

# FRED KAN & CO.

Solicitors & Notaries

## URBAN PLANNING AND ENVIRONMENTAL LAW QUARTERLY

(Published since May 1992)

簡家驄律師行 · 城規環保簡訊

*In this edition we review the dissertation (MSc in Environmental Management, HKU) awarded the 2009 Fred Kan & Co. prize. The dissertation deals with an extremely important environmental issue in China (and the world generally): environmental impacts of chemical pollutants.*

*The editors wish everyone the compliments of the season and a prosperous and environmentally harmonious 2010.*

*The Editors*

### CONTENTS

FEATURE:	Page
ENVIRONMENTAL IMPACTS AND MANAGEMENT OF PERSISTENT ORGANIC POLLUTANTS IN SOUTH CHINA .....	1
LEGISLATION DIGEST .....	2
TOWN PLANNING.....	3
WEST KOWLOON CULTURAL DISTRICT (WKCD) .....	4
HONG KONG BRIEFING .....	4
ADVISORY COUNCIL ON THE ENVIRONMENT (ACE) .....	5
REGIONAL & INTERNATIONAL .....	8
PROSECUTION STATISTICS.....	12

### ENVIRONMENTAL IMPACTS AND MANAGEMENT OF PERSISTENT ORGANIC POLLUTANTS IN SOUTH CHINA

Many conservationists trace the beginning of the modern environmental movement in western countries to Rachel Carson, author of *Silent Spring* (1962). Carson, a well-known American natural history writer, wrote *Silent Spring* to publicise enormous environmental harm the United States had suffered through widespread, uncontrolled use of chemical pesticides and herbicides. The title reflected the demise of bird-life due to chemical poisoning.

*Silent Spring* was a best-seller and ignited public debate of, and concerns with, pollution of the land, air and water by toxic pesticides and herbicides. Consequently, within 10 years the United States banned DDT and enacted broad anti-pollution laws, such as the *Clean Air Act* and *Clean Water Act*.

Melody Hoi Yin Lau's dissertation for her MSc (Environmental Management, HKU) in 2009 covers the same chemical pollution issues as Carson wrote about more than 45 years earlier, but in the context of China in the 21<sup>st</sup> century.

The author writes about sources and impacts of a number of chemicals which are present in numerous forms and substance in modern day China and which, to a greater or lesser effect, are harmful to the environment or directly to human beings, or both. These are generically called persistent organic pollutants (POPs).

The dissertation also surveys examples of other countries' systems for monitoring and management of harmful effects of POPs and concludes with an overview of China's most recent efforts in that regard. The author adds her own brief comments on the weaknesses of China's approach, if realistic alleviation of POPs' pollution is the government's goal.

As defined by the author, POPs are "organic compounds that are generally persistent, bioaccumulative, toxicants and thus often ubiquitous in the environment". POPs are lethal pollutants, due to their characteristics of being bio-accumulative and with ability to travel long distances by ocean current, wind and directly through, especially, agricultural run-off. As such, POPs are found even in relatively pristine areas, such as the Arctic Circle. China,

with its huge population and rapid industrialisation of the last 25 years faces a monumental task to combat environmental damage from POPs. This issue is essentially what Ms. Hoi's dissertation is about. We do not have space to attempt a comprehensive review of the dissertation, and shall therefore just highlight several of the more important or interesting points Ms. Hoi makes.

An appropriate overview of the dissertation is the author's "Abstract":

*"Persistent organic pollutants (POPs) have become serious environmental problems of global concern as they are persistent in the environment, can be bio-accumulated and biomagnified through our food chain, and thus pose adverse effects on human health and the environment. This study aimed to (1) review the sources, exposure pathways and impacts of POPs, (2) examine the monitoring and management experience in foreign countries and in China, and (3) discuss the challenges of POPs management in South China.*

*In the last two decades, many coastal cities of China like those in the Pearl River Delta have experienced rapid economic growth and large scale industrialization and urbanization, at the cost of rapid deterioration of its environmental quality. In the past, little attention was paid to the environment; as such, industrial and municipal effluents were discharged without proper treatment. Furthermore, illegal import of electronic-waste (e-waste) and primitive techniques used in material recovery from the e-waste have created a serious environmental problem of POPs' contamination in some regions of the South China such as Guiyu and Shantou.*

*In China, monitoring data on POPs in the environment and biota are scarce. Only ad-hoc studies, mainly focused on the effect of POPs on a specific group of human population in a small region, were conducted. Consequently, data on systematic studies on chronological effects of POPs to human are not available. China is lagging behind in terms of human and national-wide population monitoring on POPs.*

*With respect to law and legislation, China has a relatively comprehensive environmental law to cover the use, production, handling, transportation, import and export of hazardous chemicals and pesticides; however, China does not have laws which target specifically on POPs management.*

*Currently, the management of POPs come under different departments and ministries. Due to lack of coordination between departments, enforcement of such laws and regulations are weak. Furthermore, public awareness and participation on environmental issues and legislation is*

minimal, especially in rural area.

In the past 30 years, China has engaged more than 30 international treaties related to environmental management issues. Recently, China has ratified the Stockholm Convention of Persistent Organic Pollutants; as such, substantial work has been done in terms of international cooperation on POPs' monitoring, control and reduction. The effectiveness and shortcomings of the current management practices for POPs' control and reduction are discussed with special reference to the situation of South China. By borrowing examples from other countries, some additional measures are recommended for further improvement of POPs' management in China".

### Varieties and sources of POPs

Consideration of varieties of POPs essentially also identifies the many different sources of POPs pollution. For example, the most notorious group of POPs are pesticidal chemicals, such as : toxaphene; HCB; chlordane; heptachlor and mirex. These were produced in China on an industrial scale from the mid-1940s.

The use of pesticides in China (and in most other countries) historically has been probably the single most significant source of POPs' pollution. In many developed countries today, this family of pesticides (together with serious carcinogenic termiticides, such as aldrin and dieldrin) are completely banned.

Other POPs of particular interest include :

- (i) perfluorinated compounds – which are widely used in non-stick coatings for cookware and in adhesive and other industrial products and processes;
- (ii) tributyltin – which is the active ingredient in marine anti-fouling paint (widely used in China and Hong Kong, but banned in many developed countries) and is very harmful to marine ecology;
- (iii) chlorine (and other such chemicals) – used in pulp-wood bleaching and steel industry; and
- (iv) polybrominated diphenyl ethers – which is a flame retardant and is used extensively in the manufacture of textiles, furniture, electrical equipment etc.

As said, the uses of these sub-categories of POPs also identifies corresponding sources of pollution. Many other sources exist too, however, such as illegal electronic waste recycling or dumping, and solid waste incineration.

