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Solicitors & Notaries

## URBAN PLANNING AND ENVIRONMENTAL LAW QUARTERLY

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簡家驄律師行 · 城規環保簡訊

**Hong Kong's serious air pollution, and the government's realisation, finally, that this is a real problem, have left other equally important environmental issues in the shadow of government and business apathy. This edition looks at a high profile example of one such victim : environmental assessment of development projects.**

**The Editors**

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#### SAVING THE SOKO ISLANDS : CAN WE RELY ON OUR EIA PROCEDURES?

##### Introduction

A major infrastructure development has been proposed for South Soko Island, one of the beautiful and largely unmarked Soko Islands. The proponent is a joint venture company, Castle Peak Power Company Limited ("CAPCO"), which has been established by two powerful energy companies, CLP Power Hong Kong Limited and Exxon-Mobil Energy Limited.

CAPCO has applied to the government for approval to construct and operate a receiving terminal (and associated facilities) for liquefied natural gas ("LNG"); (a summary description of the development project is contained in the EIA Report referred below).

The terminal will enable CAPCO to import LNG from one or more the world's suppliers. The terminal's facilities will cater for : receiving and unloading LNG carrier – ships; on-shore LNG storage in large silos; and LNG re-gasification. The development includes construction of an underwater pipeline to supply LNG to the Black Point Power Station ("BPPS").

The BPPS was established in 1996 and currently supplies approximately 25% of Hong Kong's electricity. Since its inception, the BPPS has used LNG as one of the fuels for power generation. The other fuel is coal.

CAPCO says the need to develop the terminal is due to :-

- the depletion and imminent demise of the present source of LNG, which is the Yacheng gas field off Hainan Island; and
- the government's increasingly restrictive controls of emissions of global-warming gases, of which coal-fired power stations are a major source.

In terms of global-warming and climate change – which now are taken seriously by Hong Kong and most other countries – LNG is undoubtedly to be preferred to coal for generating electricity. With LNG, most sulphur is removed in the liquefaction process, and natural gas gives off less carbon dioxide than coal.

CAPCO asserts that there are no feasible options to importing LNG by ship, as distinct from a pipeline supply, which is the current arrangement.

There are also other reasons that generation of power by LNG is to be preferred to the use of coal, such as the greater efficiency and higher volume of world supplies of LNG.

The development proposal, and its environmental impact assessment ("EIA") required by the *Environmental Impact Assessment Ordinance*, therefore proceeded on the basis that the above "need factors" are correct. They probably are, and few if any environmentally minded people would dispute them (although it is virtually impossible for the ordinary person to check out some of CAPCO's assertions regarding present or alternative LNG supplies). However, from that point the EIA proceeds on a flawed basis with, it would seem, a pre-determined outcome that the terminal *will be built* in the Sokos.

## The EIA

The terminal is a “major project” under the Ordinance and so requires an environmental permit if it is to be approved for construction. The EIA is the foundation of the permit application process. CAPCO engaged Environmental Resources Management (“ERM”) to carry out the investigations and write the EIA Report (“Report”) which was recently submitted to the Environmental Protection Department (“EPD”). In doing so, CAPCO had to address, at a minimum, technical and scoping matters laid down by the EPD. An executive summary of the Report (“Executive Summary”) has also been published.

### The project

The Executive Summary describes the terminal project as follows :

“It is proposed that the LNG terminal will be located on 36.5 ha of land located in the center of South Soko Island. The majority of the terminal’s facilities will be located on land that was developed in the late 1980s as a Detention Centre. The Detention Centre was demolished in the mid 1990s and what remains is a series of cut slopes, access roads and paths coming from the large concrete platform in the center of the island. In order to locate all of the necessary equipment for the terminal, reclamation totally less than 0.6 hectares will be required in Sai Wan. Seawall modifications will also be required at South Soko which will occupy 1.1 ha of artificial and natural coastline. The key elements of the LNG terminal include :

- Jetty, including unloading arms located on the southeast coast of south Soko Island capable of accommodating LNG carriers with capacities ranging from 125,000 m<sup>3</sup> up to a class of 215,000 m<sup>3</sup>;
- Process Area;
- Three full containment cryogenic LNG Tanks (capacity of up to 180,000 m<sup>3</sup> each);
- Low Pressure and High Pressure pumping systems;
- Vaporization (Re-gasification) Area;
- Seawater intake and outfall systems;
- Vents (low pressure and high pressure);
- Ancillary features : (Guard House, Maintenance Workshop, Administration Building, Utility Area, Control Room);
- In order to deliver the re-gasified natural gas from the terminal to BPPS, a 38 km long submarine gas pipeline will be constructed;
- A gas receiving station is required at the BPPS to receive the gas and send it on to the power station;

- Submarine power cable and water main to connect the terminal to electricity and wastewater supply sources on Lantau Island;

- Provision of gas turbines for onsite power generation requirements at South Soko Island.” [references to graphics deleted]

The project also involves a considerable amount of dredging, both for ships’ access and construction of pipelines.

The design and specifications submitted for assessment incorporated several improvements on earlier designs, which CAPCO adopted in an attempt to reduce environmental impacts. The most important of these are described as being :

- “Reduction in dredging volumes (from approximately 5 Mm<sup>3</sup> to 1.32 Mm<sup>3</sup> at the terminal site) with reduced impacts to water quality, fisheries and marine ecology through adoption of partially dredged site formation works.
- Avoidance of substantial dredging in the sensitive area between North and South Soko Islands.
- Reduction in reclamation from 13 ha to approximately 0.6 ha which reduces impacts to water quality, fisheries and marine ecological sensitive receivers.
- The amount of natural coastline lost to reclamation works has been reduced from over 1 km to approximately 300 m which in turn reduces impacts to marine ecological sensitive receivers.
- By locating the terminal facilities in the center of the island the disturbance to natural habitats on the island has been reduced and the view of the storage tanks from visual sensitive receivers on Lantau Island is in part obscured.
- Construction methods will be adopted including the use of a bubble jacket to reduce underwater sound levels during marine percussive piling work for the construction of the jetty and deployment of silt curtains during dredging operations at specific locations.”

A detailed examination of the Report will not be attempted here. The Executive Summary is peppered with unsubstantiated assertions, such as : “During the operational phase, adverse impacts are not expected to occur”; and “The construction impact on the natural habitats and associated wildlife is considered to be manageable, and no residual impact is expected after the implementation of the recommended mitigation measures.”

However, these apparent methodology deficiencies are not the focus of this article. Rather, we wish to point out the inherent defects

of the EIA, and also to refer briefly to several criticisms of the Report and project included in submissions from the public.

Unsurprisingly, ERM concludes that for each of the components assessed in the EIA the assessments of residual impacts have been shown “to be acceptable” and within the relevant criteria of technical standards stipulated by the EPD under the *Ordinance*.

### *Inherent defects of EIA process*

More than 11 years ago we criticised Hong Kong’s (then proposed) environmental assessment legislation : see *Hong Kong’s Proposed Environmental Impact Assessment Law*, UPELQ, Autumn, 1996. The criticisms remain valid today, and are, in part at least, borne out by the EIA and the Report. The Report and EIA are just the latest products of a defective environmental assessment and protection system, in which economic factors invariably dominate. We shall limit ourselves to the following examples :-

#### *No independent assessor*

Without in any way criticising the expertise or objectivity of ERM or others involved in the EIA, the inherent weakness is that the EIA was organised and paid for by the development proponent, CAPCO. Thus, it is difficult to avoid the perception of bias, whether or not bias actually exists.

