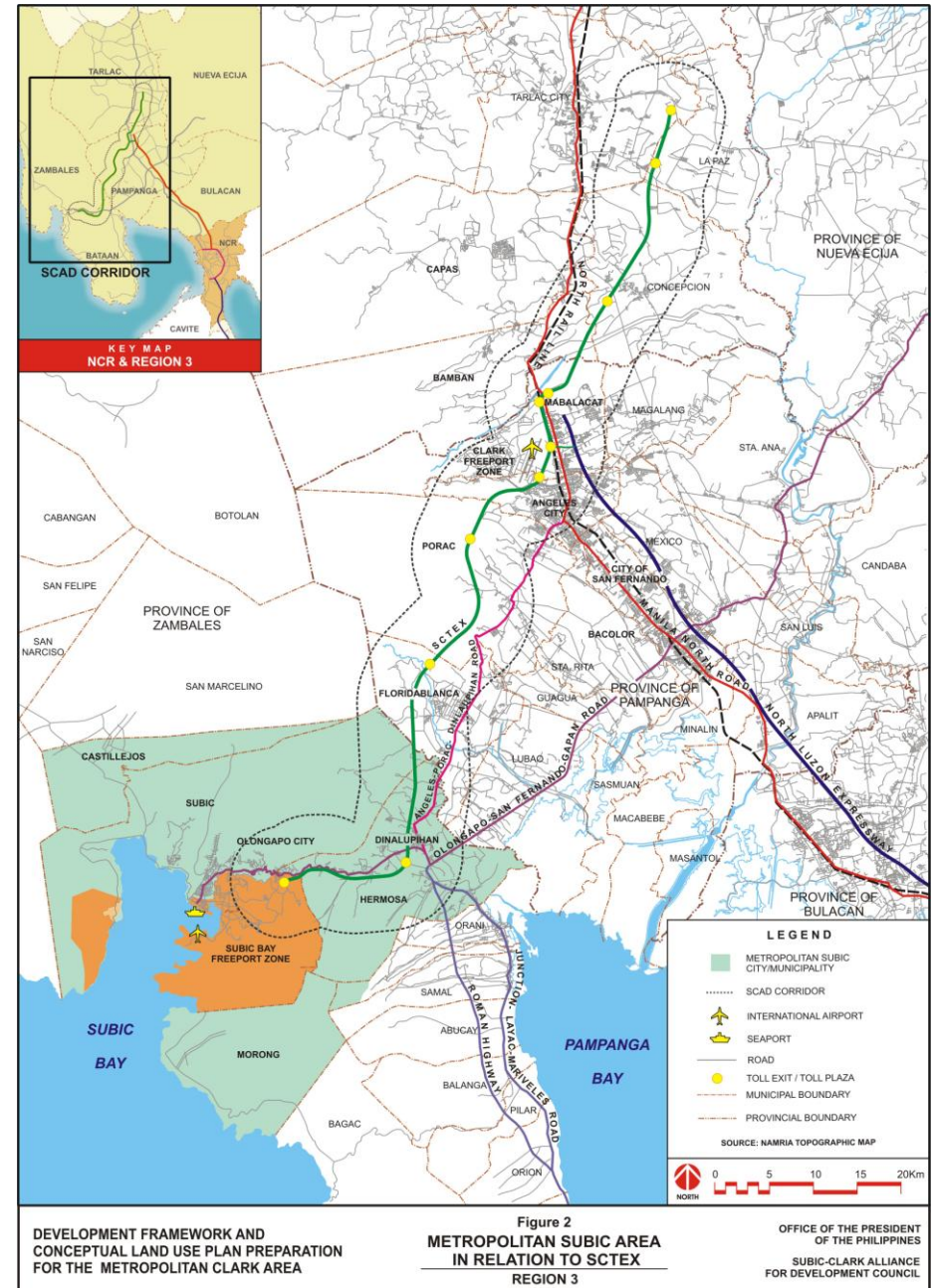
THE MEGA LOGISTICS CORRIDOR

- The **SCTEx Conceptual Land Use Plan** was formulated to identify production areas and where supporting land uses may be located.
- To attain the full potentials of the Port of Subic Bay and the airport in Clark, the corridor and the areas around it should transform into high production areas.

THE METROPOLITAN SUBIC AREA

- Rapid developments need immediate attention and coordinated planning.
- Need to identify and define expansion areas for further economic activities of SBMA.
- Main impetus/support to corridor growth will come from metropolitan areas.
- Need to identify “implementable” corridor projects; metro projects are generally more feasible and attractive to investors.

