

**Environment Committee of
the Hong Kong
General Chamber of Commerce**

**Environmental Protection
Challenges Ahead**

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Permanent Secretary for the Environment**

Vision and Challenges

- **Vision:** An international city with quality environment
- **Challenges:**
 - Population per km² : 6,350 people
 - 553,000 vehicles running in the road
 - Daily passengers transportation demand exceeds 12 million people
 - Municipal Solid Waste volume on the rise
 - Harbour Water Quality to be improved
- **Limitations:**
 - 43% of land is for nature conservation
 - Development concentrated on 20% of land

On Air Quality

Economic development of Guangdong and Hong Kong

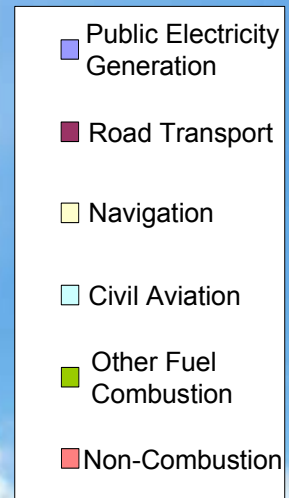
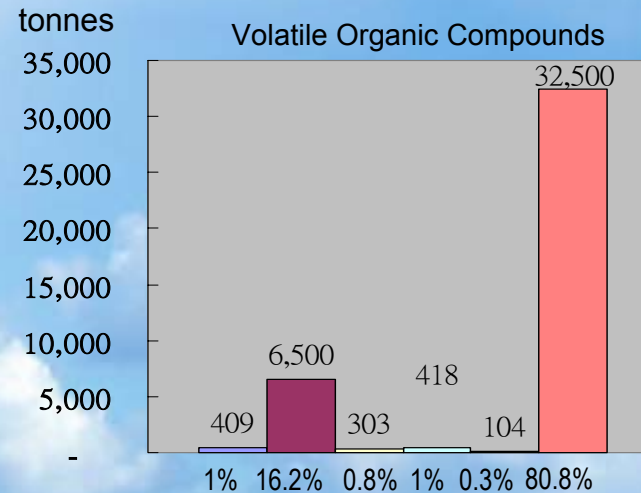
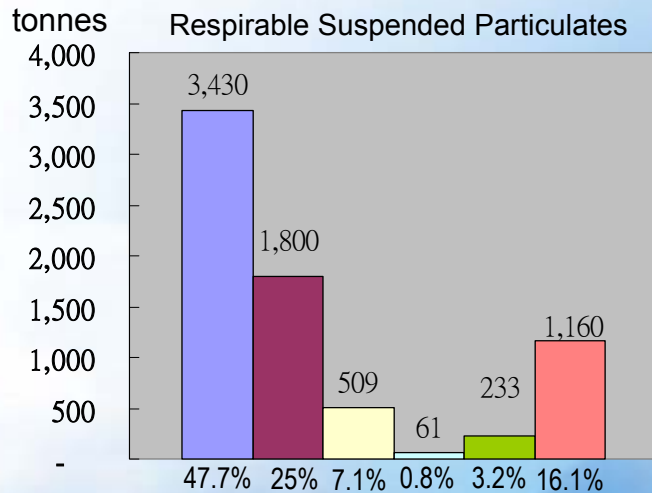
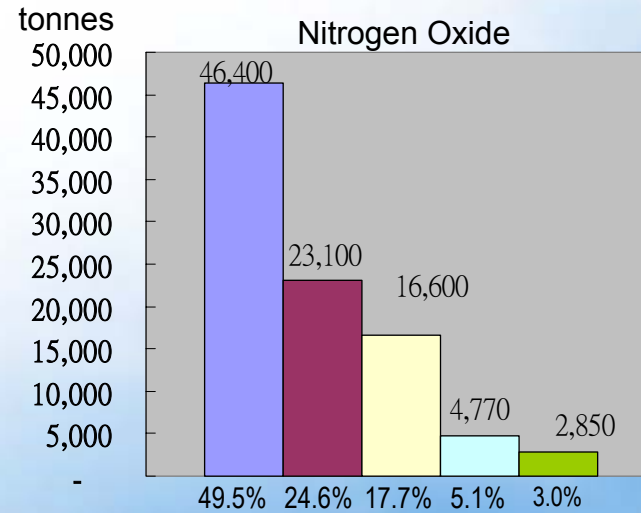
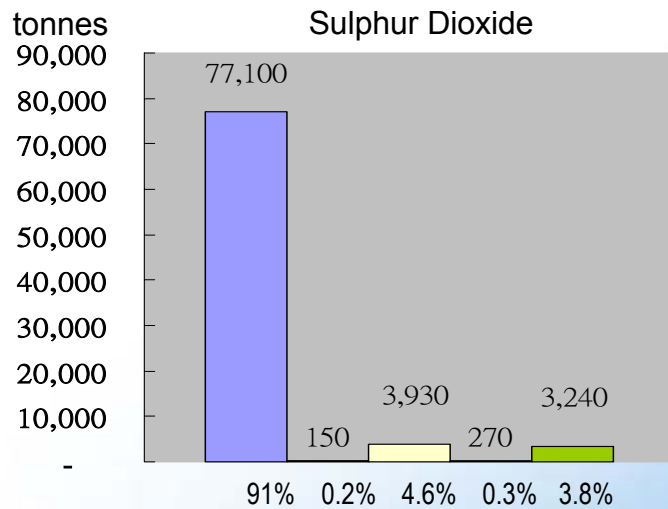
Indicator	Hong Kong		Guangdong	
	2005	Changes between 2005 and 1995	2005	Changes between 2005 and 1995
GDP ('000 billion, value at that year)	1.38 (Hong Kong Dollars)	↑ 24%	2.24 (Renminbi)	↑ 377%
Energy Demand (Terajoule)	332,000	↑ 14%	5,062,000	↑ 245%
Number of vehicles (ten thousand)	54	↑ 16%	377	↑ 329%
Number of industrial enterprises	14,000	↓ 49%	446,000	↑ 115%

