REVAMPING ASEAN THROUGH SUSTAINABLE DEVELOPMENT POLICIES AND TRANSPORT SYSTEMS

PROJECT DESCRIPTION:

The authors highlights mainly three key issues of ASEAN members which obstructs the pathway towards sustainable cities and communities. They focused on the triple threat of the growing urban problem. Namely, those concerns are the solid waste generation, fossil fuel as a source of energy and on the current situation of vehicular transportation.

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PRESENTATION OUTLINE

1. Introduction
2. Municipal Solid Waste Generation
3. Energy Source and Usage Issues
4. Motor Transportation Vehicles
5. Recommendations
6. References
The authors specifically aims to support the following targets of the chosen sustainable goal:

- **Sustainable Transport Systems**
- **Reduce adverse per capita environmental impacts of cities**
The world averages 0.74 kg per capita while ASEAN is 1.14 kg per capita.

Singapore contributes more than anyone.

5 countries are below the world average.
<table>
<thead>
<tr>
<th>Country</th>
<th>MSW Generation in Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>64.00</td>
</tr>
<tr>
<td>Thailand</td>
<td>26.77</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>22.02</td>
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<tr>
<td>Philippines</td>
<td>14.66</td>
</tr>
<tr>
<td>Malaysia</td>
<td>12.84</td>
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<tr>
<td>Singapore</td>
<td>7.51</td>
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<tr>
<td>Cambodia</td>
<td>1.09</td>
</tr>
<tr>
<td>Myanmar</td>
<td>0.84</td>
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<tr>
<td>Brunei Darussalam</td>
<td>0.21</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>0.08</td>
</tr>
</tbody>
</table>

- Indonesia generates 327% more than the average.
- Singapore ranks at 6\textsuperscript{th}.
- Problem will continue to increase in the future.
Food/Organic Waste percentage most abundant

Singapore has higher plastic percentage than Food/Organic Waste

90% of increase in urban population.

Plastic pollution one of the biggest environmental concerns.
Top 5 Countries with kWh per Capita Data Forecast

- Brunei
- Malaysia
- Singapore
- Thailand
- Vietnam

Energy Usage Forecast

From Dec 30, 2009, to Jan 1, 2022

1 Filter

Forecast in Thousand
Electricity Installed Capacity Generation by Countries

- Most of ASEAN countries still are supplied by fossil fuels.
- Fossil fuels are a risk towards sustainability.
- Nuclear energy and renewable sources
ANALYZING GROWTH

ASEAN’S AVERAGE MOTOR VEHICLES GROWTH AND URBAN POPULATION GROWTH

% Annual growth rates

Motor Transport

- Vehicles seem to increase whenever the mean of urban population rises.
- Observable also on both growths when average population decreases.
RECOMMENDATION #1

A STRATEGIC GREENER WASTE MANAGEMENT SOLUTION

1. MEASURE THE MARKET
   Analyze trends and measure the cost-effectiveness of processing plastics, selling them and the giving of cash incentives.

2. MANDATE POLICIES
   Mandate policies that would increase recycling rate per capita and enable recycling infrastructures to be built.

3. BUILD INFRASTRUCTURES
   Build infrastructures that would cater the collection of the particular plastics and a central hub that would process the overall collected plastics.

4. INFORM COMMUNITIES
   Disseminate information through mass media channels such as the internet, broadcast, etc. An open community forum could also be held.

5. COMMENCE OPERATIONS
   Reward cards

RECOMMENDATIONS

RECYCLING CENTERS

RECYCLING STATIONS

REWARD CARDS
RECOMMENDATION #2

SOLAR ENERGY

A Scheme where every infrastructure should have a renewable source of energy
RECOMMENDATION #3

Transforming private vehicles to public transport vehicles
RECOMMENDATION #3

Reducing number of cars on the road.
RECOMMENDATION #3

Less congestion, improving traffic conditions.
RECOMMENDATION #3

Enhancing social interaction and increasing productivity.
RECOMMENDATION #3

Generating additional income.

Gas Receipts = Tax Shield
REFERENCES

Data

- UN Summary Report 2017: Waste Management in ASEAN countries.
- https://data.aseanstats.org/indicator/ASE.TRP.ROD.B.005
- https://data.worldbank.org/indicator/SP.URB.GROW
Images Used