Like justice, objective assessment of environmental risks must be seen to be done, not just done.

#### *Artificially restricted scope of EIA*

A fundamental element of any sophisticated and effective environmental assessment process is that all reasonably available alternatives (including the “no action” alternative) are expressly analysed and assessed.

In the present case, the EIA proceeded on the basis that, prior to the EIA, CAPCO itself had considered 29 possible sites for the Terminal, and had concluded that only two of these were suitable, South Soko Island and Black Point (in the western New Territories).

After that internal process, CAPCO undertook the EIA which covered both sites, and then decided South Soko Island was the preferred site. There may have been some pressure from the government to select the Soko. If so, the whole process is even more shameful.

A realistic, meaningful environmental assessment should include evaluation of all identified sites, although not all sites need necessarily be evaluated to the same depth or detail.

#### *Cumulative impacts must be considered*

Another fundamental principle applied in assessing environmental impacts of proposals is

that existing and proposed activities within the (scientifically defined) area must be taken into account. In other words, estimated cumulative impacts from present and likely, future developments must be assessed, rather than the specific project's impacts being assessed in isolation.

This has not been done in the EIA, which is especially of concern, given that other large infrastructure projects have been built recently in the broad locality, and more are proposed under the *Lantau Island Development Plan*.

### Samples of criticisms of Report

In a detailed commentary on the Report (24/1/2007) the *Living Islands Movement* severely criticises both the EIA process and its conclusions. Such criticisms include (but are not limited to) the following :

- The major premise – namely, that the terminal is in fact needed, or that, if it is, that it should be under the control of CAPCO – has not been evaluated independently.
- The Sokos were proposed by the government as a marine park, but the final decision was deferred in 2002. Was that, then unexplained, decision linked to the terminal proposal?
- CAPCO say they need a speedy resolution – hence, the Report was not first released as a draft, as would occur in any other Western system – but the Yacheng gas supplier says its reserves will last until 2025, contrary to CAPCO's claims.
- Only the minimum 30 day period was allowed for public consultation, which was wholly insufficient. Hong Kong's LNG requirements were raised as an issue more than 4 years ago, so the present haste to approve the project is surprising.
- Only 2 of numerous potential sites are covered by the EIA.
- Aspects of the EIA/Report indicate they do not represent an objective, balanced view. For example, the proposed marine park is not even shown on maps in the Report.
- The assertion that only the Sokos is safe enough for the terminal is doubtful. There surely are islands in the Pearl River Delta which could accommodate the facility.
- An independent organisation should have conducted the EIA.

WWF (*Hong Kong*) highlights significant inaccuracies in the Report's findings – or assumptions – of impacts. One of these relates to the threat to marine species from operation of the terminal. In the consultation process ERM (and AFCD) simply dismissed as “not significant” (a phrase often repeated in the Report, without

proper scientific/factual backing) WWF's concern that the water intake system for the terminal will kill large numbers of marine life. On the basis of the EIA's own data, WWF calculates that the fish kill rate from operation of the terminal will be “alarming” :

- 400 million eggs and larvae killed annually, equivalent to
- 400,000 adult fish killed each year, of which
- 55,000 adult fish are from commercially important species

*The Conservancy Association* has emphasised that until several years ago, the Sokos were to be a declared Marine Park. That indicates the level of the ecological value of the area. The marine area is an important fishery spawning and nursery ground. As well, seriously endangered species, such as the Chinese white dolphin, make their home in the waters of the Sokos.

Yet, now, out of all the potential sites Hong Kong has, the Sokos are the designated site for a major piece of infrastructure.

The list could go on. Suffice to say, the “structural” basis, the methodology and the inevitable conclusions of the EIA/Report are seriously questionable, and, regrettably, entirely consistent with Hong Kong's third world attitude to environmental protection.

## LEGISLATION DIGEST

### Air Pollution Control (volatile organic compounds) Regulations (Legal Supplement No. 2 to Gazette No. 6/2007)

#### Summary:

The Regulation was made pursuant to section 43 of the Air Pollution Control Ordinance to control the emissions of volatile organic compound (VOCs) and came into operation on 1 April 2007.

The Regulations contain the following key provisions:-

#### Section 3

Architectural paints with VOC contents above prescribed limits shall not be manufactured or imported into Hong Kong. The applicable prescribed limits are set out in Schedule 1 of the Regulation and will be introduced in phases from 1 January 2008.

#### Sections 4 and 5

Before the VOC limits come into effect, architectural paints with VOC content in excess of the prescribed limits must bear a warning label in the prescribed form.

#### Sections 6 and 7

All architectural paints manufactured or imported after 1 April 2007 must display information on VOC. Manufacturers and importers of regulated paints shall give information of the paint to the Authority prior to the sale or use of the same in Hong Kong.

#### Section 10

Printing inks with VOC contents above prescribed limits shall not be manufactured or imported into Hong Kong. The prescribed limits are set out in Schedule 2 of the Regulation and will be introduced in phases from 1 April 2007.

#### Section 13

Six categories of consumer products including aerosol products and air fresheners with VOC contents above prescribed limits shall not be manufactured or imported into Hong Kong. The prescribed limits are set out in Schedule 2 of the Regulation and will be introduced in phases from 1 April 2007.

#### Sections 8, 11 and 14

Manufacturers or imported of the regulated products shall submit a report to the authority annually on the sales volume of the regulated products in the preceding year.

#### Section 16

Owners of lithographic heat set web-printing machine shall have certified emission control devices installed on their machines to capture VOCs from printing process.

#### Sections 19, 20 and 21

Products that are already in the market by the time the regulations come into force, as well as products bound for export, in transit or not intended for sale in Hong Kong.

#### Section 22

Importers and manufacturers of regulated products shall keep records and documents containing the particulars of the regulated product manufactured or imported by them for a period of not less than 3 years after it is made and the Authority may require the importers or manufacturers to produce the same for inspection.

## TOWN PLANNING

### Petition delivered in move in block high-rises at historic site

Central residents and district politicians submitted to the Town Planning Board (TPB) a petition with more than 1,000 signatures requesting the TPB to make the former married police quarters

in the Hollywood Road available for community use instead of building two residential high-rise blocks.

The 64,000 square metre site is on the government's application list and developers will be permitted to build two 43-storey residential blocks there.

The Central and Western Concern Group, which organised the petition, has filed a rezoning application with the TPB. A member of the group said that the area is overdeveloped and it lacks open space. The majority of the residents hope the government will keep the site and turn it into a park and a community centre. Some also want the existing building to be preserved.

This has been the group's second attempt to save the site, where granite walls and stairs belonging to the building which occupied the site, the earlier demolished Central College, have been discovered. The discovery failed to deter the government from releasing the site for residential development.

Latest research conducted by the group showed that the land was the original site of Hong Kong's first Shing Wong Temple. The temple was demolished in the 1880s to allow the building of the Central College, later renamed Queen's College, which is now located in Causeway Bay. The residents' group hopes the Antiquities and Monuments Office will conduct comprehensive research of the historic value of the site.