Where Comes the Pollution?

- Two distinct sources demanding two distinct strategies
 - Local pollution sources
 - Regional pollution sources



Local Pollutants Emission in 2005



Measures adopted already

- Provision of a world-class public transportation system
- LPG taxis and light buses
- Tightening of emission standard to Euro IV
- Installation of emission reduction devices for pre-Euro diesel vehicles
- Adoption of the latest environmental technology by the franchised bus companies
- Rationalization of bus routes
- Doubling the penalty for smoky vehicles



Further Efforts at Home

- \$3.2 billion to expedite replacement of pre-Euro & Euro I diesel commercial vehicles with Euro IV vehicles
- Tax concession for vehicles with low emissions and high fuel efficiency
- Public consultation on the mandatory requirement to switch off engines while waiting
- Step up enforcement of emission of cars by remote sensing



Further Efforts to Reduce Local Emissions

- Installation of vapour recovery system for vehicle refueling in petrol stations
- Mandatory cap for volatile organic compounds (VOC) in architectural paints, printing ink and selected consumer products
- Mandatory labelling on energy efficiency for electrical appliances



ENERGY LABEL 能源標籤	
Brand 牌子	ABC 某某牌
Model 型號	HK1234
Annual Energy Consumption* kWh/yr 每年耗電量 單位/年	1200
Energy Efficiency Grade** 能源效率級別	1
Room Cooler Category** 冷氣機類別	1
Cooling Capacity (kW) 製冷量	2.5
Refrigerant 制冷剂	HFC 133
EEC Registration Number 能源標籤登記號碼	C 96-0001

* The value are provided according to the Hong Kong Energy Efficiency Labelling Scheme by the Energy Commission, administered by the Electrical and Mechanical Services Department (EMSD), Government of the Hong Kong Special Administrative Region. The registration number can be found on the label website at www.emsd.gov.hk.

資料來源係根據香港能源效率標籤計劃，由電力及機械處（電機工程處）管理。該處由香港特別行政區政府。登記號碼可在標籤網頁 www.emsd.gov.hk 找到。

Pollution from Power Generation

- The source of over 90% Sulphur Dioxide and 50% of Nitrogen Oxides and particulates
- Introduction of emission caps / the use of ultra low sulphur coal and natural gas / emissions trading