METROPOLITAN SUBIC AREA



METROPOLITAN SUBIC AREA



VISION FOR THE METRO SUBIC AREA

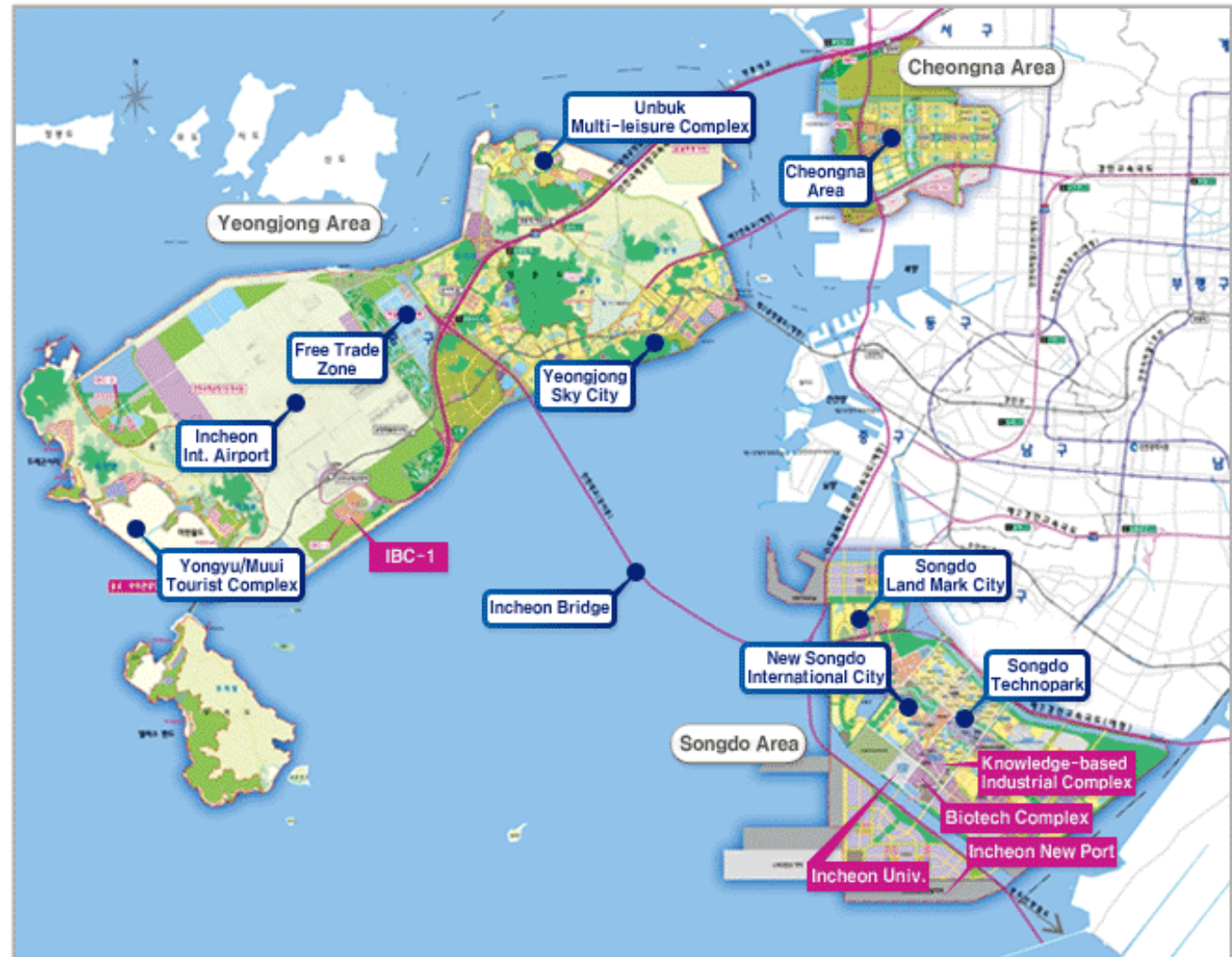
- Central Luzon's main seaport can serve the highly urbanized mega-Manila logistics corridor.
- The SCTEx corridor as well as the rest of the Luzon have to become areas with efficient production and attractive for investment/ tourism that could generate cargo/ passenger traffic through the Port of Subic Bay.

**MODELS OF PORT CITIES
(LOGISTICS HUBS)**



- Singapore was founded in 1819 as a small port along the Straits of Malacca.
- According to the Marine and Port Authority of Singapore (MPA) reports that the port has about 140,000 vessels annually grossing over 1.5 million tons.
- the bunkering port services 30 million tons of bunkers is serviced annually.

INCHEON – 209 square kilometers of new development



SONGDO – 53 km² – Incheon New Port, International Business Club, Knowledge & Information Complex, BT & IT Innovation Hub, Bio & Medical Hub

YEONGJONG - 138 km² – Incheon Airport, Free Trade Area, Logistics Complex, Marine Resort

CHEONGNA - 18 km² – international trade complex, robotic industry complex, automobile complex