### Direct human exposure to POPs

Apart from their toxic presence in the ambient environment (which causes ecological harm) POPs also may directly affect human beings by exposure in a number of ways, such as :

- (i) *Dietary exposure*  
Extensive studies in various countries – e.g. Taiwan, Italy, Belgium and China – have shown that POPs enter the food and water chains in various ways, thereby directly poisoning the end consumer. For example, in China electronic waste chemicals have accumulated in soils on which vegetables and domestic fowl food are grown; significant concentrations of the chemicals have been detected in vegetables and chicken meat. Similar results come from studies conducted in France and Italy.
- (ii) *Inhalation and dermal absorption*  
High levels of several kinds of toxic POPs have been detected in studies of ambient air quality at various locations in China (for example).
- (iii) *Occupational exposure*  
Some occupations expose the worker to hazardous POPs, just because of the job process. Occupations such as a commercial laundry worker and electronic dismantler (or circuit board builder) carry a far greater risk of POPs' toxicity exposure.
- (iv) *Pre-natal exposure*  
Infants can be exposed to POPs through lactational transfer and umbilical cord blood transfer.

### Impacts of POPs

The author provides an extensive overview of common adverse environmental and human impacts of POPs. In short, "POPs not only pose serious problems to human health, but also reduce the biodiversity, create threats freshwater resources and degrade the water and sediment quality of coastal environments".

Of these many impacts, we shall mention only one : fresh water contamination.

China faces a double-whammy here. On the one hand China discharges into the environment 68 billion tones of waste-water each year, a significant proportion of which is untreated and so contaminates rivers and underground water supplies. On the other hand, China is also becoming desperately short of potable water for its many inhabitants. [The author quotes a 2005 study as finding that "3 billion people do not have access to clean drinking water in China"; however, for obvious reasons, this figure must be incorrect.]

### Monitoring and management

The dissertation provides useful comparative examples of government implemental monitoring and management schemes in several countries, plus Arctic Circle. These schemes have the objective of monitoring the incidence/spread of POPs in every-day life, and (hopefully) managing their polluting impacts.

Very few countries can afford the heavy expense of maintaining a nation-wide monitoring system; Germany and the USA are two of the few countries with such systems. Several other highly developed countries – e.g. Japan, Belgium, New Zealand and Australia – have similar, "population-wide" systems.

These monitoring programmes entail time-consuming and expensive testing of viable population samples to assess the general exposure of the community to POPs. For example, blood and urine samples are taken from representative samples of Germany's population between ages 25 and 69, on a regular basis.

Management systems are in place in all developed (and many other) countries. The USA has been a leader, at least, until the late 20th century, in this field. The author describes in part that country's steps taken to manage impacts from POPs :

*"Integrated Pest Management (IPM) was initiated by US EPA to reduce pesticide risk. The concept of IPM is to minimize the use of chemical pesticides, to promote and encourage the use of biological pesticides (biopesticides) and to manipulate pest growth and reproduction by using the current information available on the life cycle of pest (US EPA, 2008b). Furthermore, a voluntary programme, the Pesticide Environmental Stewardship Programme (PESP), was established to promote partnership between the government and the pesticide users. The main objective is to reduce health and environmental risk posed by pesticide use, and adopt pollution prevention strategies (US EPA, 2009b).*

*The United States has taken action to control and reduce the emission of POPs. Environmental Protection Agency (US EPA) control and manage the release of dioxins and furans to air, water and soil by the Clean Air Act and the Clean Water Act. According to the 1990 Clean Air Act, US EPA will identify the major industrial sources of toxic air emission and set regulations using a technology-based or performance-based approach to reduce toxic emissions. Industries have to achieve the maximum control for hazardous air pollutants, including dioxins and furans (US EPA, 2007). Furthermore, the Act requires EPA to evaluate the remaining risks and decide whether control measures have to be tightened. Apart from the control of dioxins emitted to air, the Clean Water Act controls and manages the release of dioxins to water through a combination of risk-based and technology-based tools (US EPA, 2008a). EPA Superfund and Resource Conservation and Recovery Act Corrective Action programmes help to cleanup the dioxin-contaminated land (IS EPA, 2009c)."*

The author also describes briefly systems implemented in Japan, Canada and the European Union.

### Monitoring and management of POPs in China

In 1981 China agreed to the Global Monitoring System to monitor POPs (such as DDT) in food. In 1992 food hygiene monitoring and inspection programmes were conducted in 10 provinces. Between 1990 and 2000, China conducted 3 total diet studies to evaluate heavy metals, POPs etc. residues in common food products. In recent years, various other one – off studies have been conducted. However, there is no permanent monitoring scheme in place.

In terms of managing harmful pollution sources, such as POPs, the author notes that it was relatively late, in the early 1990s, that the authorities in China began to realise

the importance of environmental protection and sustainable development. Since then, China has become a signatory to a number of important environmental treaties (such as the Stockholm Convention of Persistent Organic Pollutants).

Today, China has 3 categories of laws for regulating POPs and other pollutants : pesticides management; hazardous chemical management; and environmental protection and pollution control.

An immediately recognisable weakness of China's system is that different government departments are responsible for enforcement of different parts of the laws (a weakness commonly found in other countries' environmental legislation too, including Hong Kong's). The author notes that "as such, co-ordination and co-operation between departments and ministries are required in order to achieve effective monitoring".

### China's challenges in managing POPs

As well as its disjointed management regime, China faces serious political and social obstacles to installing an effective anti-POPs'-pollution programme.

Firstly, China has adopted (unsurprisingly) a one-dimensional "command and control" approach to limiting emissions of harmful chemicals. The author notes that "China should also encourage industries to adopt best available techniques and best available practices by providing incentives for those whose emission reductions exceed the statutory limit [i.e. minimum]".

Public awareness of, and participation in, environmental and anti-pollution programmes is very low. However, with China's increasing personal incomes and general standards of living, environmental responsibility and awareness should also improve. A critical issue is China's culture of weak and fragmented enforcement of environmental legislation. To have a realistic chance of being effective, a POPs statutory management framework must be resolutely and unbiasedly enforced. [We note that exactly the same warning could be given to Hong Kong's government.]

Lastly, the author recommends that China's management system must include effective environmental risk assessments of highly contaminated areas, such as electronic waste and recycling depots and sites already contaminated by pesticides.

We congratulate Ms. Hoi on a very well researched and written dissertation concerning a vitally important environmental and health issue.

