بسم الله الرحمن الرحيم

Evolution of Cairo Transport & Land Use and of their Effects on Energy & Environment; Problems, Solutions and Potentials

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SEMINAIRE REGIONAL SUR LES DEPLACEMENTS URBAINS EN MEDITERRANEE

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Challenge for Big Cities of the Global South?

Urban Population Increases

- → Lack of Space & Economic Constraints
- → Activity Concentration & Random Expansion
- → Increased Travel, Traffic & Mode Captivity
- → Decrease Speed & Increased Delay
- → Increase Energy Consumption
- → Environment Quality Degradation
- → Dissatisfaction
- → Change of LU

Urban Population Increases

The Challenge is Big … But Avoidance of Adverse Effects is Really Possible

1. Brief on Greater Cairo

Transport Modes

- **Private Transport:**

  Car / Taxi / Bus / Motorcycle / . . . .

- **Public Transport:**

  Formal:

  Bus / Minibus / Metro / Tram / Suburb. Rail / N Ferry

  Informal:

  Shared Taxi

Transport Supply & Demand (GC 2001)

	Vehs.	Lines	Length (km)	Speed (km/hr)	Trips (million)
C	1.2 m	-----	-----	-----	3
B	3350	520	10000	19	3
M	22	2	80	33	2
ST	27000	325	-----	-----	3.6
T	-----	-----	-----	-----	1.2
Pt. B	-----	-----	-----	-----	1.2
O	-----	-----	-----	-----	0.4

Travel Demand (GC 2001) Pop. 11 m

- 22.4 Million Trips / day
- 36 % NMT (8 m trips / day mostly walk)
- 64 % Motorized (14.4 m trips / day)
- Cars (Cairo 0.65 m / GC app. 1.2 m)

Expected (GC 2022) Pop. 22 m

- Motorized (25 m trips / day)
- Cars 2.5 m

2. Comments on Transport Supply and Demand Evolution

2.1 Bus & Minibus

- Operator increases supply (buses & lines) while demand is decreasing

- Do not make full use of existing supply
- Loss of revenue
- Supply increase for access
- Increased cost of operation

2.2 Shared Taxes

- *Supply & Demand Increase sharply*

- **Admit ST** is there to stay and expand
- Need for **liberal policies:**
  → **Deregulation / commercialization /** eventual **privatization** of bus operation that is steadily looses market
- Be aware of the **adverse effects** of increased **ST: Need for enforcement:**
  → Driver behavior, fare violation, routes, energy efficiency, ...

2.3 Metro

- *Lines & Demand Increase*
- *Evolution of Past Financing*

➢ L1 100 % France
L2 100 % Local MOT & TC
L3 National banks, international loans, fare box (20%). [MT not MT&C]

2.4 Cars

- *Growth vary with Economic Policy*

60s Low (closed) / 70s Sharp (open)
80s Med (moderate) / 90 & 00s High (GAT)

3. Main *Land Use Elements* Contributing to Increased Transport & Environment Problems and Increased Energy Consumption

- Activity concentration
- Unbalanced distribution of H & W
- Concentrated workshop sites in the inner areas

(*1960s*)

- Difficulty of control of Housing Regulations
- Random housing expansion

(*1970s*)

- Adaptive reuse of activity units
- Higher densities of use of major activity centres

(*1980s*)

4. Main *LU Policies* related to Transport, Environ. And Energy

Long Term Policies

Activity Decentralization	*(Mid70s – Now)*	Success
New planned cities around GC	*(Late70s – Now)*	+ ve Varied
Control of Random Expansion	*(980s to 90s)*	Varied

Medium Term Policies

Activity Units out of Cairo	*(Late 80s to 90s)*	Success
Workshops to outer locations	*(1990s)*	+ ve. Varied

Short Term Policies

Control of Building Regulations	*(Continuous)*	Challenge
Control of Adaptive Reuse	*(Since 1990s)*	Success