MODELS FOR SPATIAL DEVELOPMENT

MODELS FOR SPATIAL DEVELOPMENT

THE GARDEN CITY CONCEPT

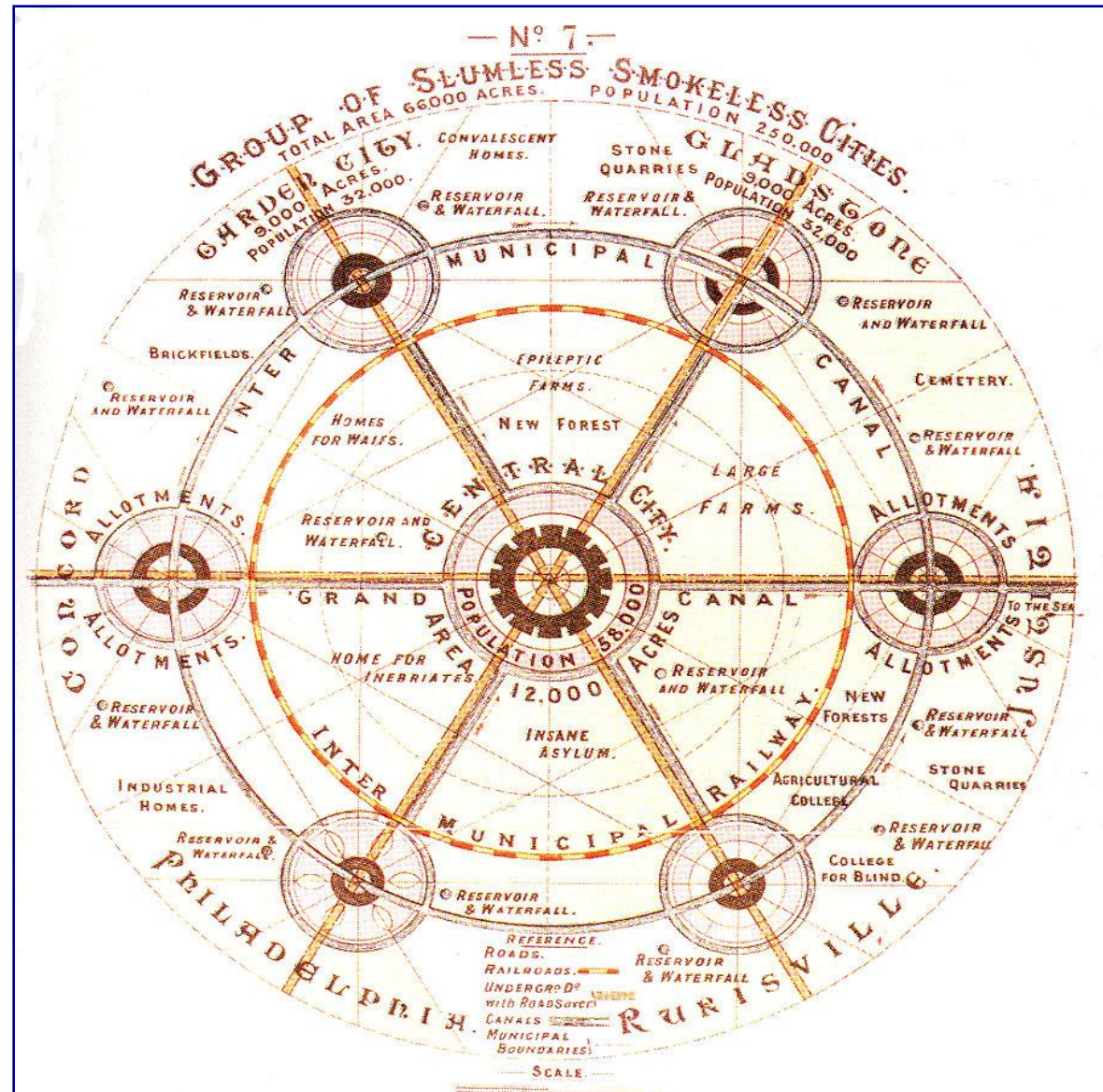


EBENEZER
HOWARD

In 1898, Ebenezer Howard released the book, *Tomorrow: A Peaceful Path to Social Reform*.

He theorized about the optimum sizes of towns and advances a cluster concept; a central city of 58,000 people surrounded by smaller "garden cities" of 30,000 people each.

Permanent green space would separate the city and towns. Rails and roads would link the towns.