The TBP will discuss the residents' application in April.

[SCMP, 24/02/07]

### Conservation groups fear the worst as market renewal plan edges closer

The Urban Renewal Authority (URA) submitted to the TPB last month the master layout plan of the redevelopment project of the area bordered by Cochrane, Gage and Wellington Streets, Central.

The project covers Hong Kong's oldest urban wet market, which is nearly 140 years old and occupied part of Peel, Graham and Gage streets. The plan proposes that two residential blocks of 30 and 32 storeys will be built on a podium, as well as a 33-storey office tower and a 26-story hotel on top of two four-storey podiums. Shops will be housed in the podiums.

Conservationists fear that the market is unlikely to survive the redevelopment. The Authority promised that three pre-war buildings in Graham Street would be preserved together with the street stalls, but it did not state how will this be done. Spokesman for the Food and Hygiene Department said about 40 licensed stalls will be affected by the project and the Department is now working on future arrangements with the hawkers affected.

The Hong Kong government last month began compiling an inventory of intangible cultural heritage, including street markets and *dai pai dong*.

Conservation groups are concerned that the market will not be preserved. Rents will rise, because hotels and expensive apartments will be built in the area. Current Owners of the small shops and stalls will not be able to afford the higher rents. There will be massive development along the very narrow streets. Some conservationists describe the master plan as "total nonsense".

After approval is given by the TPB, the Authority will begin compulsory resumption of affected properties.

This scheme is one of the 25 projects left over from the former Land Development Corporation. The URA's spokesman said it would face lawsuits if the projects were not implemented, as residents had been waiting for a "better environment" for a long time.

[SCMP, 25/02/07]

### Tsuen Wan pleads for air flows

Urban environment concern group *GreenSense* warned that a redevelopment project in western Tsuen Wan may impede air flow into the district's heart and stifle its historic dried seafood street.

The project will affect the narrow Chuen Lung Street, which partly adjoins Tsuen Wan's famous Goldsmith Square, popular for its inexpensive supplies of ginseng, birds' nests and dried seafood. The street will be subject to stagnant air and a lack of sunshine and shops will have difficulty in drying their products on the pavements under the sunlight, as they now do.

The Sino Group development, under the auspices of Urban Renewal Authority (URA), will cover 7,230 square metres and roughly one-third of the Tsuen Wan Sports Ground, is expected to yield 17,797 and 26,790 square meters of commercial and residential space respectively. Two tower blocks of Vision City phase two, for which the foundation work has been completed, will soar 45 stories, atop several stories of podiums.

*GreenSense* criticised the developers, saying that their only concern is for profit maximisation, and so they are cramming in as many units as possible into their sites. *GreenSense* maintains that this practice is completely contrary to sustainable planning and building. They are providing sea view space for the few by sacrificing intangible assets - like sunlight and sea breeze - of the many.

The group wants a halt to out-of-scale developments, and a communally holistic approach which considers both the surrounding environment and the concerns of the community. It has been appealing to the Planning Department to re-think its building designs so as to improve

urban airflow. It has also entered into discussions with the URA.

A survey of 1,576 Tsuen Wan residents found that more than 80 percent were gravely concerned about "wall effects" associated with skyscrapers. Nearly half of all respondents rated air quality as poor to very poor, and feared it will get worse. The URA insists there is nothing improper about the Tsuen Wan project, which has now been approved by the TPB.

[The Standard, 26/02/2007]

### Planned buildings will block sun and air

A number of legislators have opposed the construction of two tall buildings on Hong Kong Island's north shore facing Tsim Sha Tsui, saying they will have a "wall effect" and block air flow and sunlight in Central. One of the buildings is a 28-storey office block, while the other is an 18-story hotel.

Legislators belonging to the Democratic Alliance for the Betterment and Progress of Hong Kong said the buildings are too high and will create a wall-like effect and prevent the circulation of air while blocking out the sunlight from parts of Central. The proposed site was intended for low-density development and should be utilised for both commercial and public use.

They also pointed out that the plans for these buildings were drawn up more than 10 years ago when the public had a different perception of town planning and was not so aware of the problems created by dense, high-rise buildings.

Another legislator accused the government of looking at short-term gains instead of long-term benefits and urged the government to reserve an open space for the public and to build commercial blocks in other places, instead of merely focusing on economic returns by building there two high-rise blocks along the waterfront.

Spokesperson of the Planning Department said the proposed layout had been approved 13 years ago and had gone through the Regional Council and stressed that there was a high demand for top-grade commercial buildings in Central.

[The Standard, 09/03/07]

## HONG KONG BRIEFING

### Plant to tackle food-waste mountain

The Environmental Protection Department (EPD) is to conduct a trial in which a fraction of the city's food leftovers will be converted to fertiliser. The HK\$5 million trial will recycle into fertiliser four tonnes of food-waste a day. The trial has been proposed by the EPD to tackle directly a more than two-fold increase in the amount of food discarded by the hospitality industry in Hong Kong over the past five years.



The EPD is looking for a site for two composting units to process the waste into organic fertiliser. The scheme, which is expected to be launched by the end of year 2007, is aimed at reducing food waste generated by different sectors, including catering companies, restaurants, breweries and food manufacturers. These businesses account for nearly 30% of the commercial waste dumped at landfills.

Details of the scheme and its duration are still under consideration. Essentially, waste will be collected from participating businesses and transported to the composting units.

The restaurant trade admits that its customers are wasteful. They seldom eat everything that is brought to their tables, especially those people who enjoy buffets and hotpots which cause so much food to be wasted that some restaurants have already formulated policies to fine greedy and wasteful customers. The EPD's statistics show food-waste from hospitality sectors more than doubled from 282 tonnes a day to 701 tonnes between 2000 and 2005.

The pilot plant will have a capacity to treat four tonnes of waste per day and is expected to cost about HK\$5 million. The plant will be managed by consultants from Maunsell Environmental Management. They will turn the waste into about two tonnes of fertiliser per day for use on farms and as a soil conditioner for landscaping.

An odour-removal system will be designed to minimise smell caused by the composting process. The four-tonne capacity of the recycling units is about equivalent to the daily food waste generated by four Island Shangri-La hotels or six JW Marriott hotels.

JW Marriott's director of engineering and facilities said the hotel was interested in joining the scheme as it would reduce its expenditure on transporting waste to landfills. He said that the total volume of waste shrinks after separating food waste from garbage. They will need fewer trucks for transporting waste and the cost will be lower. He also said that it would be impractical for the hotel to recycle its own food waste because it had no room for the composting machine. He said that a food-waste recycling factory was needed for the commercial sector.

The director of communications of Island Shangri-La hotel said that the hotel collects 1.2 tonnes of food waste from its restaurants and staff canteen daily, consisting mainly of rice, vegetables and surplus food from buffets.

[SCMP, 21/02/07]

### Hong Kong marine parks are ineffective

A ten year monitoring programme has concluded that marine parks in Hong Kong have failed to boost numbers and species of fish because commercial fishing is allowed within the parks.

