SECTORAL PLANNING: ECONOMIC

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Calapan City
LECTURE OBJECTIVES

By the end of the lecture, participants are expected to:

- Understand the need for economic sector planning in the CLUP/ local development plans
- Explain planning criteria, standards and requirements in the economic subsectors
OBJECTIVES OF LAND USE PLANNING

1. To promote the efficient utilization, acquisition and disposition of land and ensure the highest and best use of land;

2. To direct, harmonize and influence discussions and activities of the private and public sectors relative to the use and management of land;

3. To reconcile land use conflicts and proposals between and among individuals, private and government entities relative to the present and future need for land;
OBJECTIVES OF LAND USE PLANNING

4. To promote desirable patterns of land uses to prevent wasteful development and minimize the cost of public infrastructure and utilities and other social services;

5. To conserve areas of ecological, aesthetic, historical and cultural significance.
ECONOMIC SEGMENT IN LOCAL PLANS

- Economic structure in development plans
- Production land use
- Land use tools
a. The LGU’s profile/development plans has a segment on economic structure which include the following among others:

- Employment
- Revenue sources
- Average family income and expenditure vis-à-vis poverty level
b. One of the four major land use policy areas of the CLUP/development plans pertains to production land use.

- *Production areas* are focused on economic production from the extractive to modern service sectors
- Includes the commercial, industrial, tourism and agricultural and other resource extraction areas
c. Implementation of local land use plans needs tools which are economic in nature

- Taxes on real properties, special levies on land, idle lands tax, etc
- Public investment programming
- Guided private investments
- Zoning and zoning ordinance
ECONOMIC SECTORAL STUDIES

Aims to assess the current status and growth pattern of local economy to build and strengthen economic activities in a sustainable manner.

The study includes the following areas:

- Employment and workforce development
- Volume and value of production
- Land utilization
- Investments in the form of policies
- Infrastructure and marketing facilities
Sectoral studies are conducted as bases for the CLUP preparation. It includes analysis of the following common economic subsectors:

- Agriculture
- Forestry
- Commerce and Trade
- Industry
- Tourism

At the end, an integrated economic sector analysis is completed.
GENERAL STEPS IN SUBSECTORAL ECONOMIC STUDIES

1. Gathering and processing of subsector data
2. Analysis and assessment of the subsector data
3. Identifying of the current and projected needs
4. Construction of sectoral analysis matrix
## ECONOMIC SECTORAL STUDIES
### AGRICULTURE [1]

<table>
<thead>
<tr>
<th>Agricultural Production</th>
<th>Forestry</th>
<th>Support Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Crop production</td>
<td>• Area coverage of forest lands, production and protection forests</td>
<td>• Physical infrastructure</td>
</tr>
<tr>
<td>• Livestock and poultry</td>
<td>• Economic activities of production forest</td>
<td>• Credit and finance</td>
</tr>
<tr>
<td>• Fisheries and aquaculture</td>
<td>• Reforestation/conservation programs</td>
<td>• Agricultural and forest support program and technical assistance</td>
</tr>
<tr>
<td></td>
<td>• Environmental issues/concerns</td>
<td>• Employment and income by activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Areas covered by national/local policies</td>
</tr>
</tbody>
</table>
Support systems in agriculture subsector:

- **Physical infrastructure**: irrigation facilities, farm-to-market roads, postharvest facilities, etc.
- **Credit and finance**: loans and credit facilities, market linkages for agricultural and forest products, financing schemes available.
- **Agricultural and forest support program and technical assistance**: programs and projects provided by local, provincial, national agencies, NGOs and POs.
- Employment and income by activity.
- **Areas covered by national/local policies**: NPAAAD, SAFDZ, CARPable areas/lands, lands for conversion/reclassification.
ECONOMIC SECTORAL STUDIES
AGRICULTURE [3]

Network of Protected Areas for Agricultural and Agro-Industrial Areas for Development (NPAAAD)