Further Efforts to Reduce Pollution from Power Generation

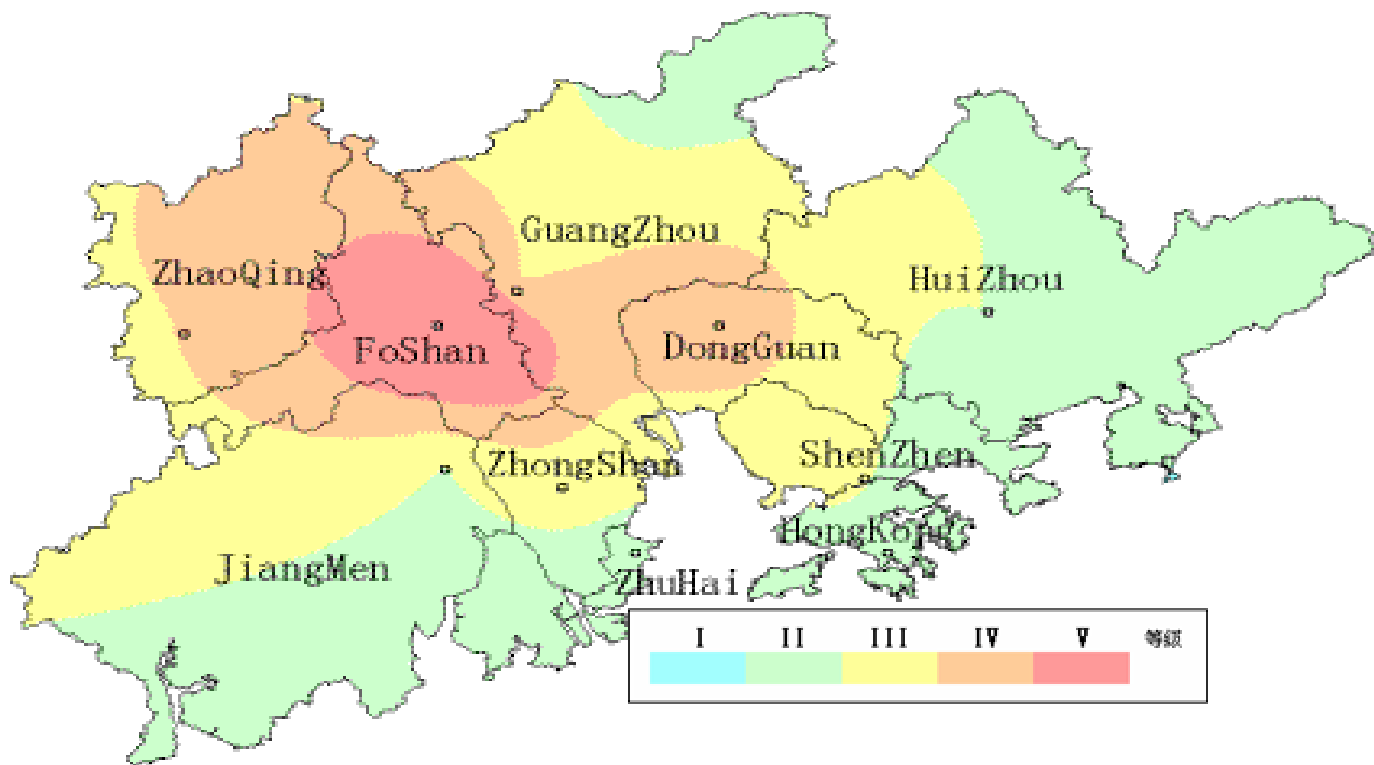
- Pursuing a new Scheme of Control Agreement with the following features –
 - Reduced return for breach of emission caps
 - Higher return for Renewable Energy (RE) facilities
 - Facilitating access of 3rd party local RE sources to the grids of power companies
 - Incentives to encourage improved energy efficiency and promotion of energy conservation

Targets with Guangdong

- Consensus between SAR and GD in April 2002 to reduce by 2010, and compared to 1997
 - Sulphur Dioxide by 40%
 - Nitrogen Oxides by 20%
 - Respirable Suspended Particulates by 55%
 - Volatile Organic Compounds by 55%

Joint Air Quality Monitoring Network

Pearl River Delta Regional Air Quality Map
2006. 10. 20



Guangdong Actions (I)

- Power plants
 - Closure of substandard factories
 - Continue to reduce energy intensity (i.e. the energy consumed for each CNY10000 GDP)
 - FGD for coal-fired power plants
 - Four new large-scale gas-fired power plants (total 11 generation units by 2007)

Guangdong Actions (II)