## LEGISLATION DIGEST

### Air Pollution Control (Motor Vehicle Fuel) (Amendment) Regulation 2009 [Gazette published on 20 November 2009, No. 47 Vol. 13, Legal Supplement No. 2]

The object of this Regulation is to provide for the specifications of bio-diesel used as motor vehicle fuel so as to prevent adverse impact on the environment resulting from the use of substandard bio-diesel for motor vehicles. This Regulation comes into operation on 1 July 2010 and amends the Air Pollution Control (Motor Vehicle Fuel) Regulation (Cap. 311 sub. leg. L) ("the principal Regulation").

The main provisions of this Regulation are set out below:-

#### (a) Evidential burden (Sections 3 to 5)

Sections 3 to 5 amend sections 3, 8 and 9 of the principal Regulation respectively to make clear that the relevant provisions impose an evidential burden on a person charged.

#### (b) Regulatory control (Section 6)

Section 6 adds to the principal Regulation a new Part V which provides for the regulatory control on the supply and sale of motor vehicle bio-diesel and the labeling requirements.

#### (c) Specifications (Section 7)

Section 7 adds to the principal Regulation new Schedules 3 and 4. The New Schedule 3 set out the specifications of the pure motor vehicle bio-diesel while the new Schedule 4 sets out the specifications

of the motor vehicle bio-diesel label.

### **Bunker Oil Pollution (Liability and Compensation) Ordinance 2009**

[Gazette published on 20 November 2009, No. 47 Vol.13, Legal Supplement No. 1]

Hong Kong introduced the *Merchant Shipping (Liability and Compensation for Oil Pollution) Ordinance* to implement the *International Convention on Civil Liability for Oil Pollution Damage 1992* and the *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1992*, and to provide a compensation regime for damage from oil pollution caused by tankers.

The *Bunker Oil Pollution (Liability and Compensation) Ordinance* ("the Ordinance") will come into operation on 22 January 2010. So far, 39 Member States denoting about 76% of the world tonnage have participated in the *International Convention on Civil Liability for Bunker Oil Pollution Damage 2001* ("the Convention") which came into force on 21 November 2008.

The main purpose of the Ordinance is to implement the Convention and to provide for a similar regime for bunker oil pollution caused by non-tankers. Throughout the implementation of the Convention, the Ordinance provides for (a) compensation for damage arising from pollution caused by discharge or escape of bunker oil from ships or for threat of such damage; and (b) the liability of ship-owners for bunker oil pollution damage and compulsory insurance in respect of such liability on par with that of most overseas jurisdictions.

The main provisions of the Bill are set out below:-

#### (a) Liability of ship-owners (Section 5)

Section 5 imposes liability on the ship-owner of a ship for bunker oil pollution damage caused in Hong Kong and any other place where the Convention is in force. The Ordinance does not apply to any warship, naval auxiliary, or any other ship that is owned or operated by a state and for the time being used by it only on government non-commercial service. Neither the government, nor any public officer in the officer's capacity is liable to be prosecuted for an offence against the Ordinance (Section 3).

#### (b) Exemption from liability under Section 5 (Section 7)

Section 7 provides for exemption from liability for bunker oil pollution damage resulting from an incident if the ship-owner provides that the incident: (a) was resulted from an act of war, irresistible natural phenomenon, etc.; (b) was wholly to anything done or omitted to be done by any other person, not being a servant or agent of the ship-owner, with intent to cause damage; (c) was due wholly to the negligence of the person who suffered the damage; or (d) was due wholly to the negligence or wrongful act of a government or any other authority in exercising its function of maintaining lights or other navigational aids for the maintenance of which it was responsible.

#### (c) Limitation of liability (Sections 8-10)

Section 8 enables a ship-owner to bring an action to limit the ship-owner's liability under Part III of the *Merchant Shipping (Limitation of Ship-owners Liability) Ordinance* (Cap. 434). Section 9 provides for liability of person other than ship-owners of ships. Section 10 confers on a person who suffers pollution damage the right to bring a direct action against the relevant insurer. The insurer may then bring an action to limit their liability under Part III of the *Merchant Shipping (Limitation of Ship-owners Liability) Ordinance*.

#### (d) Compulsory insurance or other security for ships with a gross tonnage greater than 1,000 (Sections 12-14, this Part does not apply to a local vessel that operates exclusively within the river trade limits)

A ship to which the requirement for compulsory insurance applies is prohibited from entering or leaving the waters of Hong Kong without a certificate issued by the competent authority certifying that there is in force of a relevant insurance certificate satisfying the requirements of Article 7 of the Convention (Section 13). In case of contravention of the

compulsory insurance requirement, the master and the registered owner of the ship each commits an offence and is liable on conviction on indictment to a fine of \$500,000, or on summary conviction to a fine at level 6, i.e. \$100,000. Section 14 requires the keeping of insurance certificates or specified certificates on ships. A person who contravenes Section 14 commits an offence and is liable to a fine at level 3, i.e. \$10,000.

#### (e) Issue of insurance certificate (Section 16)

Section 16 empowers the Director of Marine or authorised persons may issue insurance certificates for a ship.

#### (f) Jurisdiction of Hong Kong Courts to enforce claims and enforcement in Hong Kong of jurisdiction given by courts of other places (Sections 18-22)

Section 18 provides for an action to be brought in the Court of First Instance to enforce a claim arising from pollution damage in Hong Kong. Section 21 provides for the recognition and enforcement of certain judgments made by a court in a *Bunker Oil Convention* place, other than a place in the People's Republic of China.

## TOWN PLANNING

### Disappearing butterflies highlight bigger problems

The Lung Kwu Tan valley near Tuen Mun was once famous for its profusion of butterflies. However, the number of butterflies in the valley has fallen by half, and there are particular concerns about the depletion of the *red lacewing*. The habitat of *red lacewing* has almost all been burned and cut now in the valley.

Despite having been identified as a site with scientific value, the valley is not a designated area for conservation and therefore not protected by the *Town Planning Ordinance*. The Agriculture, Fisheries and Conservation Department says it is now considering recognising the location as a "site of special scientific interest".

Eco-disasters in some rural areas brought about by illegal dumping and land filling have hit headlines recently. For example, it is not uncommon for construction waste to be dumped illegally on farmland and fishponds. Environmental Protection Department figures show that complaints about illegal dumping of construction waste have increased; but tracking the origins of waste can be a difficult task.

A member of the Town Planning Board called for a holistic approach to be taken towards conservation. Some critics have pointed to a loophole in the town-planning laws. For instance, Tung Tsz in Tai Po has been zoned as a green belt; however, planning officers have no power to take action because the area is not covered by a development permission plan under which enforcement action can be taken against land filling according to the *Town Planning Ordinance*.