- Ensures the sustained production of the country’s basic agricultural and fisheries commodities through the stewardship and utilization of the most productive agricultural and fishery land resources for optimal production, processing, and marketing
NPAAAD includes:

i. All irrigated areas

ii. All irrigable lands already covered by irrigation projects with firm funding commitments

iii. All alluvial plains highly suitable for agriculture, whether irrigated or not

iv. Agro-industrial croplands or land presently planted to industrial crops that support the viability of existing agricultural infrastructure and agro-based enterprises
NPAAAD includes:

v. Highland or areas located at an elevation of 500 meters or above and have the potential for growing semi-temperate and high-value crops

vi. All agricultural lands that are ecologically fragile, the conversion of which will result into serious environmental degradation

vii. All fishery areas as defined in the Fisheries Code of 1998
Strategic Agriculture and Fishery Development Zones (SAFDZ)

- Areas within the NPAAAD identified for production, agro-processing and marketing activities to help develop and modernize the agriculture and fisheries sectors in an environmentally and socio-culturally sound manner. (RA 8435: Agriculture and Fisheries Modernization Act of 1997)
Strategic Agriculture and Fishery Development Zones (SAFDZ)

- Should be recognized and incorporated into the local plans and implemented because they contribute or have the potential to contribute to attaining food self-sufficiency
- Should be designated as key production areas and should be protected from land conversion
Land areas covered under the Comprehensive Agrarian Reform Program (RA 6657) includes:

- All alienable and disposable (A&D) lands of the public domain devoted to or suitable for agriculture.

- No reclassification of forest or mineral lands to agricultural lands shall be undertaken after the approval of this Act until Congress, taking into account ecological, developmental and equity considerations, shall have determined by law, the specific limits of the public domain
Land areas covered under the Comprehensive Agrarian Reform Program (RA 6657) includes:

- All lands of the public domain in excess of the specific limits as determined by Congress in the preceding paragraph;
- All other lands owned by the Government devoted to or suitable for agriculture; and
- All private lands devoted to or suitable for agriculture regardless of the agricultural products raised or that can be raised there
Lands for conversion/reclassification:

- Agricultural lands approved for conversion to non-agricultural uses
- Lands no longer subject for conversion to reclassification:
  - Agricultural lands distributed to agrarian reform beneficiaries
  - Agricultural lands with a Notice of Acquisition already issued or voluntarily offered for coverage under CARP
  - Agricultural lands covered by Office of the President AO No. 20, series of 1992, declaring these as non-negotiable for conversion.
Lands for conversion/reclassification:

- Sec. 4 DAR AO No. 1, Series of 2002 defines the areas which are non-negotiable for conversion even when some portions thereof are eligible for conversion.

- When agricultural land acquired by RA 6657 is the subject of the application for conversion, its conversion shall be allowed only if the applicant is the agrarian reform beneficiary and after the applicant has fully paid his obligation as required under Section 65 of RA 6657 (Sec 8.4)
Lands for conversion/reclassification:

- Section 20 of RA 7160 states the authority of cities/municipalities to reclassify agricultural lands to non-agricultural uses and to provide the manner of their utilization and disposition.
- Percentage limit of agricultural areas for reclassification under:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Highly Urbanized and Independent Component Cities</th>
<th>Component Cities 1&lt;sup&gt;st&lt;/sup&gt; to 3&lt;sup&gt;rd&lt;/sup&gt; Class Municipalities</th>
<th>4&lt;sup&gt;th&lt;/sup&gt; to 6&lt;sup&gt;th&lt;/sup&gt; Class Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Rules and regulations on reclassification and conversion of lands

- **DAR Administrative Order No. 1, Series of 2002**: Comprehensive Rules on Land Use Conversion
- **DAR Administrative Order No. 5, Series of 2007**: Amendments to the 2002 Comprehensive Rules on Land Use Conversion
Demand projection for agricultural products

To determine the capacity of projected agricultural products to meet future demands by considering the volume of agricultural product consumed for human nutrition or actual demand

Actual Demand or Required Food Intake

= Per Capita Dietary (or Food) Requirement * Projected Population at a given year

Actual Demand: amount of food that an individual can consume/afford considering income and preferences to be based on the standards recommended by DOST-FNRI
Planning strategies of food systems include:

- Development of policies and zoning provisions to protect farm areas over a longer period, encourage community gardening and reverse rural decline.
- Advocacy on use of organic composts.
- Improvement of transport networks used by food suppliers and farmers.
- Promotion of producers’ markets to help local farmers.
- Urban and peri-urban agriculture/gardening.
ECONOMIC SECTORAL STUDIES
AGRICULTURE [16]

PDP 2011-2016 Goals and Strategies

Competitive and sustainable agriculture and fisheries Sector towards inclusive growth and poverty reduction

