



CLIMATE AND CLEAN AIR COALITION
TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

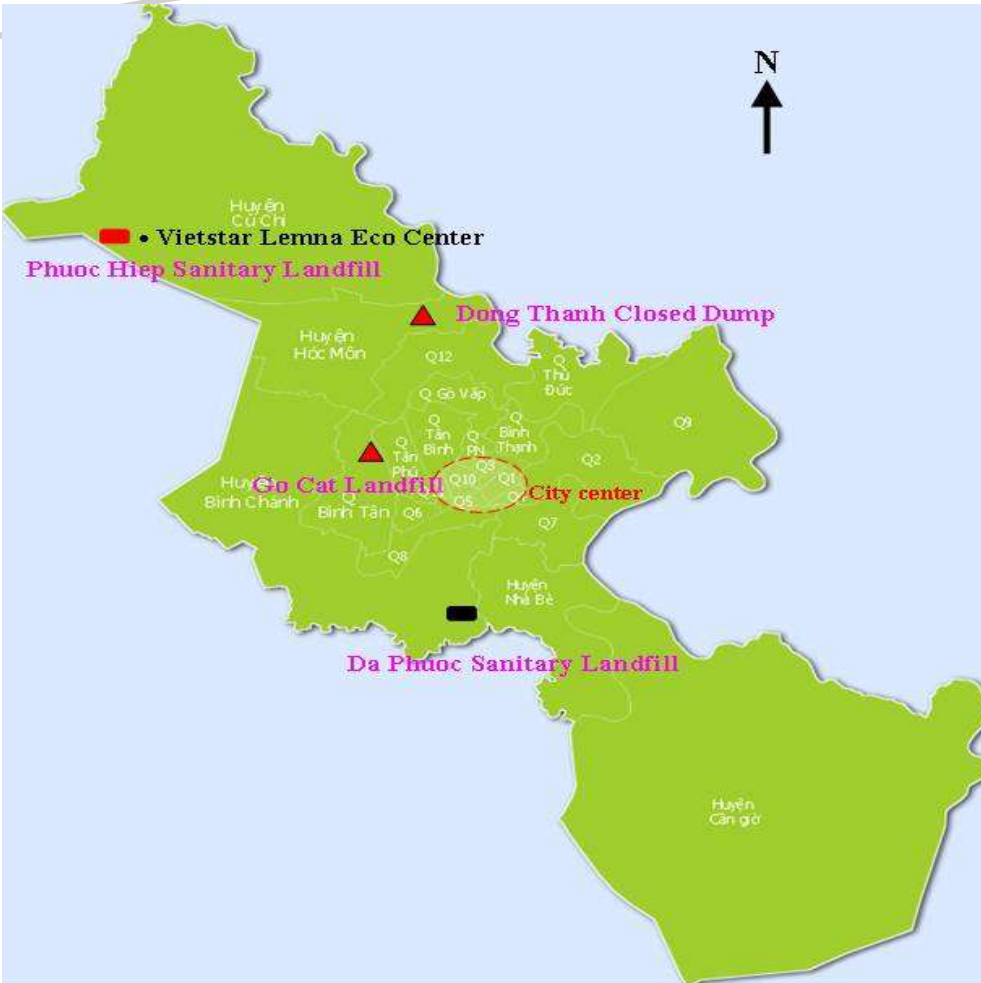
Ho Chi Minh City

City Assessment Presentation

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General Information



- Ho Chi Minh city is the largest city of Vietnam
- Center of economic, culture, industry, and services
- Located in the south of Vietnam
- Area 2095 km² (urban area 494 km²)
- Tropical climate, average temperature is 28 °C
- Precipitation about 2,000 mm in six month rainy season