[SCMP, 14/09/2009]

### Planners to approve extra five storeys for new Lego building

The five-storey expansion plan of the new Legislative Council building at Tamar is likely to win initial approval from town planners. The directors of Golden Investment, owner of the Citic Tower in Tim Mei Avenue, filed an objection to the plan on the ground that the expansion would also block penetration of sunlight to the middle and lower zones on the west side of the Tower and intensify the wall effect.

The expansion will also add a Tamar café connecting to an extensive lawn. The Tamar development will include two government office blocks as well as Legco's Chamber. It is expected to be in operation by 2012.

[SCMP, 18/09/2009]

### Builders in rush to beat new rules

Developers are vying for approval for ambitious building projects before the government resumes its tighter planning restrictions on building heights and densities which aim to achieve adequate air-flow and sunlight exposure for surrounding buildings. Where restrictions have not yet been spelled out in an outline zoning plan, individual

approvals may be secured from the Buildings Department.

MTR Corporation faced the wrath of *Green Sense* when it invited development tenders for its residential project at Che Kung Temple Station in Sha Tin last year. The action group also lobbied the Town Planning Board to reduce the development plot ratio of MTR's Tsuen Wan project from five to three and the number of towers from seven to four last year. Although the objections were not upheld, this year MTR Corporation hastened to secure approvals from the Buildings Department for three other development projects already on the drawing board and not yet subject to outline zoning plans.

[SCMP, 23/09/2009]

### Partial uplifting of Pokfulam Moratorium facilitates preservation of Jessville

The Chief Executive approved the partial uplifting of the Pokfulam Moratorium for the preservation of the historic building at 128 Pokfulam Road, commonly known as Jessville. The approval will facilitate the necessary lease modification. The new development will be developed to a plot ratio of 2:1, which will comprise two blocks with a total of 72 flats.

This is the second case of the government successfully preserving a privately owned historic building through the application of its new heritage conservation policy. Jessville built in 1931 as a private residence of Italian Renaissance architecture style with art deco variations, has been accorded Grade 3 status by the Antiquities Advisory Board. Jessville will be fully preserved as a club house for the residential development, but it will be open to the public at least once a week.

[Development Bureau, 30/09/2009]

### Nightmare of a web of red tape

A factory owner complained about the difficulties of reusing a waterfront factory due to red tape and town planning procedures. The Vice-president of the Chinese Manufacturers' Association of Hong Kong said it took him almost five years to get government approval to convert the 40-year-old building into an exhibition centre showcasing local-brand products. "First you have to go to the Town Planning Board to apply for change of land use. You also need approval from the buildings, fire services and environmental protection departments," he said. He added when departments had different views about the proposals, the work became tougher and took even longer.

[SCMP, 13/09/2009]

### Officials powerless to stop landowners cutting access roads

A Town Planning Board member said the current town planning mechanism for the New Territories village house construction led to haphazard village layout and lack of planning. Town planners and the Lands Department say they cannot do anything about New Territories land owners blocking access roads to villages to build houses. The vice-chairman of the Board agreed saying that regulations would touch on the whole small house policy.

[SCMP, 13/10/2009]

### Blueprint to save city's historic heart

The government yesterday unveiled plans which include preserving part of the government's headquarters buildings and turning the Central Market into an urban oasis, to give overdeveloped Central some breathing space. The government proposed to preserve Government Hill, built in the 1950s, by retaining the main and east wings of the Central Government Offices complex, while allowing commercial development in the west wing where a public garden will be built. The 40-year-old Murray Building will be offered for conversion into a luxury hotel.

The Central Market's rooftop may be used for restaurants, a bookshop, gymnasium and an atrium garden for arts-related activities. The government said it would become an urban oasis for white-collar workers in the daytime and a new hang-out for locals and tourists in the evenings and at weekends. A Town Planning Board member recommended that the plan would protect the core Central areas against further traffic congestion and air pollution, but added the district's streetscapes could be threatened by massive

private re-developments.

[SCMP, 15/10/2009]

### Building release plan 'not for developers'

The government denied the scheme to release industrial buildings was aimed at benefiting developers. The new 'pay for what you build scheme' will allow owners of the industrial buildings to pay additional premiums according to the actual development density after redevelopment. The scheme will also allow industrial owners who need to pay additional premiums exceeding HK\$20 million to pay by instalments, with the interest rate at 2 percent above prime.

In the meantime, the premium is based on the plot ratio, which is quite high and deters industrial owners from applying for a change of land use. The Secretary for Development said the aim of the scheme is to release more buildings.

It was also announced the lawn area between Two IFC and the outlying island ferry piers in Central will become a cultural and recreational complex, according to the government's new harbour-front plan.

[The Standard, 16/10/2009]

### Legal change rejected for heritage properties

The government yesterday rejected a recommendation by its heritage consultant to change laws and designate Government Hill a special protection area. "If we suddenly change the law, many property owners in the area will raise objections" the Secretary for Development said. The secretary was introducing conservation measures for seven historic sites in Central, namely: the two wings of the Central Government Offices complex; Central Market; the former police married quarters on Hollywood Road; the Murray Building; the Central Police Station compound; the former French Mission Building; and the Sheng Kung Hui church compound.

[SCMP, 17/10/2009]

### Height showdown over police headquarters plan

The Planning Department said there should be no height restriction on the redevelopment of the historical Central Police Station compound. The heritage site will be revitalised by the Hong Kong Jockey Club. The Club has yet to complete a new design for the compound, which includes the former Central Police Station, Victoria Prison and Central Magistracy. But it plans to turn it into a tourist-arts-culture hub. The Convenor of the Central and Western Concern Group said a height restriction for the site is needed to guide the developer.

[The Standard, 19/11/2009]

## WEST KOWLOON CULTURAL DISTRICT (WKCD)

### Continuation of work of the Joint Subcommittee to Monitor the Implementation of the West Kowloon Cultural District Project

#### Purpose

This paper reports on the progress of work of the Joint Subcommittee to Monitor the Implementation of the West Kowloon Cultural District Project ("Joint Subcommittee").

#### Background

At the joint meeting between Legco's Panels on Home Affairs and on Development on 14 November 2008, in light of the overall importance of the West Kowloon Cultural District ("WKCD") for Hong Kong and the amount of financial resources involved in this project, members of the joint panel agreed that Legco should continue to monitor the WKCD project pursuant to the *West Kowloon Cultural District Authority Ordinance* (Cap.601) and after the establishment of the West Kowloon Cultural District Authority ("Authority").

