Siem Reap City Urban Development
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I-Introduction
II-Current Development
III-Development Problems and Constraints
IV-Clean City Contest
V-Project EcoMobility
I-Introduction of Siem Reap City

- Location: 314 Km from capital Phnom Penh
- Land area: 472.73 Km$^2$
- Sangkats: 13,
- Villages: 108
- Population: 244,285 (Female: 120,255)
- Households: 50,266
- Family size: 5
- Tourists: 4,210,165 (2013) (International: 2,237,286)

II-Current Development

1. Increased Population and Tourist Arrivals
2. Main Area of Action
3. Densification and Slightly Expanded Urbanized and Urbanizing Area
4. Large Scale Development
5. Land Use Plan and Urban Growth Management
III-Development Problems and Constraints

1-Problems related to roads and transportation

- Traffic congestion
- Lack of sidewalks, traffic signs, traffic lights, street signs, and signposts
- Lack of parking lots and parking regulations

2-Problems related to Water, Wastewater, and solid waste disposal

- Insufficient sewerage and storm drainage systems (some systems are blocked at certain places)
III-Development Problems and Constraints

3-Problems related to Solid Waste Management

- Litter piles up
- Insufficient solid waste collection system
- Lack of sanitary waste disposal sites, municipal landfill sites, and composting sites
- Public lack of environmental awareness

4-Problems related to Squatter Settlements

- Lack of appropriate solutions for housing the urban poor
- Squatter settlements partly cause disturbances such as noise pollution, water pollution, and security problems
- Living and environmental conditions in squatter settlements are squalid.
**IV-Clean City Contest**

**Clean City Standard**

7 basic indicators, divided into 33 more detailed indicators, and being defined as the 77 criteria-based assessment:

1. Environmental arrangement and management
2. Civic hygiene
3. Waste management
4. Raising Awareness
5. Green areas
6. Health safety, security, and urban arrangement
7. Tourism infrastructure and facilities:

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**IV-Clean City Contest**

**1-Solid Waste**

- Enforcement of regulation on SWM
- Education and Participation with stakeholders
- Master Plan on SWM by Local Authority and GAEA (3R concept)
- Incineration and Landfill
- Budget
IV-Clean City Contest

2-Sewerage

- AFD : 362 Ha
- ADB : 3,000m³
- KOREA-1 : 5,000m³
- KOREA 2 : House Connection
- Today 17,000 m³ (9,000m³)

IV-Clean City Contest

3-Road Network

Road improvement
To improve road conditions and create attractive cityscape
- Road pavement
- Improvement of Intersections
IV-Clean City Contest
4-Quality of Tourism and Public Services
- Side Walks
- Public Toilets
- Garden for Children
- Tourism Information
- Security and Safety for Tourists
- E-co Transportation

V-Project EcoMobility
1-Current issues facing travelers getting around town and temples

- Ubiquitous Air pollution
- Unfair fares
- No Accident Insurance
- Traffic congestion
- No by-pass or alternative routes
- Narrow and bumpy roads
- Poor traffic safety
- No transfer method

Many journey choices for tourists

However, transportation to and around the temples is usually hired by the day.
V-Project EcoMobility

2-Sustainable Angkor Access Schematic Diagram

- Park & Ride
- Commercial Bus Service
- Rural Villages
- Welcome Center
- Sustainable Eco Tourism
- Convenient Transport Mobility
- Getting on and off
- Managing travel
- Enabling accessibility
- Relieve Traffic Congestion
- Fair and Transparent Fare calculation

V-Project EcoMobility

3-Benefits by EcoMobility

- Increase driver incomes
- Positive visitor experience
- Reduced Angkor Impacts
**V-Project EcoMobility**

4-Project EcoMobility for JCM

- 4,200 licensed Reumork Moto
- Driver Interview Survey
- Mobility Monitoring Survey
- Traffic and Person Trip Survey

Collection of fuel consumption data and diurnal driving range information

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**V-Project EcoMobility**

5-Negative Spiral of Reumork Moto Use

- Very expensive fuel costs
- Use of low quality gasoline in second-hand motorbikes
- Damage to the Angkor heritage sites from transport exhaust
- Demonstration of protest against EV
- Low income and low quality of life for drivers
- No management of fleet operations
- Inconvenient and poor services with unclear fare for foreigners
V-Project EcoMobility

6-Positive Spiral for the Angkor Mobility

- Increasing number of international passengers
- Cooperation between drivers and agents
- Increasing the occupancy rate and the operation rate
- Reducing air pollution inside Siem Reap City
- Coordination with other public transportation
- Increasing driver incomes
- Reduction of traffic congestion

Thank You For Your Attention!