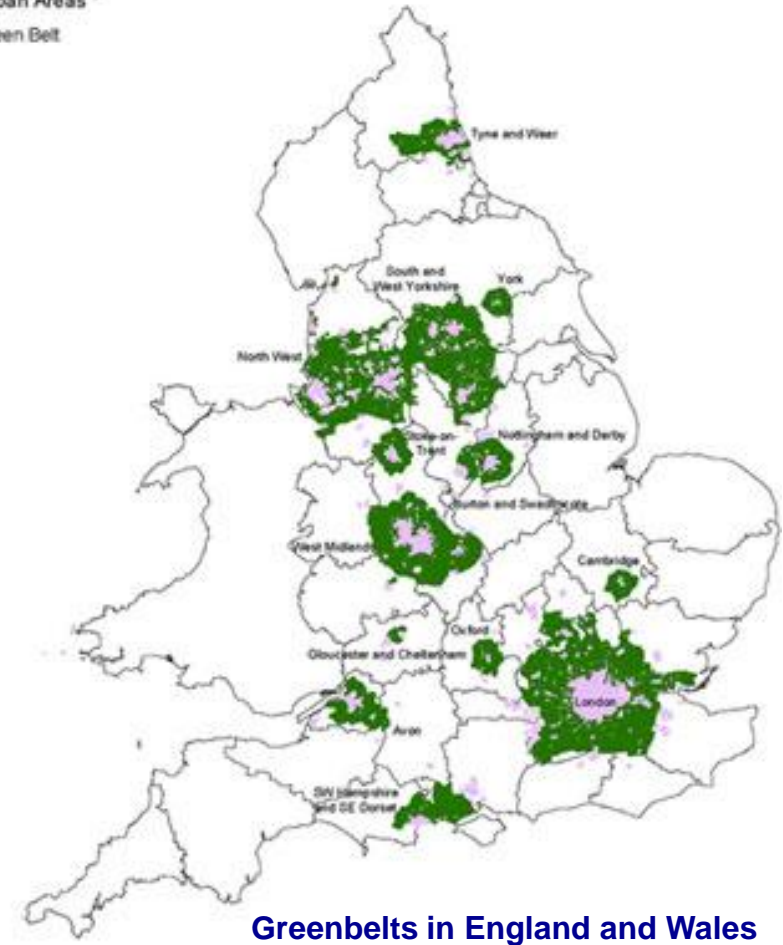
MODELS FOR SPATIAL DEVELOPMENT

GREENBELTS, United Kingdom



Greenbelt of Metropolitan London

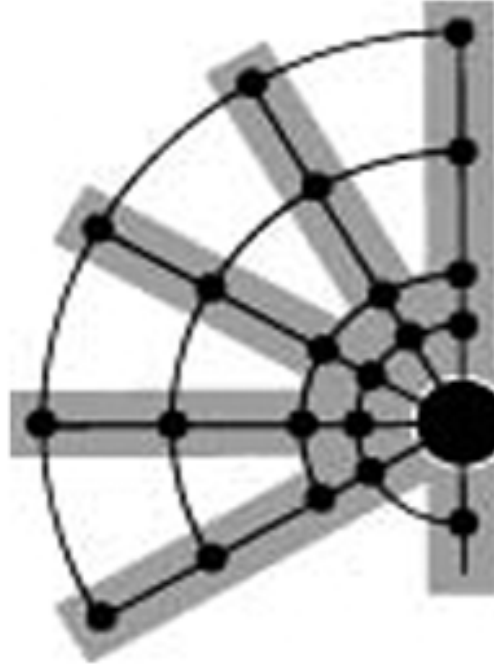
- The Metropolitan Greenbelt around London was first proposed by the Greater London Regional Planning Committee in 1935.



Greenbelts in England and Wales

- The Town and Country Planning Act of 1947 then allowed local authorities to include green belt proposals in their development plans.

THE FINGER PLAN, Copenhagen, Denmark



- The Finger Plan sought to preserve natural areas including farms and forests.
- Growth was allowed along the fingers but preserved the wedges in between as natural areas.
- Integrated Transport system (vehicular roads, rail systems, bikeways) gave the people a lot of mobility.



Copenhagen's growth was confined along the "Fingers".

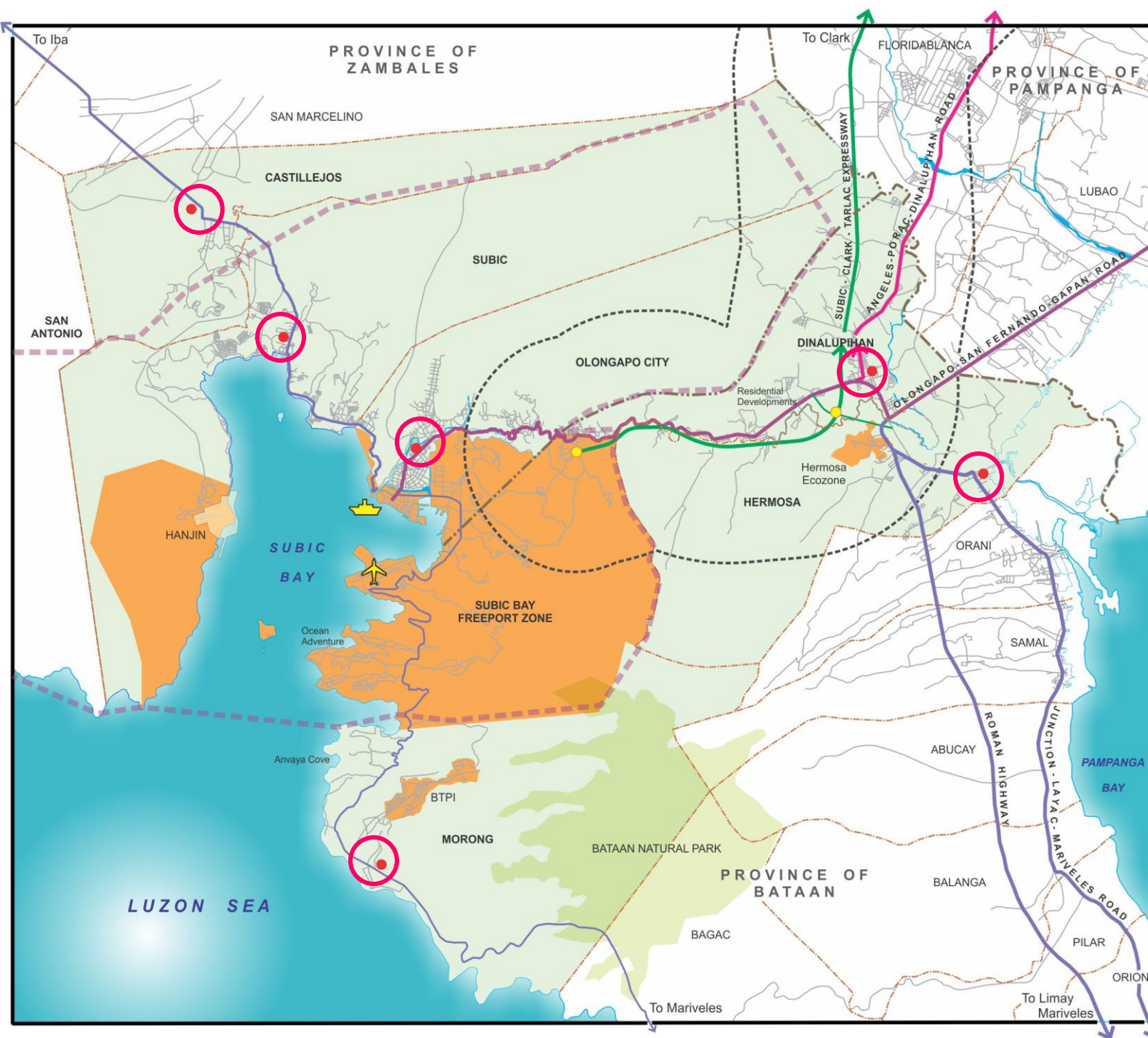
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Table 3 Profiles of Model Metropolitan Areas