The conservation director of WWF (HK), Andy Cornish, said that the parks are supposed to be nursery grounds for fish, but are proving to be ineffective in conserving and boosting fish stocks. Dr Cornish started the fish programme monitoring when the Hoi Ha Wan Marine Park was established in 1996. He said that the parks' objectives have been defeated by over-exploitation by commercial fishers, to the extent that only small fish are left.

The survey of Tung Ping Chau recorded seven species in 1996 and last year, whilst the survey of Hoi Ha recorded eight and four species respectively. At Tung Ping Chau, 25 fish were recorded in 1997 and the number doubled to 50 last year. But fish at Hoi Ha Wan decreased from 33 in 1997 to 23 in 2006. The size of surveyed area in both marine parks was 20 metres long and 3 metres wide, in line with international scientific sampling standards.

Dr Cornish said that if we average the data collected during all survey-dives concluded over the ten year periods, there is no statistical difference between surveys carried out in 1997 and 2006, and the average weights of the fish remain unchanged. Monitoring covered only two of the marine parks, so the situation in the Yan Chau Tong, Sha Chau and Lung Kwu Chau marine parks remains unclear.

Commercial fishing by licensed fishers, using methods such as line and hook, fish traps and gill nets, is permitted in marine parks. Yvonne Sadovy, who is an associate professor of the department of ecology and biodiversity at the University of Hong Kong and was not involved in the survey, said that marine parks need proper management. The government is too short-sighted if it thinks banning commercial fishing will end fisher's livelihood. Dr Sadovy urged the government to ban commercial fishing in marine parks, or at least the government should have an agreement with fishers to reduce the amount of fish catches allowed.

A spokesman for the Agriculture, Fisheries and Conservation Department said the department issued permits only to bona fide fishers who conduct non-destructive fishing in marine parks. There are about 30 fishers operating in the Hoi Ha Wan and Tung Ping Chau parks. He said that the number of valid fishing permits is expected to further decrease through natural wastage, as these permits are non-transferable and non-inheritable. Permits issued for the Hoi Ha Wan and Tung Ping Chau marine parks have fallen from 546 in 1997 to the current level of 290.

[SCMP, 15/02/07]

### Hong Kong warned as border city faces disaster

According to a city government report, the Shenzhen mangroves are dying and Mai Po could be the next neutral area to be threatened by Deep Bay pollution. The mangrove forests of Shenzhen

are dying because of rapid urbanisation, industrial pollution and invasion by alien species. Several experts warn that Hong Kong's internationally important Mai Po wetland could be under threat if mainland authorities do not take immediate action.

Shenzhen has 169.7 hectares of mangrove forest, which make up one of China's most important wetland conservation zones. Due to the city's rapid development, the size of the wetland has shrunk by half in the past two decades. According to a Shenzhen government study, over 60% of species have disappeared from the mangroves. There are more than 100 bird, plant and fish species, some of them endangered, living in the Futian mangrove forest conservation zone, which is one of only two national mangrove reserves in China.

An official in charge of the mangrove forests in Shenzhen attributed the problem to reckless urbanisation and industrial pollution, because many factories and residential communities discharge untreated sewage into Deep Bay. According to the government study, there is a high level of heavy metal contamination in waters inside the conservation zone, and the waters were worse than the lowest measurement of water quality, grade five. Grade-five water is deemed to be heavily polluted.

Shenzhen's mangrove forest is surrounded by pig and fish farms. Run-off from the farm makes the waters overly nutrient-rich, which encourages non-native seaweed species to grow rapidly. The seaweed has seriously affected mangroves in Hong Kong and Shenzhen.

The director of the Shenzhen Bird Watching Society, who is an expert on mangroves, said the problems exist in the general environment in Deep Bay, which could face an ecosystem collapse at any time. If the Shenzhen mangrove forests disappear, it will be a fatal blow to Hong Kong's mangroves.

The Mai Po nature reserve is a major over-wintering ground for scores of migratory bird species, including the endangered black-faced spoonbill. Academic research in Hong Kong has shown that high levels of heavy metals in Deep Bay hamper birds' ability to raise their young. Paul Lam Kwan-sing of City University's department of biology and chemistry said heavy metals were found in eggs and feathers of birds at Mai Po during research conducted from 2000 to 2002. He urged the Hong Kong government to identify sources of pollutants immediately and to ensure that sewage treatment plants across the border operate properly. Mai Po Reserve manager said that once heavy metals entered the food chain, the birds there would be endangered.

The Environmental Protection Department does not monitor heavy metals in seawater, saying concentrations are usually very low. To prevent further depletion, the Shenzhen government has said it will invest 300 million yuan in the coming years to restore the mangrove forests.

The money will be spent on water treatment, rebuilding habitats for birds and moving traffic away from the conservation zone. However, mainland government experts say it will take 10 to 20 years for these measures to take effect.

[SCMP, 06/02/07]

### River water quality improves

Due to persistent efforts of the Environmental Protection Department (EPD), compliance with water quality objectives (WQO) for Hong Kong's rivers has increased from 49% in 1986 to 85% in 2005. About 81% of monitoring stations now have their water quality indices rated either excellent or good, and compliance with marine water quality objectives has risen from 76% to 85%.

A Senior Environmental Protection Officer attributed the success to long-term, regular monitoring, effective regulation, and improvements to sewage treatment and sewerages. Since the implementation of the *Water Pollution Control Ordinance* in the 1980s, 10 water control zones have been created in phases. At present, the EPD has 82 monitoring stations on 30 rivers, and conducts on-site sampling monthly to gauge the extent of pollution.

At the end of 2001, the first stage of the Harbour Area Treatment Scheme was launched, which had a positive impact on Victoria Harbour. Under the scheme, Stonecutters Island Sewage Treatment Works treats 1.4 million cubic metres of sewage per day from Kowloon to the Eastern part of Hong Kong Island. Treated sewage accounts for about 75% of all wastewater from the harbour catchment area. Treatment removes approximately 80% of suspended solids and 70% of biochemical oxygen demand from sewerage. The EPD plans to initiate the second stage of the scheme by 2009, subject to public support for increased sewage charges to cover operating costs.

However, approximately 14% of the monitored rivers were still rated 'bad' or 'very bad' and overall compliance in the northwestern New Territories was less than for the other three river zones. Different kinds of measures will be implemented in order to improve the rivers in the coming years, such as building public sewers for unsewered villages under the Sewerage Master Plans, thereby reducing domestic discharge into rivers and so alleviating pollution.

[Hong Kong Government News, 20/02/07]

### Green private car scheme to launch

From April 1, the Environmental Protection Department (EPD) says the buyers of newly registered environment-friendly petrol private cars will enjoy a 30% cut in the first registration tax subject to a ceiling of \$50,000 per car.

The environment-friendly petrol cars emit 50%

fewer hydrocarbons and nitrogen oxides and consume 40% less fuel than conventional Euro IV petrol cars. Moreover, they emit 40% less carbon dioxide, which is a key greenhouse gas contributing to global warming.

In helping car buyers to choose environment-friendly petrol cars, the EPD will issue certificates to cars which comply with the qualifying standards. A vehicle owner who applies to the Transport Department for first registration of his/her private car which is issued with a valid environment-friendly private car certificate will be entitled to the tax cut. Those cars without a valid environment-friendly private car certificate will not be eligible for the tax reduction. Car buyers should confirm with sellers the availability of the certificates when considering buying environment-friendly private cars.