- Vehicle emissions and VOC
 - Euro III motor vehicle emission standards from 2006
 - Euro III motor fuels introduced from 2006
 - Pilot projects in Shenzhen to control VOC emissions from oil depot, tanker trucks and petrol filling stations in 2007

HKSAR Progress in Achieving the 2010 Emissions Reduction Target

	Emission level in 1997 (tonnes)	Emission level In 2005 (tonnes)	Changes in Emission level during 1997- 2005	Reduction Target for 2010
Sulphur Dioxide	64 500	84 600	+31%	-40%
Nitrogen Oxides	110 000	93 800	-15%	-20%
Respirable Suspended Particulates	11 200	7 200	-36%	-55%
Volatile Organic compounds	54 400	40 200	-26%	-55%

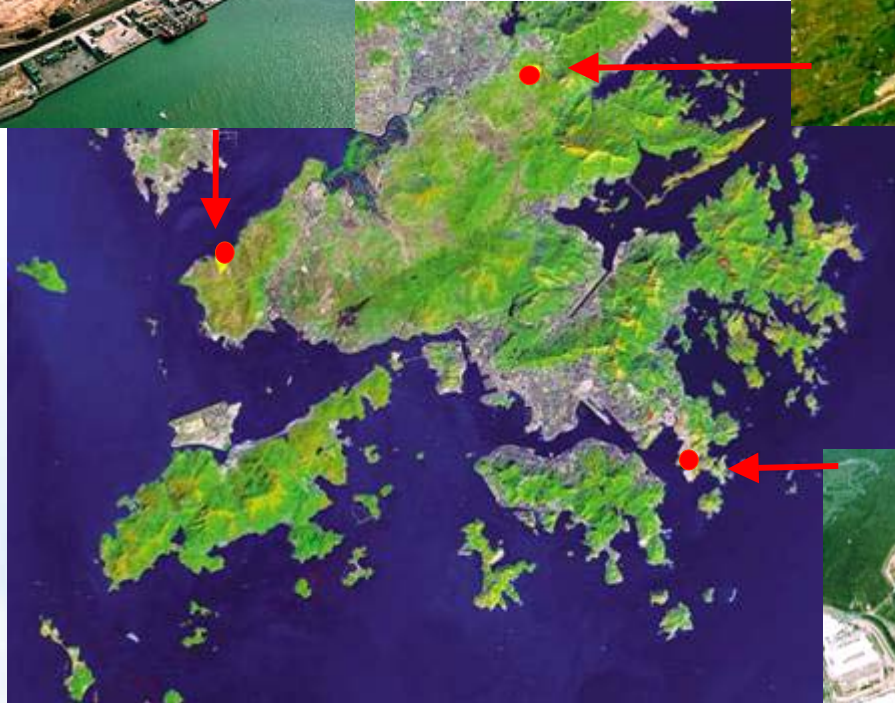
The background of the slide is a bright blue sky filled with soft, white, fluffy clouds. The clouds are scattered across the frame, with some appearing more prominent than others. The overall lighting is bright and airy, suggesting a clear, sunny day.