Sector Outcomes:

- Food security improved
- Incomes in agriculture and fisheries sector increased
- Sector resilience to climate change increased
- Growth in agriculture and fisheries sector increased

Intermediate outcomes

- Productivity and production increased
- Credit access increased
Common commercial areas

- commercial business district (CBD)
- public market
- commercial strips/talipapa (wet/dry neighborhood commercial center)
- commercial complex (range of dry goods store, boutique shops, recreational/entertainment establishments and service shops)
- malls (with department stores, supermarket and various shops in one building)
Commercial establishment by economic activities based on the Philippine Standard Industrial Classification

A – Agriculture, forestry and fishing
B – Mining and Quarrying
C – Manufacturing
D – Electricity, gas, steam and air-conditioning supply
E – Water supply, sewerage, waste management and remediation activities
F – Construction
Factors to consider in the growth of locality’s commerce and trade

• Adequacy of the existing commercial service centers to serve the municipal population: nature and distribution of commercial area, location criteria, etc
• Efficiency of support facilities such as garbage collection/solid waste management
• Adequacy of power/water requirements
Factors to consider in the growth of locality’s commerce and trade

- Efficiency of infrastructure and traffic problems within the vicinity
- Population needs for certain facilities/services
- Need for financing source for commercial development
- Need for a particular manpower skill and the corresponding training based on existing trends/demand of the commerce and trade sector
Standard area requirement for future commercial space

• 1.5% to 3% of the total built-up area is projected future space requirement for commercial use
Standard area requirement

Sample computation

Existing commercial area: 1.3 hectares
Projected built-up area change 187 hectares

Area requirement = (Space standard * Projected BUA) - Existing Commercial Area
The standard area requirement may not be applicable to certain areas especially those with identified functional role as a commercial center.

Area allocation for commercial area expansion depends on:

- Chosen development strategy
- Role of the sector in promoting the city’s/municipality’s vision
- Comparative advantage over adjacent cities/municipalities any planned vertical expansion
Site selection criteria and requirements

Commercial areas
Market/trading sites or trading centers
Parking and loading space
Recommended distances (to travel on foot)
Planning strategies for commercial areas

- Development of multi-functional urban core
- Emphasis on clean and safe street activities
- Preservation and reuse of historic buildings
- Market/trading sites or trading centers
- Establishing and maintaining regional amenities
- Strategies for developing commercial areas in the CBD: historic preservation, waterfront development, transportation enhancements
ECONOMIC SECTORAL STUDIES
INDUSTRY [1]

Number of type of industries
Location and area utilization
Capitalization
Revenue generation
Employment
Existing hazardous and/or pollutive industries
National and local policies on industrial development (including incentives)
Industrial needs and growth requirements

- Capital financing for industry generation and/or expansion
- Required manpower skills and training
- Marketing strategies and market for perceived surplus products or goods.
- Power requirements of existing/ projected industries
- Infrastructure support facilities
- Anti-pollution devices for pollutive and hazardous industries and economic activities.
### Classification according to capitalization and employment size

<table>
<thead>
<tr>
<th>Scale</th>
<th>Capitalization Assets (in PhP)</th>
<th>Employment size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-industry</td>
<td>150,000 and below</td>
<td>No specific number</td>
</tr>
<tr>
<td>Cottage industry</td>
<td>Above 150,000 to 1.5 M</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Small scale industry</td>
<td>Above 1.5 M to 15 M</td>
<td>10 to 99</td>
</tr>
<tr>
<td>Medium scale industry</td>
<td>Above 15 M to 60 M</td>
<td>100 to 199</td>
</tr>
<tr>
<td>Large scale industry</td>
<td>Above 60 M</td>
<td>&gt; 200</td>
</tr>
</tbody>
</table>

*Source: DTI*
Classification according to degree of hazard and pollution

- *Hazardous industries* are those that produce fire and health hazards. Their wastes have large amounts of combustible and toxic materials.
- *Non-hazardous industries* discharge negligible amount of combustible or toxic wastes.
Classification according to degree of hazard and pollution

- **Pollutive industries** are those that discharge large amounts of air, water, and solid pollutants
- **Non-pollutive industries** emit little or negligible amounts of these pollutants
Classification according to degree of hazard and pollution