The qualifying standards will be reviewed and tightened annually in line with technological advancements, with the aim of restricting the incentive scheme to cars of truly outstanding emission and fuel-efficiency performance.

[Hong Kong Government News, 28/02/07]

### Green groups call for tougher policies

Local environmental groups have requested the next Chief Executive to commit his government to a comprehensive clean-air policy as part of more effective conservation and heritage protection. They hope the newly elected Chief Executive will embrace international environmental protection trends when considering the sustainability of development and policy formulation.

The groups have also urged the next chief executive to consider incorporating environmental conservation and heritage preservation considerations into the government's decision-making processes.

They have demanded that the government: formulate a comprehensive strategy to fight air pollution based on World Health Organization guidelines; provide adequate financial resources for environmental protection; and confront and properly deal with town planning and transportation issues.

Moreover, they want the government to create a Climate Change and Energy Bureau to centralise efforts to combat air pollution, and to impose a carbon dioxide cap on power-generation companies. They also proposed energy-saving targets, and that Hong Kong work more closely with regional neighbors to promote clean energy.

[The Standard, 13/03/07]

### Too much light in Hong Kong

Environmental concern group *GreenSense* is concerned with the environmental effects of the 670-odd neon signs and illuminated signboards

dotting Mong Kok and Tsim Sha Tsui streets and operating past the 11pm cut-off time for noise-levels, and well after the businesses had closed for the day.

*GreenSense* said that this excessive lighting consumes a lot of energy which will exert greater demand on fossil fuels and will increase air pollution. The group is petitioning for legislation to limit the size and density of outdoor advertising lights to reduce frivolous energy use.

According to *GreenSense*, few residents living in and around the heavily lit areas were found using their own house lights. Some said the ambient light from the signs was more than enough to light up their homes, whilst other neighbors were forced to use thick curtains to block out the lights.

The Chairman of the Hong Kong University Astronomy Club said that air pollution obscuring the city was similar to the effects of light pollution, with the latter exacerbating the former. According to the Environmental Protection Department, the number of complaints concerning light pollution continues to rise. Meanwhile, environmental group, Friends of the Earth, has demanded that the government help cut electricity use in the territory in order to cut air pollution. They said if Hong Kong cut its power consumption, our carbon dioxide emissions would be lowered.

[The Standard, 12/03/07]

## ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)

### Encouraging owners to change to more environmentally friendly diesel commercial vehicles

(ACE Paper 2/2007)

#### Purpose

This paper consults the ACE's members on the government's proposal to encourage vehicle owners to replace pre-Euro and Euro I diesel commercial vehicles with Euro IV models by offering a time-limited, one-off grant. The scheme will come into effect on 1st April 2007 if approved by the Finance Committee of the Legislative Council.

#### Justification

Road vehicles are the second largest source of air pollution in Hong Kong, contributing to 25% and 27% of the territory-wide emissions of respirable suspended particulates (RSP) and nitrogen oxides (NOx) respectively. Of the vehicle fleet, diesel commercial vehicles are key contributors of air pollution which account for 90% and 80% of the total vehicular emission of RSP and NOx respectively.

Compared with their Euro IV counterparts,

pre-Euro vehicles emit 30 times more RSP and twice the volume of NO<sub>x</sub>, whereas Euro I vehicles emit 15 times more RSP and 1.5 times more NO<sub>x</sub>. If all pre-Euro and Euro I diesel commercial vehicles are replaced by Euro IV models, vehicular emissions of RSP and NO<sub>x</sub> will be reduced by 74% and 38% respectively, and Hong Kong's emissions of RSP and NO<sub>x</sub> will be reduced by 18% and 10% respectively. If background air pollution does not worsen, the reduction in emissions of these polluting gases will result in marked improvement to roadside air quality.

Many of Hong Kong's pre-Euro vehicles are close to the end of their normal service life (12 to 15 years). Assuming that on average such vehicles can operate for one to two years more, the government proposes to set an incentive at 12% of the average vehicle taxable value of the newly registered vehicles in the same class. The grant is comparable to the level of the First Registration Tax for medium and heavy goods vehicles.

Euro I vehicles are relatively younger and some of them are still within their normal service life. In order to compensate owners for losses and to maintain the attractiveness of the scheme, it is proposed to provide owners with a grant of 18% of the vehicle taxable value of newly registered vehicles in the same class, which is 50% higher than the proposed incentive level for pre-Euro vehicles.

Light buses which run on liquefied petroleum gas (LPG) are more environmentally friendly than diesel models. The government proposes that the owner of a pre-Euro or Euro I diesel light bus will be eligible for an incentive of \$80,000, \$60,000 and \$40,000 for replacement with electric light bus, Euro IV LPG light bus, and Euro IV diesel model respectively. The different levels of incentives for electric, LPG and diesel light buses reflect their relative capacity to bring about environmental benefits.

### Consultation

The government has consulted with: relevant transport trades; the Hong Kong Motor Traders Association (HKMTA); the Right Hand Drive Motor Association; and authorised vehicle dealers. Those consulted support the proposal, except that the relevant transport trades have the following suggestions:

- (a) The government should not compel the retirement of pre-Euro and Euro I diesel commercial vehicles by legislation or other means.
- (b) The grant should be pegged to the category to which the original vehicle belongs, even if the replacement vehicle belongs to a category with a lower incentive level.
- (c) Some cross-boundary transport operators have asked for the grant to be doubled and the incentive period to be extended.

- (d) Some transport trade members have suggested that eligible vehicle owners should not be required to acquire replacements. In other words, they should be given the grant solely for scrapping their vehicles.

After careful consideration of the above suggestions, the government responded as follows :-

- (a) The government has no plans to make the retirement of pre-Euro and Euro I diesel commercial vehicles mandatory. As vehicle replacement is a heavy financial burden for operators, those who cannot afford to replace their vehicles will be forced out of business.
- (b) If the amount of the grant is pegged to the category of the original vehicles, the vehicle owners concerned will pocket part of the grant by acquiring Euro IV commercial vehicles with a lower incentive level as replacements. This is not in conformity with the purpose of the grant scheme and the principles governing public finance management.
- (c) The government does not consider that there is a good case to double the grant for cross-boundary diesel commercial vehicles. It also has reservations as to the extension of the grant period because such extension will defeat the purpose of encouraging early replacement of the polluting vehicles with new Euro IV vehicles.
- (d) The acquisition of Euro IV diesel commercial vehicles should remain a pre-requisite for the grant as the purpose of the proposed scheme is to help those who will stay in the business, but not to provide extra cash for those winding up their business.

### Financial and civil service implications

The proposed scheme will cost the government approximately \$3.176 billion if all eligible vehicle owners take up the grant, exclusive of the time-limited resources of about \$3.53 million for administering the grant.

### Proposal for applying the “polluter-pays principle” in the provision of sewage services, and progress update on Harbour Area Treatment Scheme Stage 2A

(ACE Paper 5/2007)

#### Purpose

This paper invites the views of the ACE's members on the government's proposal for applying the polluter-pays principle in the provision of sewage services and reports progress to date on preparations for proceeding with the Harbour Area Treatment Scheme (“HATS”) Stage 2A.