Models of Development Metropolitan Area	Total Land Area (square km.)	Population	Population Density 2007 (pop./ sq. km.)
Municipality of Copenhagen (January 2011)	455.61	1,116,979	2,451.6
Singapore (2009 total population)	694.00	4,987,600	7,186.7
Incheon Metropolitan City (2005 population)	1,029.35	2,628,000	2,553.0

**DEVELOPMENT FRAMEWORK AND THE
CONCEPTUAL LAND USE PLAN**



**THE
SUBIC FREEPORT ZONE
AND THE 6 LGUs**

OLONGAPO CITY

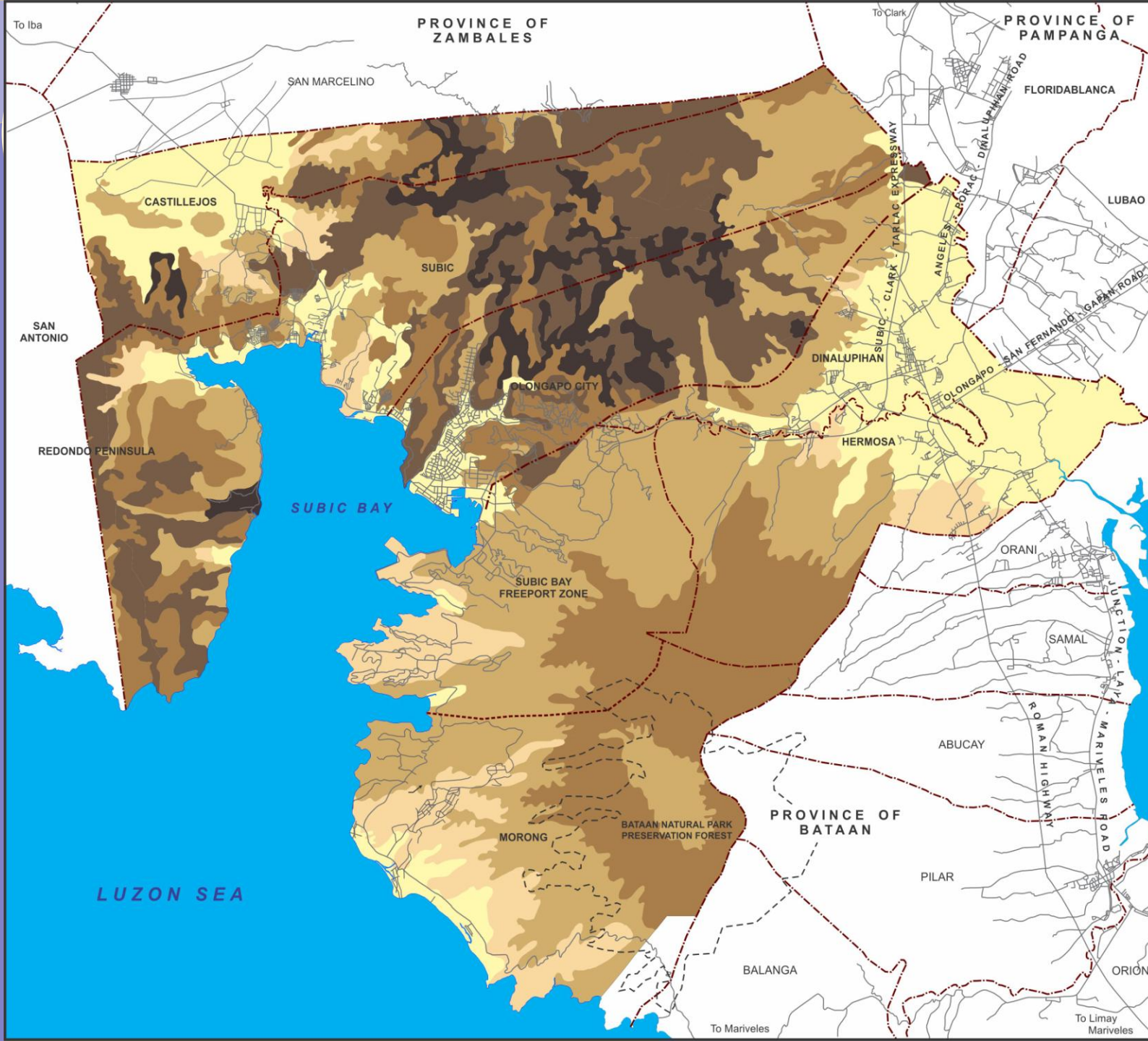
DINALUPIHAN

HERMOSA

SUBIC

CASTILLEJOS

MORONG



KEY MAP
CENTRAL LUZON

LEGEND

- 0-3% - Level to very gently sloping
- 3-8% - Gently sloping to undulating
- 8-18% - Moderately sloping to rolling
- 18-30% - Rolling to hilly
- 30-50% - Steep hills and mountains
- >50% - Very steep hills and mountains