The Joint Subcommittee had been assigned to monitor

issues relating to the implementation of the WKCD project, including but not limited to the work of the Authority, the WKCD project's interface with arts and cultural development and other related matters. The Joint Subcommittee mainly focuses on the following areas:-

- preparation of the development plan for WKCD project;
- planning the construction of Core Arts and Cultural Facilities ("CACF") and other associated facilities;
- institutional and procedural arrangements of the Authority;
- financial management and procurement procedures;
- public engagement ("PE") arrangements; and
- development of cultural software.

#### Progress of work of the Joint Subcommittee

Up to 18 November 2009, the Joint Subcommittee has held six meetings with different organisations and parties. The Joint Subcommittee has studied the following issues in relation to the implementation of WKCD project:-

- Development of WKCD*
  - Preparation of the development plan for WKCD, including the approach for WKCD project, selection of the three Conceptual Plan Consultants and the Project Consultant, and the extent of public participation in the process;
  - planning of Museum Plus, including the theme of Museum Plus, appointment of curatorial professionals, building up of collection items, promotion of public knowledge of Museum Plus and implementation of the interim Museum Plus;
  - planning of the CACF, including the design competitions for CACF and development schedule of CACF and realignment of the existing cultural facilities with those in WKCD; and
  - WKCD's connectivity with adjoining districts and the community and use of the WKCD site as a temporary performing and exhibition venue.
- The work of the Authority*
  - Appointment of Board members and committees of the Authority;
  - recruitment of Chief Executive Officer ("CEO") and other senior executives of the Authority;
  - PE for WKCD project, including the establishment of the Consultation Panel ("CP"), the function and role of CP, arrangements for the three-stage PE exercise;
  - accessibility of meeting papers and minutes of meetings of the Authority to the public; and
  - use of the upfront endowment of \$21.6 billion to the Authority.
- WKCD's interface with arts and cultural development*
  - Measures to promote the development of cultural software to complement the WKCD project, including nurturing of young talented artists, building of audience, training and development of arts administrators and stage management professionals; and
  - resource allocation for software development and time-frame for the Authority to implement programmes and activities for such purpose.

#### Need for continuation of work

Most of the issues highlighted in the preceding paragraphs such as the planning of WKCD project and its CACF, institutional and procedural arrangements of WKCD project, PE exercise and development of cultural software are ongoing issues the development of which will have a significant bearing on implementation of the WKCD project. There is a need for the Joint Subcommittee to continue to monitor these matters.

In addition, the work of the Authority has reached or will reach some important landmarks. For example, the Authority commissioned three Conceptual Plan Consultants and the Project Consultant in July 2009 for the preparation of the three Conceptual Plan options and Development Plan for WKCD project.

The Authority has rolled out Stage One of its PE exercise in October 2009 to gauge the public's expectations and views for the WKCD project and stakeholders' requirements for the facilities in the arts and cultural venues; it has also embarked on the recruitment of the CEO and other senior executives in September 2009.

The Joint Subcommittee will also need to continue to monitor the progress of these aspects of the project which are crucial to the development of WKCD.

The Joint Subcommittee decided that it should continue its work in accordance with the existing terms of reference in 2009-2010 session.

[Legislative Council Secretariat, 18/11/2009]

## HONG KONG BRIEFING

### Plastic shopping bag levy achieves positive results

The Environmental Levy Scheme for Plastic Shopping Bags ("Scheme") has achieved positive results. The government noted that the community's response to the Scheme was rather positive since the commencement of the Scheme in July 2009.

Under the Scheme, all registered retailers have to submit a report to the government in every quarter setting out the number of plastic shopping bags distributed to customers in the non-exempted areas in all of their registered retail outlets and the amount of levy collected from customers.

The government announced that registered retailers distributed over 13 million plastic shopping bags in the first three months of the Scheme with a levy income of approximate HK\$6.7 million. The government considers that the levy collected from customers is less than the estimated amount. However, a lesser levy being collected means that more people choose to use reusable shopping bags, which in turn confirms the positive impacts of the Scheme.

The Scheme is the first mandatory producer responsibility scheme implemented under the *Product Eco-responsibility Ordinance* (Cap. 603). It seeks to offer economic incentives to address the issue of over-use of plastic shopping bags in Hong Kong. According to feedback from green groups and other associations, the number of plastic shopping bags distributed to customers by registered retailers has been reduced significantly. The government will at some stage further review the effectiveness of the Scheme by surveying the extent of waste reduction at the landfills.

[Environmental Protection Department, 02/11/2009]

### Call to subsidise companies to buy green buses

According to a research paper released by Civic Exchange, bus companies should be subsidised to buy vehicles which perform in a more environmentally responsible way.

The research paper, titled "Paying for a Cleaner Bus Fleet", suggests that environmental performance should be considered as one of the criteria when the government assesses whether to award a franchise to a bus operator.

Hong Kong is one of the few big cities where there is no publicly owned bus service. At present, five private companies operate 5,768 buses on 700 routes. As the ultimate aim of the company is to maximise profits, the research paper suggests that "the easiest and most effective way is to prolong the life of their existing vehicles, even if these vehicles are harming public health".

The research paper cites Singapore as a leading example to learn from, and says that 860 of the 4,353 public buses in Singapore are fitted with engine classes of Euro IV or above; 2,100 buses with engine classes of Euro I are expected to be replaced by 2011.

On the other hand, in Hong Kong, only 53 of the 5,768 buses are fitted with engine classes of Euro IV. And 456 pre-Euro buses are expected to be replaced by 2012, whilst 1,338 Euro I buses will not be replaced until 2015.

The franchises of the bus companies expire between 2013 and 2017. The research paper suggests that the government should explore ways to finance the acquisition of new buses that are less polluting and in line with other comparable countries.

[SCMP, 28/11/2009]

### A cleaner tomorrow

Global warming is the universal challenge. It holds the prospect of irreversibly damaging life. The outcome of

global warming will be up to us.

Greenhouse gas has been amassing in the atmosphere even faster than predicted by scientists. It threatens our health, food supply, weather, even how we approach financial investment and human development. It demands a systemic solution and we have only one chance to tackle it.

Hong Kong's carbon footprint is about world-average. Each of us emits the equivalent of 6.6 tonnes of carbon dioxide a year. Electricity generation produces about 63% of Hong Kong's greenhouse-gas emissions. Our power companies are installing equipment to lower sulphur emissions from coal production and are investing in cleaner fuels for electricity generation, including liquefied natural gas and offshore wind power.

But supply-side efforts will not suffice; 89% of electricity generated in Hong Kong is consumed by offices, shopping malls and apartments which are often over-air-conditioned and over-lit.

Transport is another key source of carbon emissions; 90% of all trips within Hong Kong involve public transport and although our trains are recognised globally for their effectiveness and efficient use of power, many of the buses and trucks on the roads are highly polluting.