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light ($I_1$)</td>
<td>Non-pollutive/ non-hazardous</td>
</tr>
<tr>
<td></td>
<td>Non-pollutive/ hazardous</td>
</tr>
<tr>
<td>Medium ($I_2$)</td>
<td>Pollutive/ non-hazardous</td>
</tr>
<tr>
<td></td>
<td>Pollutive/ hazardous</td>
</tr>
<tr>
<td>Heavy ($I_3$)</td>
<td>Highly pollutive/ non-hazardous</td>
</tr>
<tr>
<td></td>
<td>Highly pollutive/ hazardous</td>
</tr>
<tr>
<td></td>
<td>Highly pollutive/ extremely hazardous</td>
</tr>
<tr>
<td></td>
<td>Pollutive/ extremely hazardous</td>
</tr>
<tr>
<td></td>
<td>Non-pollutive/ extremely hazardous</td>
</tr>
</tbody>
</table>
Which intensity do the manufacturing of the following belong?

<table>
<thead>
<tr>
<th>Luggage and handbags</th>
<th>Quick freezing cold packing for fish</th>
<th>Watches and clocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolate and cocoa/ chewing gum/ candy</td>
<td>Fabricated structural and steel</td>
<td>Electrical cables and wires</td>
</tr>
<tr>
<td>Sugar refining</td>
<td>Industrial alcohol</td>
<td>Petroleum refineries</td>
</tr>
</tbody>
</table>
Industrial land intensity standards

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Hectare per 1,000 population</th>
<th>Hectare per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light ($I_1$)</td>
<td>0.80</td>
<td>.0008</td>
</tr>
<tr>
<td>Medium ($I_2$)</td>
<td>2.50</td>
<td>.0025</td>
</tr>
<tr>
<td>Heavy ($I_3$)</td>
<td>4.00</td>
<td>.004</td>
</tr>
<tr>
<td>Gross</td>
<td>7.30</td>
<td>.0073</td>
</tr>
</tbody>
</table>

Industrial land requirement

*Industrial area requirement*

\[= \text{Population} \times \text{Standard Area per 1,000 population}\]
Industrial land requirement

Example:

*Industrial land requirement for light industries*

\[ \text{Y1 Industrial Land} = \frac{50,000}{1,000} \times 0.80 \text{ has} \]

Requirement

\[ = 40 \text{ hectares} \]
## Industrial land requirement

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Area Requirement (has)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50,000</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>55,000</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>60,000</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>65,000</td>
<td>52</td>
</tr>
<tr>
<td>5</td>
<td>70,000</td>
<td>56</td>
</tr>
</tbody>
</table>
Actual land area allocation for industrial development will depend on

- LGU’s adopted vision, goals, objectives, and spatial/development strategy
- Available land supply vis-à-vis the actual demand
- Adherence to the principles of sustainable land use planning principles
Site criteria for industrial development

• Impact on the environment
• Impact on the traffic and the provision of services and utilities (i.e., water and sewerage collection systems, telecommunications facilities, electric power, and service roads)
• Proximity and access to transport nodes (i.e., sea/airports, bus terminals, and train stations)
• Measures and safeguards against pollution and means to preserve its natural ecosystems
Planning strategies for industrial areas

- Promotion of e-commerce and ICT-enabled automation
- Encouraged partnerships with private sector
- Development of human capital through market driven education and training
- Strengthening science, technology and innovation for local competitiveness
- Spatial strategies: industrial dispersal, regional industrial center, special economic zones, industrial estates,
- Agglomeration: economic units clustering for mutual advantages such as proximity to raw materials, sources of electricity, etc
Types of tourism products and services

based on the DOT National Tourism Development Plan 2011-2016

Nature (N)  Cultural (C)
Cruise and nautical (CN)  Education (E)
Leisure and entertainment (L)  Sun and beach (SB)
Diving and marine sports (DM)
Health, wellness and retirement (H)
Meetings, incentives, conferencing and exhibition events (MICE) and events (M)
Tourism facilities vis-à-vis requirements

- Rules and regulations to govern the business operation of apartment-hotels (apartelles), tourist inns, pensions, motel-hotels (motels), lodging houses and other similar establishments
- Rules and regulations governing the business of travel and tour guides
- Hotel Code of 1974
ECONOMIC SECTORAL STUDIES
TOURISM [3]