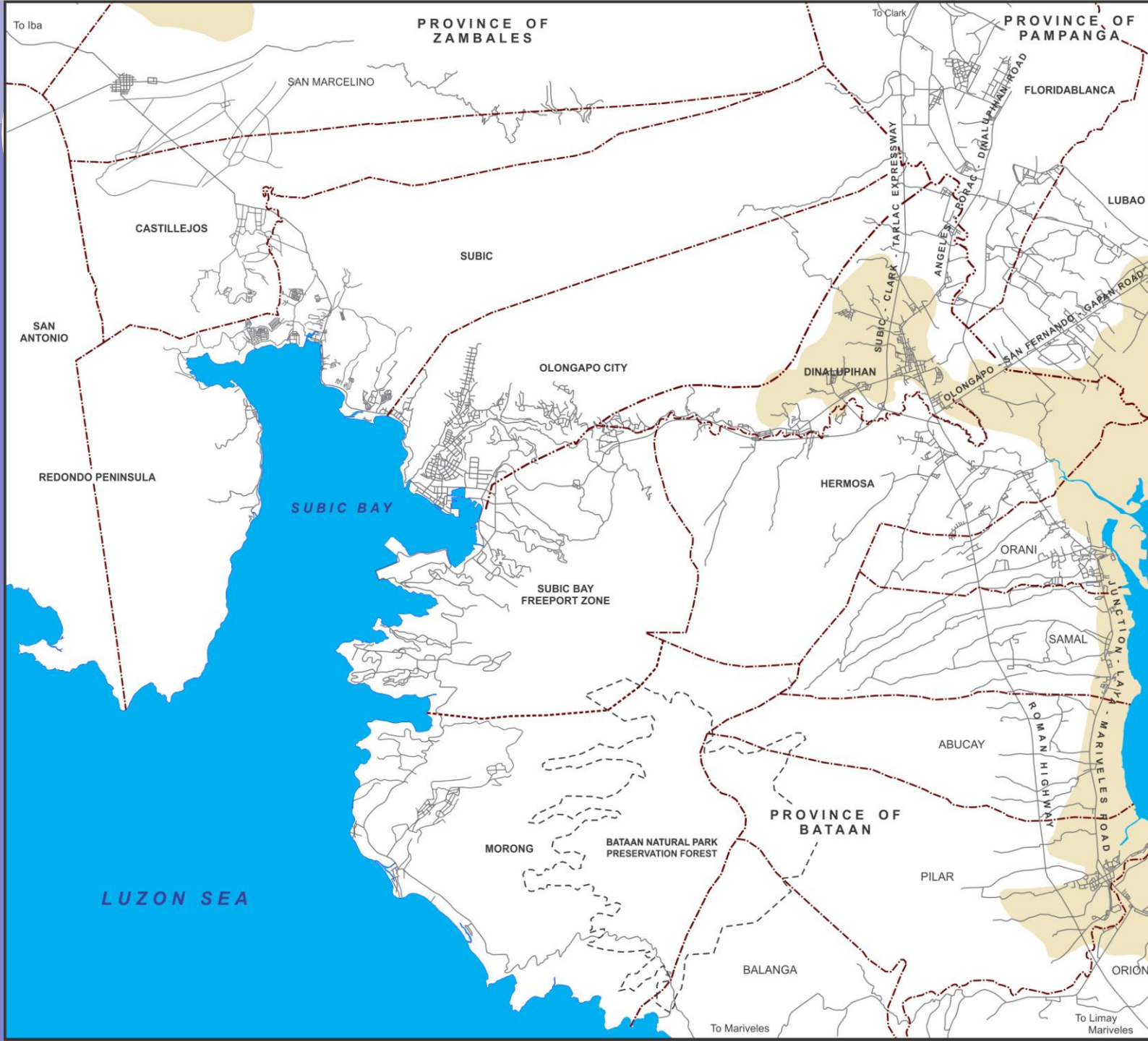
SOURCE: BUREAU OF SOILS & WATER MANAGEMENT

METROPOLITAN SUBIC AREA
DEVELOPMENT FRAMEWORK AND
CONCEPTUAL LAND USE PLAN

Map 3.1
SLOPE MAP
METROPOLITAN SUBIC AREA



0 4 8km



METROPOLITAN SUBIC AREA

**KEY MAP
CENTRAL LUZON**

LEGEND

- AREAS PRONE TO LIQUEFACTION
- PROVINCIAL BOUNDARY
- MUNICIPAL BOUNDARY
- ROADS

SOURCE: PHILIPPINE INSTITUTE OF VOLCANOLOGY & SEISMOLOGY

**METROPOLITAN SUBIC AREA
DEVELOPMENT FRAMEWORK AND
CONCEPTUAL LAND USE PLAN**

**Map 3.6
LIQUEFACTION SUSCEPTIBILITY MAP
METROPOLITAN SUBIC AREA**



LAND USE STRATEGIES FOR MSA

1. **Identify Areas for Production and Other Economic Opportunities**
 - Growth of Sea Hub to drive developments of the MSA LGUs
 - Industrial Estates in Hermosa, Subic, Morong
 - Tourism in Subic, Olongapo City, and Morong
 - Agriculture Areas for Castillejos, Subic, Hermosa, Dinalupihan
2. **Maximize Existing Settlement Areas and Supplement with New Settlement Areas**
 - Defined residential areas in Dinalupihan, Hermosa, Morong, Subic, and Castillejos
3. **Protect Ecologically-sensitive Areas and Preserve the Natural Environment**
 - Protect Forests, wetlands, agricultural areas
 - Renewable Energy, Water Management
4. **Provide Infrastructure That Would Support Growth**
 - Circumferential and Radial Roads
 - Renewable Energy, Protect/ Develop Water Sources
 - Rail Linkage to Clark International Airport

1. Identify Areas for Production and Other Economic Opportunities



ARGOLIKOS, FIRST SHIP OUT OF SUBIC BAY FREEPORT BY HANJIN HEAVY INDUSTRIES.