Further measures are needed to rationalise bus routes, set minimum standards for trucks and private vehicles, and to put an end to idling engines as quickly as we can.

Hong Kong's role as a financial powerhouse affords us a particular advantage. According to recently released figures, global corporate "green economy" investments since 2007 total over US\$1.24 trillion.

Hong Kong's financiers can lend their considerable skills in terms of capital placement, risk management and market making to the low-carbon cause. The government can provide the vision and regulatory environment that induces and rewards companies to make green investments.

The Climate Change Business Forum enables businesses to address climate-change issues. It combines academic research with corporate experience, demonstrating that businesses can both save and make money while protecting both the world and people.

The life we enjoy today is energy-intensive and carbon-intensive. We can increase enjoyment of our beautiful territory, relieve stress and reinforce civic interchange while lowering dangerous emissions and energy bills.

The following points outline the steps for us to tackle the greenhouse gas in Hong Kong:-

- Establishing a vision for a green, low-carbon Hong Kong, complete with a carbon target;
- Designing a process to engage business, government and society to achieve this; and
- Investing our considerable talent and resources to make it happen.

Climate change does pose an unprecedented and significant challenge. Hong Kong is part of the challenge and can be part of the solution.

[SCMP, 11/12/2009]

### Hongkongers say government lacks commitment to improving air quality

A significant majority 70% of Hongkongers think that the government lacks commitment to improving the city's air quality.

Approximately 90% of 660 respondents to the research conducted by Clean Air Action thought that the air quality in Hong Kong was "poor" and 27% of them said it was "very poor".

The Convenor of Clean Air Action, Ms. Yolanda Ng, said that the government had been slow in enforcing policies aimed at improving air quality. She called on the relevant government departments to speed up the introduction of more low-emission zones and to ban cars parked with engines idling.

More than two-thirds of respondents revealed that they want to see an expanded cycling network in Hong Kong and a reform of bus routes to reduce air pollution. About 22% also said that they were willing to bear costs arising from the implementation of new emission-control measures, such as

increased transport fares. However, 13% of the respondents were not willing to bear such additional costs and about two-thirds said that it depended on the amount of increase.

The research group handed a petition to the Environmental Protection Department. Responding to the charge that the government lacked commitment to improve air quality, the Department said that the government and different sectors of society have done something to solve the air pollution in the last 10 years, but it is somehow yet to see blue sky and white clouds. He mentioned that the issue of the high amount of suspended particulates in the air in Hong Kong is the first issue for them to address.

[SCMP, 30/11/2009]

### Cool savings for Kai Tak project

A HK\$1.67 billion district cooling system set to be installed at the Kai Tak development is expected to cut electricity consumption by up to 35 percent compared to traditional air-conditioning systems.

The eco-friendly cooling system can cover 1.73 million square metres and cool 30 40-story buildings. It is expected to save up to 850 million kilowatt-hours of electricity a year, equivalent to the annual consumption of 18,000 households. It can also reduce 59,500 tonnes of carbon dioxide – equivalent to the emission from 9,000 people.

The system will cool all government buildings and government-funded facilities such as schools and hospitals.

The first phase of the project is scheduled to be completed in time for the Kai Tak Cruise Terminal's opening in 2013.

"Once the land for private development is sold, the government will encourage developers to adopt the system as well," Principal Assistant Secretary for the Environment Katharine Choi Man-ye said. She said the tariff rate will need approval from the Legislative Council, but she is confident the system will appeal to private developers.

The system's massive ground level plant to the north of the Kai Tak development and an underground plant in the south will produce large quantities of chilled water which will be distributed to buildings through underground pipes. Heat exchangers at each building will then create cool air from the chilled water.

"Extra spaces, such as rooftops, can be turned into gardens and the heat island effect can be reduced," Assistant Director of Electrical and Mechanical Services Alfred Sit Wing-hang said.

The tender process will end early next year and construction will begin immediately. The second and final phases will be completed by 2016 and 2021, respectively.

The same cooling system is being considered for the West Kowloon cultural district project.

[The Standard, 8/12/2009]

## ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)

### Progress of Measures to Enhance Control on the Depositing of Construction and Demolition Materials (ACE Paper 12/2009)

#### Background

Construction and demolition ("C&D") materials are a mixture of inert and non-inert materials generated as a result of construction, site clearance, excavation, refurbishment, renovation, demolition and road works. Non-inert C&D materials account for about 20% of the total and usually comprise: bamboo; timber; vegetation; packaging waste and other organic materials. Whilst some of these can be recycled, others are disposed of at landfills. In contrast, inert materials mainly include: construction debris; rubble; earth; bitumen and concrete, which can be put to gainful uses, such as land formation.

The problem of fly-tipping and land-filling, both of which concern the illegal depositing of C&D materials, has become increasingly a public concern. Government departments have been taking action to curb activities

related to illegal depositing of C&D materials on land within their respective jurisdictions. As issues arising from such illegal waste disposal often cut across different policy areas, co-ordinated efforts from different government departments become necessary. The government has reviewed the procedures in controlling such activities and introduced enhanced measures and inter-departmental co-ordination mechanism.

### Enhanced control and other measures against the depositing of C&D materials

#### Enhanced complaint handling procedures and inter-departmental co-ordination

Although the normal public complaint handling procedures adopted by different government departments are effective in handling fly-tipping and land-filling complaints in most circumstances, there are situations where speedy responses and joint actions from government departments are required to address problems that are urgent and sensitive in nature. In this regard, the Environmental Protection Department ("EPD") and other relevant government departments have jointly drawn up enhanced complaint handling procedures to deal with cases involving active and on-going C&D materials depositing activities, especially for those that would pose risks to environmentally sensitive areas.

Under the enhanced procedures, the Integrated Call Centre ("ICC") or other departmental hotlines receiving complaints related to illegal dumping would refer the cases to the EPD in the first instance. The EPD will deploy resources to carry out investigation within one working day or as soon as practicable upon receipt of the information to ascertain the extent of the problem, and request other government departments to take parallel action as appropriate. The EPD will also coordinate joint site visits and actions with other relevant departments where necessary. A new government circular has been issued and promulgated among relevant government departments, detailing the enhanced procedures, for compliance.

In order to further enhance co-ordination among government departments to combating fly-tipping and land-fill problems, the EPD and other relevant departments meet on a regular basis to monitor the overall situation and review individual cases that are of public or environmental concern, at both territorial and regional levels. To facilitate information sharing and co-ordinated actions, the EPD, in collaboration with other government departments, has developed a database containing information on those illegal dumping cases which are under constant monitoring and actions by various government departments. In addition, a list of fly-tipping black-spots has been compiled and the departments concerned are expected to carry out regular patrol to deter fly-tipping activities in these areas.