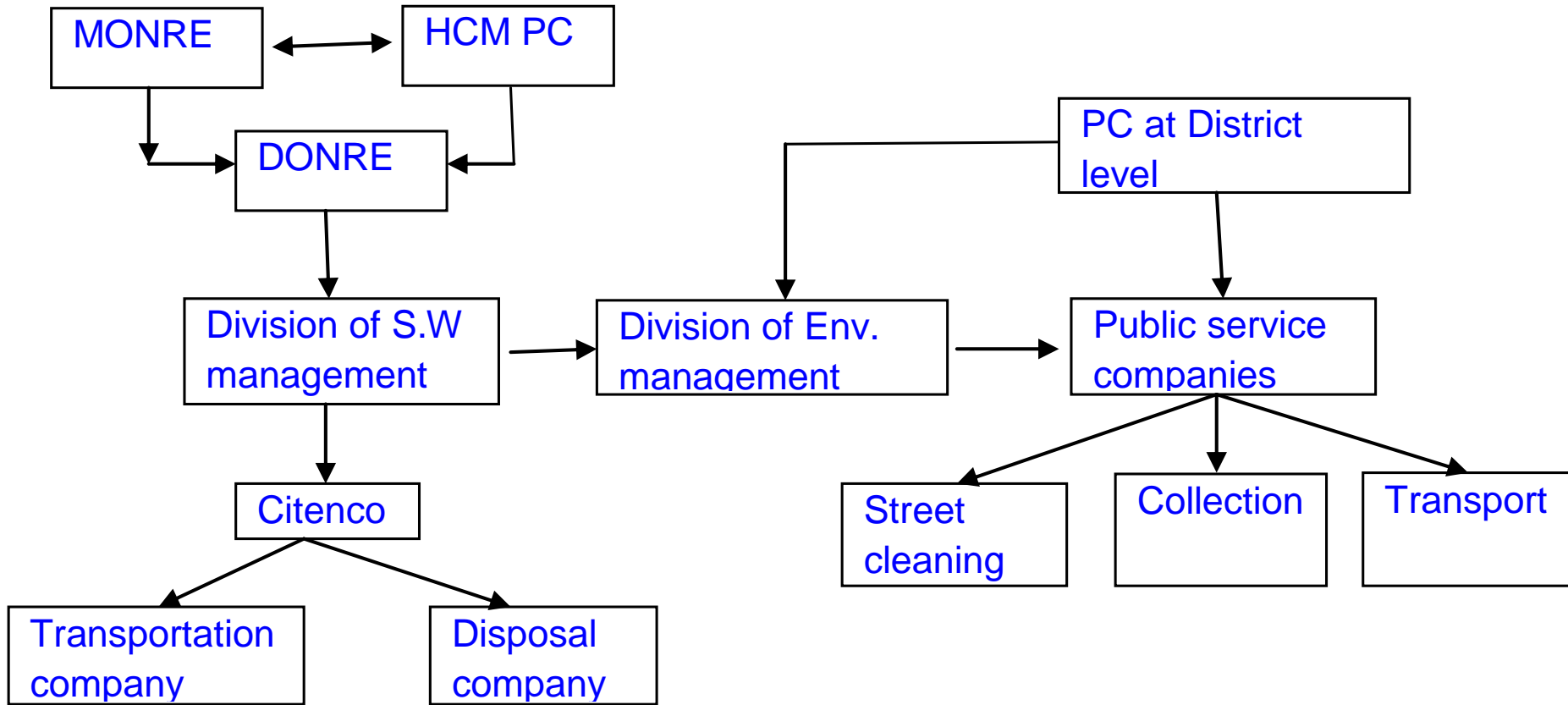
General Information

- Population 7,162,864 (2009) growth rate 3.1%/year
- Estimated current population of 10 million, increasing to 13.9 million by 2025
- GDP \$3,700 per capita, growth rate about 10%
- Ho Chi Minh represents 20.2% GDP earning and 27.9% industrial output of Vietnam