APL BAHRAIN

**HANJIN EMPLOYS 16,000
LOCALS**

**SHIP BUILDING IN REDONDO
PENINSULA AND SUBIC
MUNICIPALITY**



2. Maximize Existing Settlement Areas and Supplement with New Settlement Areas



The Subic Bay Freeport Zone and Olongapo City as Settlement Area

3. Protect Ecologically-Sensitive Areas and Preserve the Natural Environment



TOURISM IN MORONG



OCEAN ADVENTURE, SUBIC FREEPORT



ANVAYA COVE, MORONG

4. Provide Infrastructure That Would Support Growth



DIOSDADO MACAPAGAL INTERNATIONAL AIRPORT



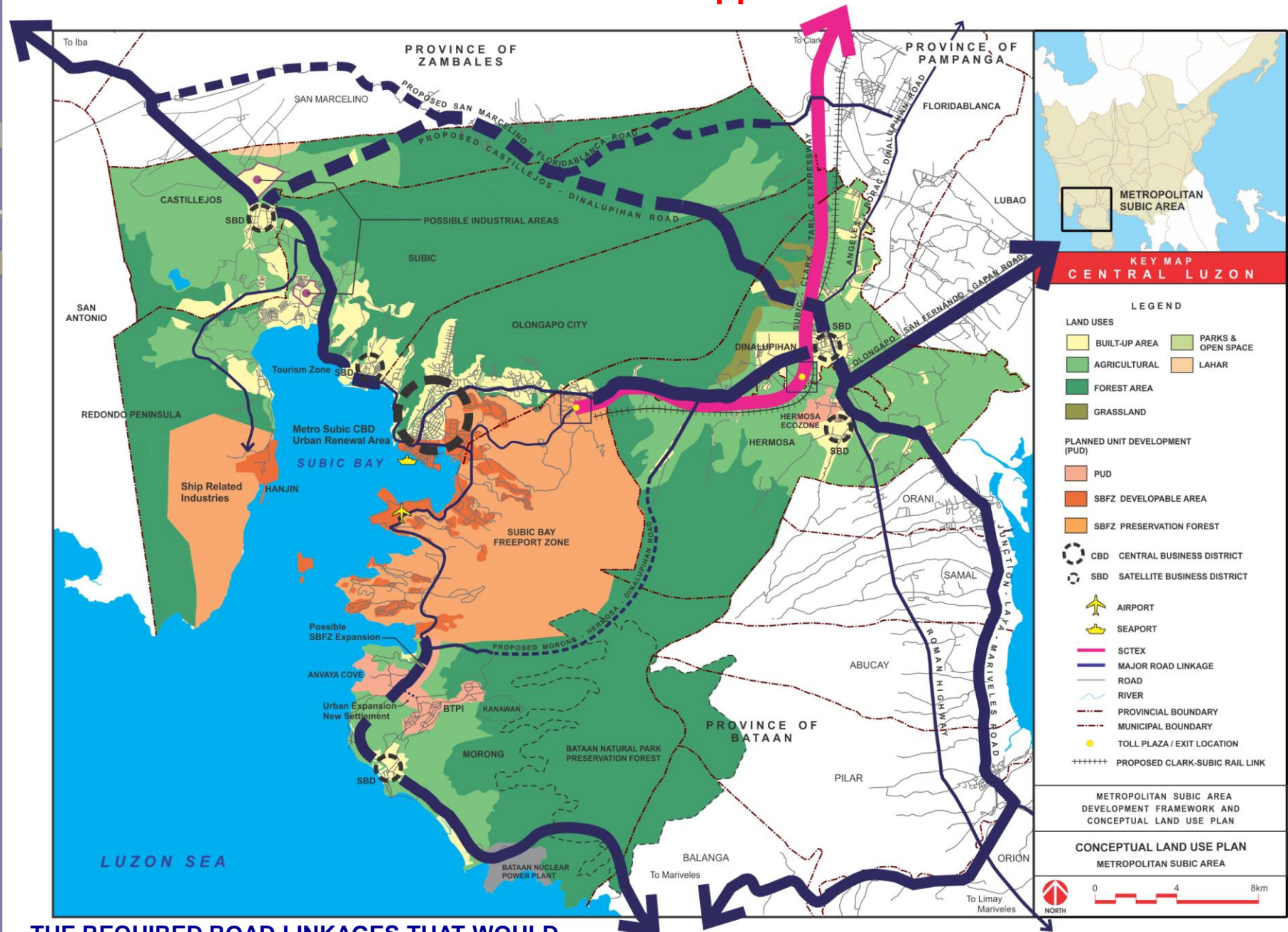
AGRICULTURAL LANDS AND THE SCTEX IN DINALUPIHAN

**NEW ROADS TO CONNECT
THE SATELLITE LGUs WILL
FACILITATE MOVEMENT OF
PEOPLE AND GOODS**

SCTEx at TIPO



4. Provide Infrastructure That Would Support Growth