#### Comprehensive Guides

The Administration operates a contractor management system which can penalise public works contractors involved in illegal dumping, including suspension from tendering for public works contracts. As well, to ensure that relevant parties, such as rural landowners, construction waste transporters and property developers, are aware of the statutory requirements, the EPD and the other government departments concerned have jointly developed three sets of comprehensive guides for them respectively. The guides provide useful information on various statutory requirements governing C&D materials dumping activities and the steps that the affected parties need to take to guard against illegal land-filling and fly-tipping activities. The guides also encourage the public and all the relevant parties to report to the government on any suspected illegal dumping activities so that the government can follow up on these cases promptly.

#### Other Measures

In addition to stepping up enforcement and patrols, and enhanced inter-departmental co-ordination, the government departments concerned have pursued other preventive measures, including the erection of warning signs and setting up road barriers in potential problem areas. In addition, the EPD has identified two fly-tipping black-spots for implementation of a trial fly-tipping control scheme based on remote monitoring by the installation of closed-circuit television ("CCTV") in the last quarter of 2009. The proposal was recently presented to and supported by relevant District Councils. Subject to the outcome of the trial scheme, a review will be conducted with consideration given to the feasibility of extending the CCTV installations to other fly-tipping black-spots.

In respect of reinstatement works for unauthorised land-filling activities on private land, recipients of Reinstatement Notices ("RN") under the *Town Planning Ordinance* who are required to reinstate the land generally are required to take steps and deploy resources to comply with the reinstatement requirements at their own expenses, given that non-compliance with a statutory notice is an offence subject to prosecution. The RN will also be registered at the Land Registry against the land. Under special circumstances, the Planning Authority could invoke sections 23(7) and 23(8) of the *Town Planning Ordinance* to enter and reinstate the land in the event of non-compliance with a statutory notice, and the expenses incurred can be recovered from the concerned parties as a civil debt. This enforcement tool will be deployed prudently and only where the circumstances and merits of the case justify such steps, after taking into account advice from the relevant departments. In the event that a land-filling activity blocks a river or stream which is designated as main watercourse under the *Land Drainage Ordinance*, the Director of Drainage Services ("DDS") can serve a notice to order the offender to remove such obstruction within a specified time, failing which DDS can authorise his contractor to enter the land to clear the obstruction.

#### Other issues

Apart from the enhanced control measures, the Administration is also considering other measures to further enhance the control of fly-tipping and land-filling activities. Among other things, EPD, in collaboration with relevant departments, is examining the feasibility of tightening control over the deposit of construction waste on private land under the *Waste Disposal Ordinance* (Cap. 354) ("WDO").

The Administration also agrees that penalties imposed on offenders should carry sufficient deterrent effect. In case the penalty imposed by the court is considered too lenient or insufficient to reflect the severity of the offence, the Administration will apply via the Department of Justice for a court review of the sentence.

In addition, the Administration has followed-up on the request of Legislative Council Members that the construction industry should adopt the trip-ticket system in private projects. The response of the Committee on Environment and Technology of the Construction Industry Council was supportive.

The EPD has also relayed the suggestions of Legislative Council Members to the Committee on Environment and Technology regarding the following:

- the introduction of the trip-ticket system in major private projects as a mandatory requirement;
- for relatively minor works projects – ranging from domestic renovations to building repairs – the introduction of a compulsory declaration system, under which contractors or project owners should furnish to the Environment Bureau certain information about the construction and demolition materials to be generated, including the estimated quantity, and method of their disposal, before the project begins; and
- fitting Global Positioning System on dump trucks used by contractors or project owners to further monitor the movement of the construction and demolition materials.

### Review and Development of Marine Water Quality Objectives First Stage Public Engagement Exercise (ACE Paper 21/2009)

#### Purpose

This paper seeks members' views on key issues to be addressed and proposed approaches and methodologies to be adopted in the review and development of marine water quality objectives ("WQOs").

#### Background

WQOs are proclaimed under the *Water Pollution Control Ordinance* (Cap. 358) ("WPCO") for waters in Hong Kong. They specify the quality that should be achieved and maintained in order to promote the conservation and best use of waters in the public interest. WQOs also serve as an objective and scientific basis for planning our environmental protection programmes and initiatives. Under the WPCO, the Secretary for the Environment may amend any WQO from time to time after consultation with the Advisory Council on the Environment ("ACE").

The current set of WQOs was established according to water conditions and scientific knowledge of the 1980s. At present, Hong Kong is divided into ten Water Control Zones ("WCZs"). Specific WQOs have been established for each WCZ and its subzones.

When the Environmental Protection Department ("EPD") briefed the ACE in May 2008 concerning the bacteriological WQO for bathing beach waters in Hong Kong, members were informed that an overall review of the marine WQOs would be conducted to keep pace with international developments. The review of marine WQOs was supported by ACE members, who would also like to provide input in the course of the review.

#### Study on the review of marine WQOs

Over the years, there has been significant advancement in water science and technology. New beneficial uses of our waters, notably as marine parks and reserves, have emerged. The community is now more aware of the need to protect our environment. Due to increasing aspirations for better quality of life, the public expects a higher quality marine environment for recreational and marine conservation purposes. Therefore, there is a need to review existing marine WQOs.

In October 2008, the EPD commissioned a consultancy study for the review and development of the marine WQOs. The objectives of the study are to review marine WQOs taking into account: latest scientific information; current conditions in Hong Kong; environmental pressures and protection requirement; technical attainability; and the potential socio-economic implications of any proposed changes, as well as the views of the public. The key tasks of the study include the followings:

- development of review methodology;
- review of nutrient objectives;
- review of physical and chemical WQOs;
- review of microbiological WQOs;
- development of biological objectives;
- development of WQOs for protection of human health through consumption of seafood;
- development of WQOs specific to identified beneficial uses; and
- evaluation of technical attainability and socio-economic impacts, and assessment on sustainability and refinement of recommendations on WQOs.

The study will include two public engagement exercises. The first stage public engagement will be conducted after completing the review of existing conditions and overseas' practices. The second stage will be held after any proposed changes to the WQOs are formulated. An advisory committee, comprising academics, professionals and representatives of various bureaux and departments, has been set up to provide peer review of the technical findings.