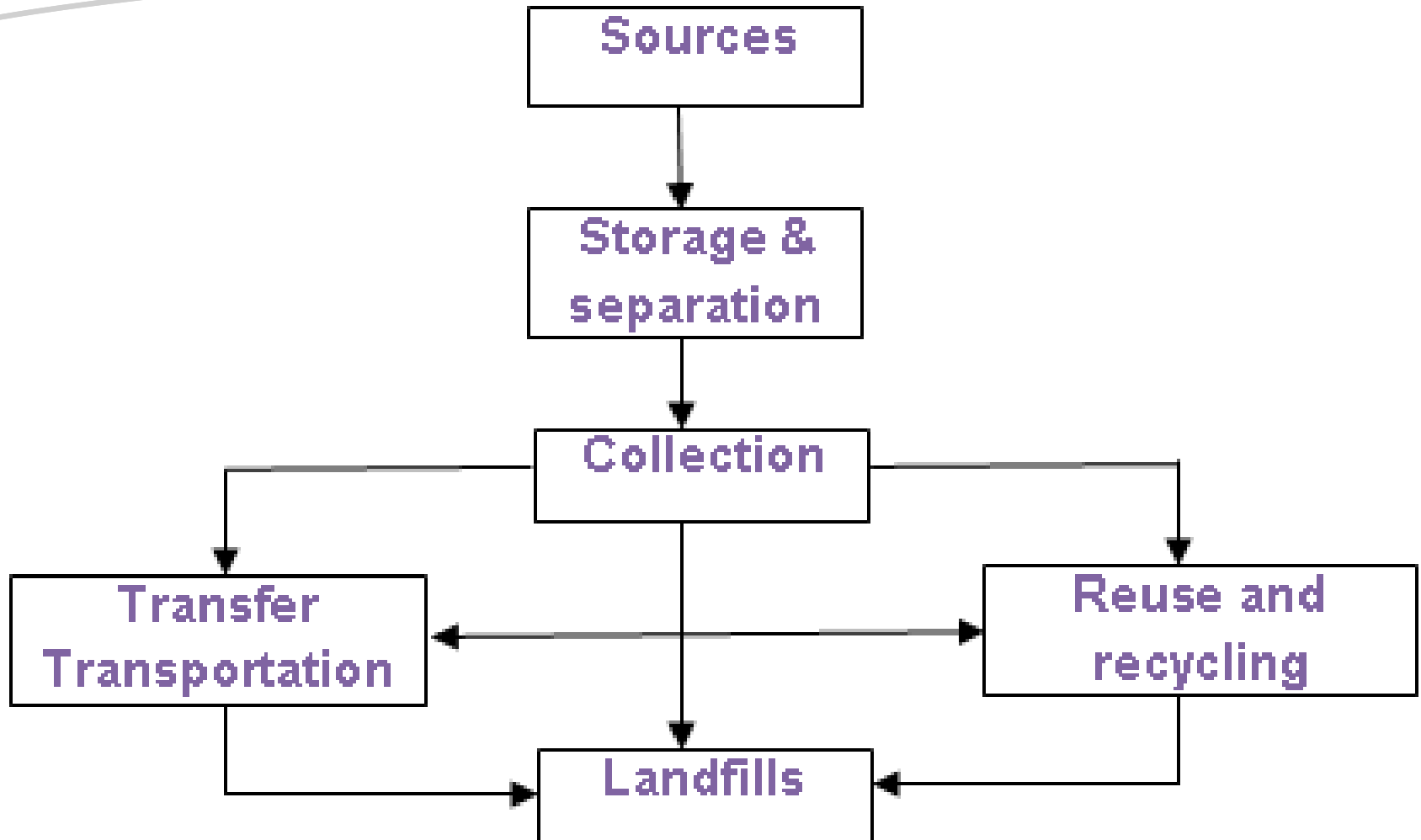


Solid waste administrative organizations

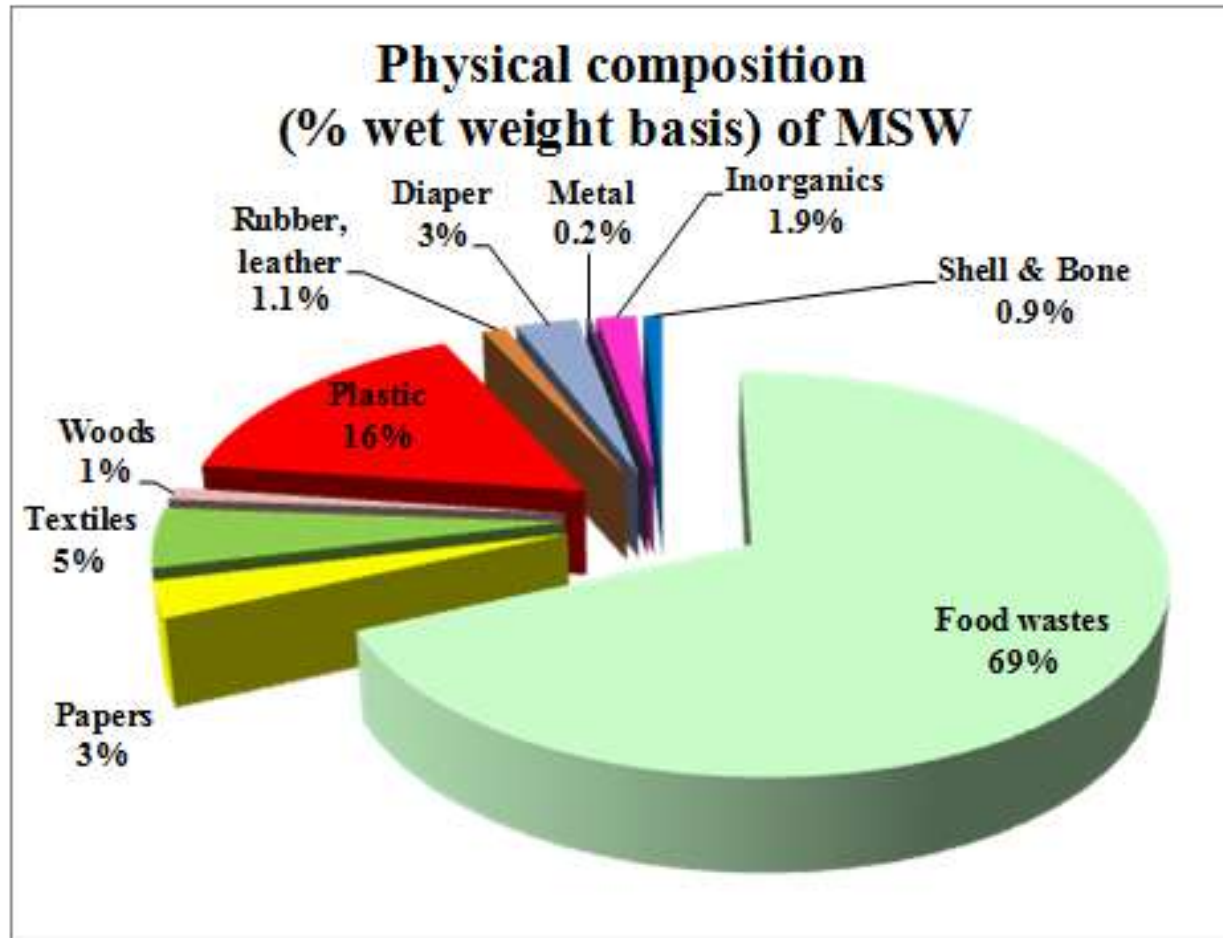


Annually 6 to 8 %increase in domestic waste collection

Year	Waste generated per capita (kg/person/day)	Waste collected (tons/day)
1996	0.61	2900
1998	0.51	2570
2000	0.78	4070
2002	0.77	4300
2004	0.76	4610
2006	0.81	5200
2008	0.79	5530
2010	0.81	6320
2012	0.81	7450



Composition of domestic solid waste





Collection, transfer, and transportation

- Door-to-door collection
 - Private groups (70%) and public groups (30%)
 - 5400 workers using 200 small trucks, 1000 three-wheelers, and 2500 handcarts
- Transfer
 - 380 meeting points and 32 transfer stations
- Transportation
 - Citenco (53%), public service companies (30%), and Cong Nong Co-operation (17%)
 - 570 trucks, capacity 5 to 15 tons



- Disposal mostly in landfills
 - Phuoc Hiep landfill, 660 ha, about 3500 tonnes/day
 - Da Phuoc landfill, 640 ha, about 3500 tonnes/day
 - Thu Thua landfill, 1760 ha in Long An, future
- Compost
 - Viet star compost, receives 450 tonnes, discharge 200 tonnes back to landfill daily





Reuse and recycle

- 1200 street junk traders
- 16000 waste pickers
- 1200 recycling shops
- 224 small-scale recycle material processors



Problems in domestic waste management

- Poor hygiene in door-to-door waste collection and transfer stations
- Lack of waste separation at source
- Negative impacts of landfill on environment, such as gas, leachate, odour, vermin
- Material recovery, especially of organic waste, is limited
- Lack of user-pays system for domestic waste (no financial incentive for households to reduce waste)
- Household organic waste composting project trialed in 2012 and unsuccessful
- Household waste separation projects (various) trialed since 2001 and unsuccessful



Cause

- Using command and control policy
- Lack of city or national NGOs (not allowed to exist under current regulations)
- Goals, direction, and strategy for MSW are unclear and too general
- Lack of technology
- Poor infrastructure
- Lack of funding
- Human resources



Proposed actions: improve MSWM and reduce SLCPs

- Landfill gas extraction and energy generation
- Source separation of organic waste from households and compost demonstration project
- Sustainable system for use of organic waste from wholesale (fresh food) markets



Conclusions and Next Steps

- Widespread stakeholder consultation needs to take place in order to create a MSW strategy and develop an action plan for HCMC
- MSW improvement projects need stakeholder buy-in and long-term commitment from government to succeed
- Focus needed on waste separation at source and material recovery (recycling and composting)
- Need involvement of national and city NGOs, financial support, and synchronized efforts
- Transparency in solid waste management must be improved
- Diversification of financial resources in solid waste sector
- Develop an action plan to progress MSW improvement projects with CCAC assistance



Questions are welcomed...

THANK YOU FOR YOUR INTEREST