On Waste Management

Our Waste Problem



WENT
Full by 2015

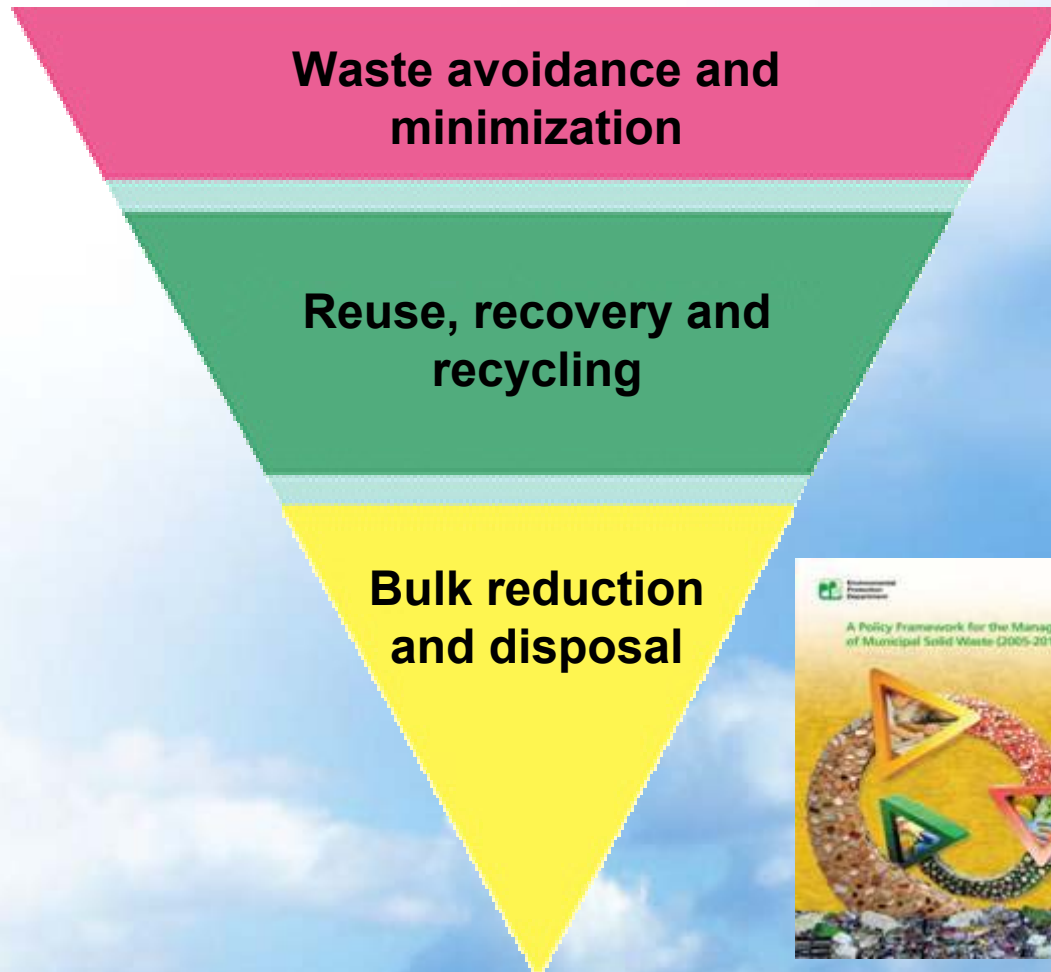


NENT
Full by 2015

SENT
Full by 2011



A Policy Framework – Waste Hierarchy



Source Separation of Domestic Waste Programme

- Territory-wide programme since Jan 2005
- 614 participating estates with 806,000 households and 2.4 million residents
- 3-4% reduction in waste disposal



Environmental Levy on Plastic Shopping Bags

- Over 8 billion plastic shopping bags disposed of every year
- More than 3 plastic shopping bags per person per day
- Policy objective: To reduce indiscriminate use of plastic shopping bags through a direct economic disincentive



Environmental Levy on Plastic Shopping Bags

- Environmental levy of 50 cents
- First phase: chain or large supermarkets, convenience stores and personal health and beauty stores
- Reduction of 1 billion plastic shopping bags; or 50% of the plastic bag usage of “relevant retailers”
- Public consensus and support necessary

Integrated Waste Management Facilities

- Multi-technology approach
 - Biological treatment
 - Mechanical sorting and recycling
 - Thermal treatment



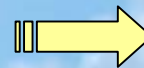
On Water Quality

Water Quality Improvement by HATS Stage 1

- Prevents 600 tons/day of sewage sludge from entering Harbour
- Improves WQO compliance from 50% to 90% in 2006
- Removes
 - 70% of organic pollutants
 - 80% of suspended solids
 - 50% of E. coli