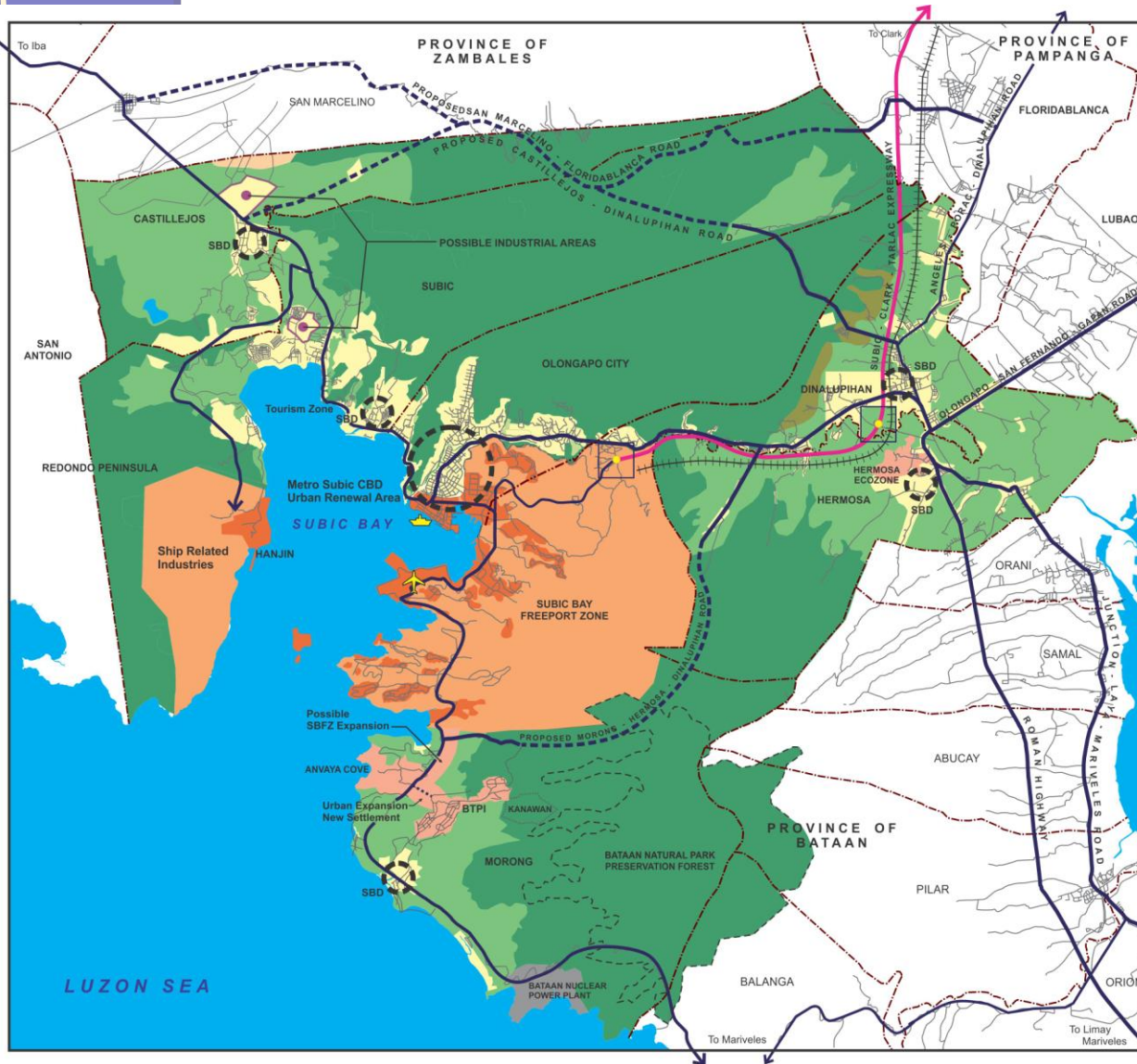


4. Provide Infrastructure That Would Support Growth

ENCOURAGE RENEWABLE ENERGY



SHAPING THE FUTURE METROPOLIS THE METROPOLITAN SUBIC AREA



CONCLUSION:

- An excellent opportunity to build a **prosperous** as well as a **livable metropolis**.
- A rational land use plan that **balances** the **built environment** with the **natural environment**.
- The **MSA Metropolitan Model** hopes to provide a better spatial framework for the development of other Metropolitan Areas in the Philippines.

SHAPING THE FUTURE METROPOLIS

THE METROPOLITAN SUBIC AREA

16TH SUSTAINABLE SHARED GROWTH SEMINAR
THE URBAN-RURAL GAP AND SUSTAINABLE SHARED GROWTH



MICHAEL V. TOMELDAN

END OF PRESENTATION...