### Background

#### Improvements brought about by HATS Stage 1

The commissioning of HATS Stage 1 at the end of 2001 has resulted in significant water quality improvements in most parts of Victoria Harbour. Every day about 1.4 million tonnes of sewage generated on both sides of the harbour are collected and treated. As a result, dissolved oxygen levels in the harbour have increased by about 10% overall and *E. coli*. (an indicator of disease-causing organisms) levels have reduced by more than 50%.

#### Expanding the sewage services

However, sewage from the remainder of the northern and western sides of Hong Kong Island continues to be discharged untreated into the Harbour area. In order to deal with this situation, the government proposes to proceed with HATS Stage 2A as soon as possible. The project will entail building deep tunnels to transfer the untreated sewage to Stonecutters Island where it will receive treatment and disinfection.

Apart from HATS Stage 2A, the government also plans to update sewage infrastructure and has earmarked funds to connect various villages to the public sewage system, which will prevent their sewage from polluting the nearby rivers and sea areas.

#### Review of the SC element of the scheme

Under the existing sewage services charging scheme, each member of the community whose wastewater is collected and treated by the public sewage system contributes to the costs. However, the Sewage Charge (“SC”) has never been adjusted in the 11 years of the scheme's existence and the SC now covers only 54% of the costs attributed to it.

It is estimated that the above projects will increase the annual operating expenditure of sewage treatment services from \$1,150 million to \$2,450 million in about 10 years' time. In order to support the operation of HATS Stage 2A and other new sewage treatment facilities, the government proposes a modest and gradual adjustment plan that aims at recovering about 80% of the projected operating cost through 10 annual increments. This means that the average SC for domestic services will increase from about \$11 per month at present to about \$27 per month in 2016/17.

The SC is imposed by the Sewage Services (Sewage Charge) Regulation. To implement the fee increment, it is proposed to set out the SC rates in the coming 10 years in a single item of subsidiary legislation.

#### Review of the TES element of the scheme

The government has also reviewed the Trade Effluent Surcharge (“TES”) element of the scheme. Each TES trade is allocated a generic



value for its effluent Chemical Oxygen Demand (“COD”), on which the charge rate for the relevant trade is determined. Based on empirical evidence they supply, individual account holders may apply to have their charge rates reduced. In order to offer sufficient financial incentive for TES trades to reduce the quantity of pollution discharged, it is proposed that the reassessment period should be extended from 1 year to 2 year and the sampling requirement for small TES accounts be reduced from 3 days to 2 days.

#### Public consultation and response

The government has consulted green groups, academics, members of the ACE and the Panel on Environmental Affairs of the Legislative Council (“LegCo”) about the proposal for applying the polluter-pays principle in the provision of sewage services. Key issues raised in the course of the consultation and the government’s response are summarised below:-

- (a) LegCo members and members of the public reaffirmed their support for adhering to the polluter-pays principle in the provision of sewage services.
- (b) Some LegCo members expressed concern about the economic, legal and political implications of approving the proposed SC adjustment over a 10-year period. The government has explained that the proposed 10-year period is necessary so as to ensure that increments are introduced in a modest, gradual and predictable manner.
- (c) There was general support for timely implementation of HATS Stage 2A to bring about further improvements to the water quality in Victoria Harbour.
- (d) There were different views in the community on the timing for implementation of HATS Stage 2B. The government reiterated that it would continue to move forward with Stage 2A while at the same time monitoring population and sewage flow build-up, and water quality trends, in preparation for a review of the timing of the implementation of Stage 2B in November 2010.
- (e) In response to the concern of a number of green groups about the possible environmental impact of the use of chlorination and dechlorination for disinfection, the government has commissioned an environmental impact assessment (EIA) of the provision of disinfection facilities at the Stonecutters Island Sewage Treatment Works. The government will not use chlorination/dechlorination if the on-going EIA ultimately concludes that this technology will lead to unacceptable environmental consequences.
- (f) The restaurant trade urged early implementation of a revised TES rate for the trade and expressed some concerns about the impact of the proposed SC increment on the trade. The government’s response was that

it aimed to complete the effluent surveys within a year and then make the required adjustments to the generic COD values. The impact of the proposed SC increment on restaurants will be modest. About 80% of them currently pay less than \$500 SC per month.

#### Progress update on HATS Stage 2A

In October 2005, the Chief Executive announced in his Policy Agenda the decision to proceed with HATS Stage 2 in two phases by adopting centralised sewage treatment at the Stonecutters Island Sewage Treatment Works (“SCISTW”). In Stage 2A, the remaining untreated sewage from Hong Kong Island will be collected and transferred to an expanded SCISTW for chemical treatment prior to discharge. In Stage 2B, chemical treatment by the addition of biological treatment will be further upgraded.

Progress of the HATS Stage 2A is summarised as follows:-

- (a) The government commenced the EIA for HATS Stage 2A in February 2006. The objective of the EIA is to identify potential environmental and ecological impacts during the construction and operation of the whole HATS Stage 2A project.
- (b) The main site investigations commenced in November 2006 and are well underway, with completion of investigations for the sewage conveyance system programmed for the latter half of 2008.
- (c) Planning and design of the sewage conveyance system commenced in January 2006 and is targeted to be completed in late 2008. Current progress is satisfactory.
- (d) The EIA for the provision of disinfection facilities at SCISTW commenced in July 2005 and is expected to be completed in the second quarter of 2007. The final report will then be made available for public inspection and comment under the *Environmental Impact Assessment Ordinance*.

## REGIONAL & INTERNATIONAL

### China

#### *Polluting paper mills to be shut down*

Hundreds of paper mills surrounding Hunan’s Dongting Lake face closure in a renewed crackdown on polluters by the Hunan Environmental Protection Bureau. At least 46 paper factories, blacklisted over environmental concerns, will no longer be allowed to operate.

A bureau official said the provincial government planned to shut down 234 paper mills in three lake-side cities—Yueyang, Yiyang, and

Changde—by the end of the year in response to an order by Premier Wen Jiabao, who was reportedly shocked in October 2006 by reports detailing the extent of the lake’s pollution.

Paper mills began operating around the Dongting Lake in the 1990s, attracted by an abundance of reeds used to make paper. The lake produces more than 700,000 tonnes of reeds a year, according to government figures.

Wu Fucheng, a professor at the Hunan Normal University’s College of Environmental Science, said serious pollution issues surfaced soon after the factories were built. Professor Wu said authorities tried to shut down many of the smaller operations in 1996 but the number of paper mills in the area only grew. “Shutdowns are useless as long as you leave their machinery intact,” he said. “They restart production and pollution emissions as soon as the inspection team leaves.”

In its 11th five-year plan, the Hunan government projected a 3.5 million tonne capacity for the province’s paper industry—three times higher than the current output. The bigger plants are likely not only to continue to dump pollutants into the shrinking lake, but also to have a greater capacity to alter the lake’s ecological system.

[SCMP, 03/04/07]

#### *Waste water fees to be introduced*

China will introduce waste water and rubbish-treatment fees in all cities and towns by the end of this year in a further effort to improve its deteriorating environment, Xinhua reported.

“Education alone cannot bring about a unified action,” the National Development and Reform Commission deputy director was quoted as saying at a conference in Chengdu, “We need to employ economic leverage to effect a change.”