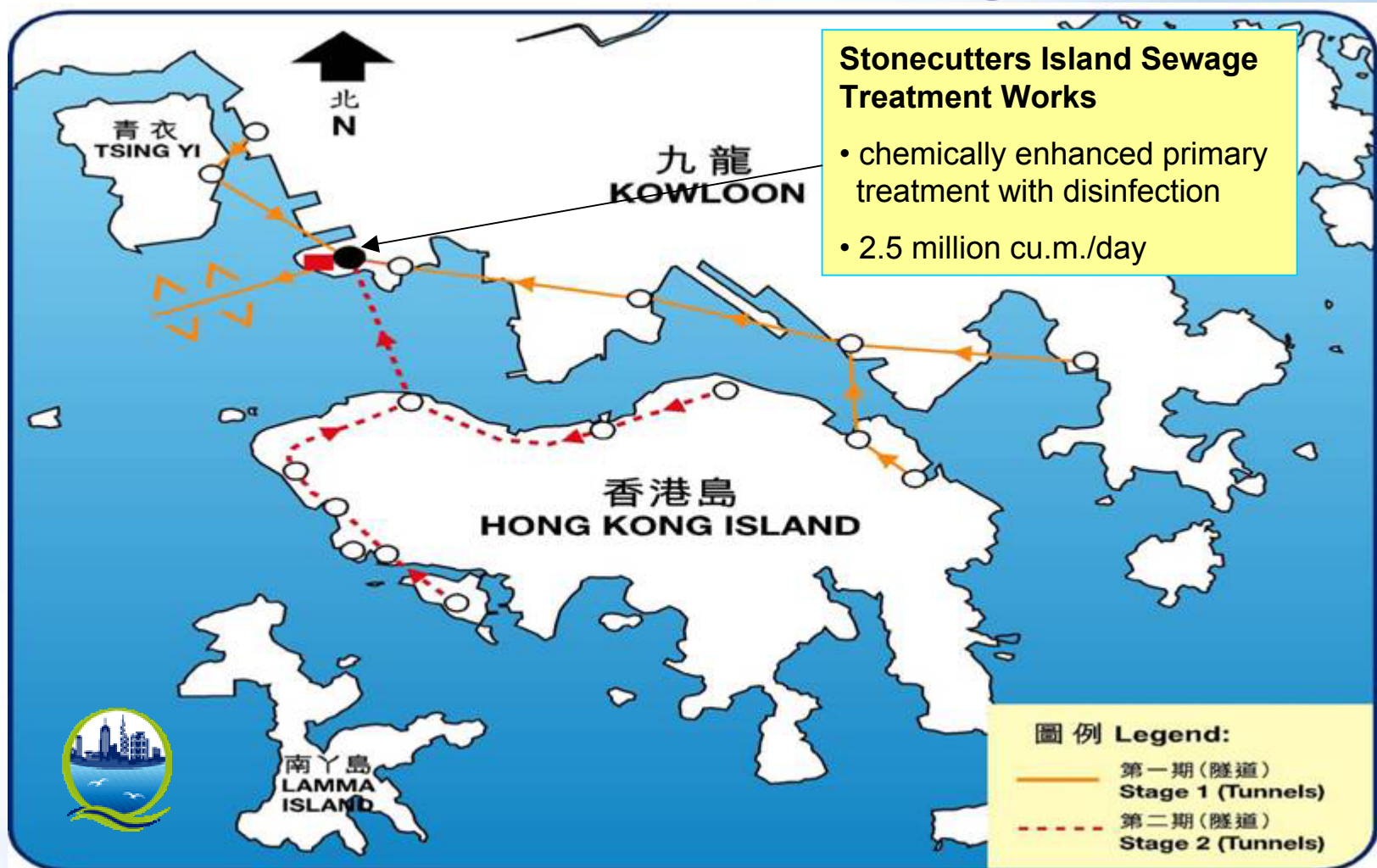


***Occasional Sewage
Plume in the Past***



***Sewage Plume
Removed***

Harbour Area Treatment Scheme (HATS) Stage 2A



How the Business Sector Can Help

Air

- Practice Clean Development Mechanism (CDM)
- Incorporate core environmental values in investment decisions or policies
- Monitor environmental performance in procurement and merchandising activities
- Reduce emissions
- Support Energy Efficiency Labelling Scheme

Air

- The Hong Kong Business Coalition on the Environment was formed by the Hong Kong General Chamber of Commerce and 33 industrial and commercial organizations
- Introduction of Project CLEAN AIR
- Clean Air Charter – there are nearly 600 endorsers



Commendation for the Business Sector

- Hong Kong Energy Efficiency Awards encourage private corporations to carry out measures on energy efficiency
- Wastewi\$e Scheme encourage businesses to adopt waste reduction measures
- Hong Kong Eco-Business Awards encourage corporations to implement environmental management
- We plan to consolidate the above schemes into one new award scheme by late 2007.



Waste reduction and recycling initiatives

- Rechargeable Battery Recycling Programme
- Voluntary Agreement on Plastic Bag Reduction
- Pilot Scheme to recycle WEEE and computer equipment



Thank You !