Tourism facilities vis-à-vis requirements

• Adequacy of the existing personnel based on staffing requirements set by the Philippine Tourism Authority (PTA)
• Peace and order situation in the area
• Identification of other factors to further enhance the beauty of the tourist spots
ECONOMIC SECTORAL STUDIES
TOURISM [4]

Analysis of potential/possible sites for establishment as set by PTA
ECONOMIC SECTORAL STUDIES
TOURISM [5]

Planning strategies for industrial areas

• Strengthening of local cultural identity
• Development of tourism marketing campaign with trade promotion thrust
• Ensuring sustainable tourism development
• Development of tourism related local products and services using community-based and ecotourism approaches
ECONOMIC SECTORAL STUDIES
INDUSTRY & SERVICES

PDP 2011-2016 Goals and Strategies

Competitive industry and services sector towards inclusive growth and poverty reduction

Sector Outcomes:

• Globally competitive and innovative industry and services sectors achieved

Intermediate outcomes

• Business environment improved
• Productivity increased
• Consumer welfare enhanced
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [1]

Location Quotient
Economic Base Model
Location Quotient (LQ)

Defined as the concentration index measurement of a certain economic activity

\[
\text{Location quotient} = \frac{\text{Employment (in an economic activity)}}{\text{Total Employment in LGU}} \times \frac{\text{Employment (economic activity) in the province}}{\text{Total Employment in the province}}
\]
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [3]

Location Quotient Sample

\[
\text{LQ Manufacturing} = \frac{\% \text{ Share of employment in manufacturing (municipal)}}{\% \text{ Share of employment in manufacturing (province)}}
\]

= $35\% / 20\%$

= 1.75
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [4]

Location Quotient Sample

\[ LQ \text{ Agriculture} = \frac{\% \text{ Share of employment in agriculture (municipal)}}{\% \text{ Share of employment in agriculture (province)}} \]

= 30% / 40%

= 0.75
## LQ Interpretation

<table>
<thead>
<tr>
<th>Value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LQ &gt; 1</td>
<td>Positive association; over-representation of the industry in the LGU than in the province. LGU is relatively specializing in the specific economic activity. The higher the value of the location quotient (higher than 1), then the greater the likelihood that it is an export-oriented industry. Industries that have a high likelihood of being economic base industries are those that have LQs substantially higher than 1.</td>
</tr>
<tr>
<td>Value</td>
<td>Interpretation</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LQ &lt; 1</td>
<td>Negative association; under-representation. This suggests the industry is relatively not specializing and not engaged in export production.</td>
</tr>
<tr>
<td>LQ = 0</td>
<td>Mutually exclusive; the industry does not exist in the locality.</td>
</tr>
<tr>
<td>LQ = 1</td>
<td>Perfect independence (locality and province have same level of specialization or concentration of the activity)</td>
</tr>
</tbody>
</table>
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [7]

Economic base model

• Model used for analyzing the driver of the local economy

Local economy = basic sector + non-basic sector

Economic base multiplier (EBM) = \[
\frac{Total \ employment}{employment \ in \ basic \ sector \ (export-oriented \ activities)}
\]
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [8]

Economic base multiplier (EBM)

• Basic sector are economic activities resulting in the export of goods/products and services (including labor) and generating income from outside the LGU. This generates income that fuels the non-basic service sector.

• Non-basic sector comprises economic activities on the production of goods and services for consumption with the region.
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [7]

Economic base multiplier

\[ = \frac{Total \text{ employment}}{employment \text{ in basic sector (export-oriented activities)}} \]
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [8]

Economic base multiplier (EBM) interpretation

<table>
<thead>
<tr>
<th>EBM Value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:2</td>
<td>means for every job in the basic sector 2 more jobs are generated in the non-basic or service sector or a total of 3 jobs</td>
</tr>
<tr>
<td>1:3</td>
<td>means for every job in the basic sector 3 more jobs are generated in the non-basic or service sector or a total of 4 jobs</td>
</tr>
</tbody>
</table>
ECONOMIC SECTORAL STUDIES
INTEGRATED ANALYSIS [9]

Economic base multiplier (EBM) Sample

- *Given: LGU’s Basic Sectors A to F*

  \[
  EBM = \frac{ET}{EA + EB + EC + ED + EE + EF}
  \]
REFERENCES