[SCMP, 03/04/07]

#### *Plan to cut water consumption by 2010*

The Ministry of Water Resources has declared that China plans to cut its water consumption by 20% by 2010, or an annual drop of 4% during the period 2006-2010. If everything goes according to plan, the nation can save a total of 69 billion cubic metres of water in the five-year period.

According to the Ministry’s statistics, China’s per unit GDP water consumption in 2004 was four times the world average and eight times that of the United States and other developed countries. Only 60% to 65% of water used industrially was recycled. China’s per capita water resources is about 2,200 cubic metres, equivalent to one-fourth of the world’s average.

[China Daily, 23/02/07]

#### *Beijing: First to release green GDP report*

As one of 10 participants in the 2004



Environmentally Adjusted GDP Accounting pilot project, Beijing is the first to release its green gross domestic product (GDP) report, covering the municipalities of Tianjin and Chongqing, and the provinces of Hebei, Liaoning, Anhui, Zhejiang, Sichuan, Guangdong and Hainan.

The GDP report shows that in 2004 Beijing required 3 billion yuan more than the earmarked 5 million yuan to treat its total pollutant discharge.

The economic damage caused by pollution in Beijing in 2004 was about 11.7 billion yuan, or 1.92% of its 606 billion yuan GDP. Air pollution caused the greatest damage, resulting in an economic loss of 9.5 billion yuan. Water pollution and solid waste caused the second and third greatest damage respectively.

However, the green GDP report is just the tip of the iceberg in showing the extent of environmental damage, for it does not cover natural resources depletion and ecosystem destruction, nor even take into account soil, underground water, indoor air, noise or radioactive material pollution.

The green GDP report, released in September 2006, was calculated by deducting the cost of environmental degradation from traditional GDP. The report is intended to show the environmental cost exacted by economic growth.

[China Daily, 14/02/2007]

*Lofty aim to reduce major pollutants by 2% this year*

Experts are concerned that China's plan to reduce major pollutants by 2% this year might have set the bar too high. The target is part of a five-year effort to reduce pollution by 10% and to clean up the country's environment.

According to the director of the National Development and Reform Commission's Institute of Energy Research, it will be hard for China to reduce pollution by 10% by 2010, while at the same time trimming energy consumption per unit of gross domestic product (GDP) by 20%, given that the country's GDP growth is so rapid.

Most experts in attendance at a symposium in Beijing organised by the State Environmental Protection Administration (SEPA) expressed similar sentiments. SEPA missed its target of reducing sulphur dioxide (SO<sub>2</sub>) and chemical oxygen demand (COD), a measure of water pollution, by 2% last year, and did not succeed in its goal to cut energy consumption per unit of GDP by 4%.

When the government drew up its pollution reduction and energy conservation plans, it was assumed that the country's annual GDP growth rate would be 7.5%. At that rate, coal consumption was expected to grow to 2.56 billion tonnes by 2010, whilst installed power-generating capacity was expected to be 700 million kilowatts. Under

those conditions, and only if all new development projects met modern environment-protection standards, the 10% pollution-reduction target, as well as the goal of cutting SO<sub>2</sub> emissions by 5 million tonnes, would be achieved.

However, China's GDP is expected to continue to grow at a rate of 9% per annum until 2010. Every percentage point of GDP growth will increase coal consumption by 20 million tonnes, and SO<sub>2</sub> emissions by 300,000 tonnes.

Experts have said that China would not meet its pollution-reduction goals if the country did not find a more sustainable way to spur GDP growth.

[China Daily, 13/02/2007]

*Indifference is more formidable than imported garbage*

Recently Britain's Sky News TV broadcast an investigative report titled "Are you poisoning China?", revealing how British plastic waste is transported and dumped in Lianjiao Village in Foshan, Guangdong Province.

There has been a tide of imported waste dumped in China since the 1980s. However, in recent years the public has rarely paid any attention to the matter, thinking such waste has been blocked from entering the country. In fact, the reality is quite shocking. It is reported that China exports \$31 billion worth of goods to Britain every year and receives 1.9 million tonnes of rubbish in return.

More surprising than this is the fact that foreign media are the first to report the problem. The local government and public in China have shown much less astonishment and disappointment than the British. Some local officials have even said it is a process of modernisation.

Chinese people are probably not shocked because they do not have as strong a sense of environmental protection as British people, or because they pay too much attention to economic growth at the expenses of sustainable development, or because imported garbage is just too common to surprise them. The indifference of the local government and public is of much more concern than the imported garbage itself.

Public indifference can also be explained in the following ways: firstly, the waste has produced an increase in local GDP numbers; secondly, local people are making a living from processing plastic waste; thirdly, profits produced have benefited some powerful people in China.

[China Daily, 29/01/2007]

## Australia

*Fines collected for environmental purposes*

Fines collected for offences under Tasmania's

environment laws are being used to improve the state's environment. According to the environment minister, projects to reduce the number of mobile phones, computer equipment, televisions and metals dumped in landfill are among those to receive a grant from the Environment Protection Fund (EPF). Local government and not-for-profit organisations share in A\$40,000, which will be used for recycling and recovery projects.

The EPF mainly is funded from fines and penalties resulting from prosecutions under the *Environmental Management and Pollution Control Act*. The EPF is administered by the Environmental Management and Pollution Control Board. Last year, the board called for submissions of environmental management projects for funding, which were rated on their ability to enhance recycling or resource-recovery rates, and to increase community awareness of environmental issues.

Those who share in the A\$40,000 are Glenorchy City Council, Central Highlands council and George Town council, along with the Mt Roland Rivercare Catchment project and Sustainable Living Tasmania.

[AAP Newsfeed, 25/02/07]

## Northern Hemisphere

*Warmest northern winter*

US scientists yesterday announced that the northern winter just ended was the warmest on record. They also said the December-February period was the hottest on record around the globe in terms of land surface temperatures. Land temperatures around the world have been increasing at three times the rate they were prior to 1976.

The US National Oceanic and Atmospheric Administration reported that during the past century global surface temperatures had increased by 0.06C per decade, but the rate of increase had been 0.18C per decade since 1976. Temperatures have been going up since the 1800s, and the warmest 10 years on record globally have all occurred since 1995.

Even though many scientists are becoming accustomed to record high temperatures, the extreme warmth at the beginning of the year was quite startling.

The combined global land and ocean surface temperature in January was 1.53 degrees (Fahrenheit) warmer than the 20th century average of 53.6 degrees (12C) – and still significantly higher than the previous record set in 2002 at 1.28 degrees above average.

The NOAA yesterday said the global ocean surface temperature was equal to the second-warmest in the 128-year period of record.

[The Weekend Australian, 17-18/03/07]

## Korea

### *Emission control devices to be installed to diesel-powered trucks*

Seoul's Metropolitan Government will require diesel-powered trucks to install emission control devices by the end of 2008. Owners who fail to abide by the new rules will be fined. Every diesel-powered vehicle which weighs more than 3.5 tonnes and has been used for over seven years will be required to install DPF (diesel particulate filter) mufflers. From 2009, the requirement will expand to vehicles which weigh between 2.5 tonnes and 3.5 tonnes and are more than seven years old.