5. Main *Transport Elements* Related to Environment & Energy Consumption

- Congested road network (Started progression since *1960s*)
- Increased Fleet age (*Continuous progression)*
- Difficulty of regular car tuning *(Persisting)*
- Through traffic passing the CBD *(Progression till mid 90s)*
- Mode captivity (*Continuous / slight improvement since 90s*)
- Lack of bus priorities & integration (*Continuous*)
- Increase of microbus informal transit vehicles (*Continuous*)
- Lack of professional traffic managt. & eng. design (*Continuous*)
- Difficulties to promote cycling (*Continuous*)

6. Main *Transport Projects* with good effect on Energy Saving & Environment Quality

- Ring Road *(1995 – improves. in progress since 2006)*
- New Road Traffic Corridors *(1990s / 2007 - 2010)*
- New bridges, overpasses and tunnels *(Since 1970s till now)*
- Metro *(L1 1987, L2 1994, L3 standard 2006)*
- CNG Taxis *(Since 1990s; progressing fast)*
- Air Con Buses *(Since late 1990s; progressing fast)*
- New Car Assembly Plants *(Since 1990s and progressing)*
- Parking Garages *(Since 1990s; progressing fast)*
- Reducing Taxi Age *(Since 2007)*
- Moving Bus Depots *(Since 2007)*

7. Areas for Imp. & Needed Effort; Transport

- **Metro Line 3** [Phases 1 & 2 - 2010 / 4 & 5 - 2015]
- **Vehicle Technology**
  - **Promote vehicle tuning** [EEAA Stations / Veh. Licensing Reg]
  - **Continue on reducing fleet age** [EEAA Taxi Project]
  - **Continuing success of CNG policies** [impressive progress]
  - **Promote cycling** [DRTPC Project for GEF / UNDP & MOE]
- **Transport Demand Management**
  - **Traffic management & Ped. zones**
  - **Bus priorities & Mode Integration**
  - **Integration & Parking Policies**

  } [DRTPC Project for GEF / UNDP & MOE]

- **New Elevated Corridors** [2007 - 2010 MOH]
- **Transport Management & Planning by Transport Engineers**

[**Unfortunately Not Yet !!**]

8. Areas for Improvement & Needed Effort; Land Use

- **Continue decentralization past and current efforts for;**
  - Improving new cities services
  - Encouraging more decentralization of activity centres
  - Moving workshops to outer locations
- **Continue control efforts for**
  - More control of adaptive reuse of existing activity units
  - Stricter control of unplanned urban expansion
  - Stricter control of building regulations
- ***Directing MOH fund for Transport Projects to MOT***

9. Overall Requirements; Transport & Land Use Related

9.1 Financing

- Untraditional mechanisms
- Private sector participation
- Introduce appropriate private financing regulations
- International TA & Aid unsustainable

9.2 Planning & Projects

- Energy Savings & Environment Quality as major objective
- More weight to energy and environment impacts in policies/ projects
- Linking land use planning and transport planning
- **Transport Projects** according to agreed **priorities** regardless of the financing authority

9.3 Institutional

- Local authorities development
- Institutionalize the job of transport and traffic engineers
- Semi Public Parking Authority
- Implement modernization plan of the bus operator
- Radical improvement of the concession contracts of private bus operators

9.4 Foreign Technical Assistance !!

- To be made sustainable (sustained innovative local future financing)
- To utilize mainly local learned expertise (not just foreign consultants)
- To take into consideration **local needs** and **conditions**
- To **understand** more the **local realities**
- To **utilize experience** from **cities** of **similar conditions**, **size** and **needs**

In Summery,

Problems exist

YES

Some out of hand & some can be controlled

Success Exists

Also YES

Some need to consolidate & some need to develop

BUT WE NEED

More awareness and understanding

Not alone from City Authorities

***But also & not less important from*:**

International Lending Agencies

Thank You