Owners who fail to install mufflers will face restrictions in low-emission zones designated by the city. The zones include downtown areas and the financial districts of southern Seoul, and will be expanded to cities such as Incheon, Songnam, Koyang, Suwon and other areas after 2009. Offenders will also have to pay fines in the form of "congestion charges".

The regulations are part of an initiative to improve the air quality of the Korean capital. Level of particles in the air is currently set at 60 micrograms per cubic metre. The city wants to lower that to 46 micrograms per cubic metre by 2010.

Seoul is following the examples of cities such as Stockholm, which has reduced its levels of dust particles in the air by nearly 40% by controlling emissions from cars.

Seoul is also considering increasing the use of alternative energy sources in buildings and public facilities, such as waste disposal plants and water supply and drainage facilities. Every new public building will be required to invest at least 5% of its construction cost in non-oil energy generators, such as solar panels. New residential apartments built by city agencies, including properties to be built under the "New Town" projects in the northern part of the city, will be designed to be eco-friendly as well.

[Korea Times, 23/02/07]

## Malaysia

### *Hainan turtle poachers*

Seventeen poachers from China have been caught with 240 protected turtles, most of them dead, in the second such seizure in Malaysia this week. Only 20 of 240 hawksbill and green turtles were found alive after marine police arrested the poachers from China's southern Hainan province, off the coast of eastern Sabah state.

The World Conservation Union lists the hawksbill turtle as critically endangered and the green turtle as endangered.

The arrests follow a similar incident on Monday

off Sabah's waters, when marine police detained 19 men from Hainan with 78 turtles, most dead as well.

Turtles are hunted in Malaysia for their meat and valuable shell.

China is a major importer of turtles from Asia for food and medicinal purposes. Aggressive illegal poaching in Southeast Asian countries has seen sea turtle numbers falling.

[SCMP, 30/03/07]

## Indonesia

### *US mining giant facing ruling on pollution*

US mining giant Newmont, the world's largest gold miner, has been charged with dumping tonnes of toxic waste, including mercury and arsenic, into Buyat Bay from its mine on Sulawesi Island before it was shut in 2004.

A court in nearby Manado is expected to rule on whether the company's local subsidiary, Newmont Minahasa Raya, and its American chief executive, Richard Ness, polluted waters around a bay over several years, poisoning villagers and killing marine life. Newmont and Ness have denied any wrongdoing.

In February, Newmont said it would pay US\$30 million in damages over 10 years. The Environment Ministry lodged the case last year, seeking damages of US\$133 million. Newmont could be fined another US\$100,000 if judged guilty in a separate verdict today.

Several thousand residents of a nearby village, and foreign investors and environmentalists, anxiously await the outcome of the three-year controversy.

Some from Buyat village just outside the bay and downhill from the defunct mine, complain of tumours, skin rashes and headaches – illnesses they blame on Newmont's waste.

Other families suffering from illnesses have moved away after complaints first emerged of pollution in 2004, a village leader said.

"We asked the government to relocate people from the bay who were suffering the most," said Faisal Papatungan, 64, who has aches in his feet and cramps. He said that every month about 200 residents visit a local health centre.

"Before 1999 the number of people coming to the centre was a lot less than that," said Fatlun Gonibala, a nurse at the centre.

But studies of water and marine life around Buyat Bay, and of village wells, have offered conflicting results. A World Health Organisation-backed report and testimony from experts, during the trial against Newmont, showed mercury and arsenic levels were within normal limits.

But Budi Haryanto, an epidemiologist in the University of Indonesia, said a study conducted for the government showed unacceptable levels of the poisons in samples taken from some locals.

"Whatever Newmont does, it cannot cover the fact that there was a problem and it came after the mine opened," Mr Haryanto said.

[Agence-France Presse, 24/04/07]

### *US gold-mining company cleared of dumping toxins in Sulawesi bay*

An Indonesian court on 24 April 2007 cleared the local unit of Newmont Mining and the unit's American president of dumping toxic waste into a bay near a gold mine in North Sulawesi.

Prosecutors had wanted to go after company executive Richard Ness for three years in a high-profile pollution case closely watched by international business leaders, environmentalists and the Indonesian government.

Newmont said last month it might reconsider its investments in Indonesia if Mr Ness was found guilty. Its Indonesian operations contribute about 6 per cent of its worldwide gold sales.

"Pollution charges against Newmont Minahasa Raya and Richard Ness cannot be proven," chief judge Ridwan Damanik told the court. However, much of the testimony centred on tests of water samples taken from the bay. A dozen laboratories, including one at the World Health Organisation, tested samples.

A team led by Indonesia's Environment Ministry said in 2004 that arsenic and mercury content in tailings dumped by Newmont in Buyat Bay from its now-defunct gold mine had contaminated sediment and entered the food chain.

Newmont and Mr Ness told the court that waste-management processes were set out in an environmental plan mandated under a contract signed with the government. There were test results on air quality, water and soil submitted quarterly over eight years.

Analysts had said a defeat for Newmont would have deterred investors from putting their money in the mining sector, which has not seen fresh investment for years.

[SCMP, 25/04/07]

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This Quarterly Report does not constitute legal advice given on any particular matter. Whilst all effort has been made to ensure completeness and accuracy at the time of publication, no responsibility is accepted for errors and omissions. Further information and enquiries in respect of this quarterly should be directed to Fred Kan & Co.

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**Convictions under environmental legislation: December 2006 to March 2007**

[Note: the EPD no longer classifies second (and subsequent) offences.]

The EPD's summary of convictions recorded and fines imposed during the above period is as follows:

*December 2006*

Twenty-three pollution convictions in December 2006

Sixteen of the convictions were under the Air Pollution Control Ordinance, five under the Waste Disposal Ordinance, one under the Noise Control Ordinance and one under the Water Pollution Control Ordinance.

The heaviest fine in December was \$30,000, imposed on a person who discharged substandard liquid livestock waste.

A person exporting controlled waste without a permit and failing to engage service of a waste collector received concurrent sentences of six months' imprisonment, suspended for two years, for each offence.

An effective sentence of 200 hours of community service was handed down against a person who exported controlled waste without a permit and failed to engage the service of a waste collector.

*January 2007*

Forty-two pollution convictions in January

Twenty-two of the convictions were under the Waste Disposal Ordinance, 13 under the Noise Control Ordinance, four under the Air Pollution Control Ordinance, and two under the Water Pollution Control Ordinance, and one under the Ozone Layer Protection Ordinance.

The heaviest fine in January was \$50,000, handed out to a company that contravened the provisions of a licence.

*February 2007*

Twenty-four pollution convictions in February

Fifteen of the convictions were under the Air Pollution Control Ordinance, five under the Waste Disposal Ordinance, three under the Noise Control Ordinance, and one under the Water Pollution Control Ordinance.

The heaviest fine in February was \$100,000, imposed on a company which used powered mechanical equipment without a valid construction noise permit.

*March 2007*

Thirty-two pollution convictions in March

Seventeen of the convictions were under the Air Pollution Control Ordinance, 10 under the Waste Disposal Ordinance, three under the Water Pollution Control Ordinance, and two under the Noise Control Ordinance.

The heaviest fine in March was \$40,000, ordered against a person who imported controlled waste without a permit.

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