#### Key issues identified

The study has so far reviewed the characteristics and quality of marine water quality in Hong Kong, the overseas' approaches for water quality management and the corresponding methodologies for establishing WQOs. The following key issues and observations have been identified:

- some WQOs might no longer be appropriate for today's conditions;
- high background levels of some chemicals might have also led to non-compliance with some WQOs;
- there are also some water bodies in which two or more beneficial uses co-exist;
- existing WQOs might not be able to provide full protection for some beneficial uses (e.g. mariculture). New beneficial uses (e.g. marine parks and reserves) do not have WQOs; and
- the EPD would also need to keep pace with other overseas' practices, such as:
  - use of biological indicators;
  - establishment of nutrient-related WQOs with reference to background conditions;
  - more common use of numerical WQOs; and
  - use of other bacterial indicators for bathing waters.

The study has also identified a list of nutrient-related, physical, chemical and microbiological parameters that should be reviewed further in the course of this study. A comparison of the types of water quality objectives or standards adopted in Hong Kong and overseas has also

been made.

#### Overseas practices and experiences

With reference to the study findings, there are three main approaches adopted in other parts of the world for setting quality standards for marine waters:

- Technology-Based Approach:** The approach is intended to apply the best available technology to meet the required standards for discharges into marine waters. It is commonly adopted in Germany, Japan, and Malaysia.
- Use-Protection Approach:** Under this approach, a suite of quality standards is developed to offer different levels of protection that are commensurate with the beneficial uses of the water body. Such an approach is largely adopted in Canada, the US, Europe and Australia, as well as in Hong Kong when the EPD established our WQOs in the 1980s.
- Non-Degradation Approach:** This is the strictest form of Use-Protection Approach that does not tolerate any disturbance to marine life. It is usually applied to waters of high ecological value.

#### Proposed review approaches and methodologies

Based on the review of overseas practices and local conditions, the following general principles could be applied for the review and development of the WQOs in Hong Kong:

- application of the *Use-Protection Approach* taking into account existing beneficial uses;
- application of *Non-Degradation Approach* to waters of high ecological value; and
- application of *Risk Assessment Approach* to protect at least 80% of species.

Specifically, the following methodologies have been proposed for establishing the appropriate values for different types of WQO parameters:

- the values of the natural parameters would be set with reference to site-specific background data;
- the values of the nutrient-related parameters would be established with reference to both site-specific background data and the trigger points for algal blooms;
- for chemical parameters (including toxicants), the Risk Assessment Approach would be used in establishing the values for chemicals with sufficient toxicity data, or otherwise the Assessment Factor Approach would be considered in the interim. Full Protection Approach would be considered when sensitive organisms are involved and as appropriate;
- in respect of the biological parameter, the baseline "normal" biological conditions for selected ecosystems would be assessed using data from our monitoring programme, and the results would be used to identify suitable indicators and parameters;
- on the bacterial indicator for bathing waters, reference to the "WHO Guidelines for Safe Recreational Water Environments" issued by the World Health Organisation in 2003 would be made and the use of *Enterococci* as a lead bacterial indicator would be explored; and
- as for mariculture (fish farming, shellfish cultivation, etc), the risk-based approach would be adopted and overseas and local references would be drawn upon as appropriate.

#### Public engagement

In September 2009, the EPD issued the First Stage Public Engagement Document and the Technical Note. The first stage public engagement exercise will last until the end of December 2009. Public views are sought on issues such as:

- whether any beneficial uses of the waters should be considered;
- what the priority and level of protection for various beneficial uses and sensitive receivers should be;
- whether the proposed review approaches are appropriate; and
- what water quality management principles should be considered during the review.

### Integrated Waste Management Facilities Technology Review and Associated Facilities (ACE Paper 22/2009)

### Purpose

The purpose of this paper is to inform members on the results of the technology review carried out under the Engineering Investigation and Environmental Impact Assessment Studies for the proposed development of the Integrated Waste Management Facilities ("IWMF"). This paper also seeks members' initial views on the associated facilities that might be incorporated in the IWMF.

### Background

In 2002, the Environmental Protection Department ("EPD") invited submissions of Expression of Interest ("EOI") from local and overseas companies on a proposal for treatment technologies for establishing the IWMF. An Advisory Group ("AG")-comprising members from professional bodies, academia, green groups and business sectors-was set up to assist and advise in selecting the appropriate technologies. After evaluating the submissions, the AG recommended that the IWMF should adopt a multi-technology approach such that the most suitable technology could be applied to deal with different waste streams of municipal solid waste ("MSW"). The AG advised that –

- (i) Incineration be adopted as the major component of the IWMF strategy. Other thermal technologies (e.g. gasification or similar systems such as co-combustion in a cement plant) may be considered as the concern regarding these technologies, cost, market competition and commercial viability, are resolved.
- (ii) Application of mechanical and biological treatment ("MBT") technologies could be considered at suitable scale under particular circumstances and as a component of the overall IWMF strategy.

"A Policy Framework for the Management of Municipal Solid Waste (2005-2014)" ("Policy Framework") was promulgated by the Government in 2005. It sets out a comprehensive waste management strategy for the next ten years, encompassing targets and initiatives on waste avoidance, reduction and recycling and the development of IWMF in mid 2010's for bulk reduction of waste.

In 2006, a delegation of the Advisory Council on the Environment ("ACE") visited waste treatment facilities in the Netherlands and Germany. Subsequent discussion of the ACE advised that thermal technology with waste to energy opportunity be adopted as the core treatment technology for treating the MSW. The ACE also recommended that the treatment facility should be developed in phases, taking into account the progress and effectiveness of the various waste reduction and recycling initiatives.

Having regard to the views of the AG and ACE, and the initiatives set out in the Policy Framework, EPD plans to develop the first phase of the IWMF with a treatment capacity of about 3,000 tonnes per day ("tpd"). This first phase of IWMF would adopt incineration with energy recovery as the core technology and it would also incorporate a demonstration scale sorting and recycling plant to recover resources from the MSW.

The government has carried out a comprehensive site search exercise to identify suitable sites for developing the first phase of IWMF and following the completion of the site-search exercise in early 2008, Shek Kwu Chau site and the Tuen Mun Tsang Tsui Ash Lagoons are considered suitable as potential sites for development of the IWMF.

In November 2008, EPD commissioned detailed Engineering Investigation and Environmental Impact Assessment Studies for both sites in order to ascertain the suitability of these two potential sites. The Studies are scheduled to be completed in the latter half of 2010, after which the Government will decide on the choice of sites for the first phase of the IWMF and commence construction as soon as possible with a view to commissioning the IWMF in the mid-2010's.

### Technology review

As a major part of the Engineering Investigation Study, a consultant has conducted a review of the latest developments in waste treatment technology so as to ensure that advanced technology that might have become proven and suitable for the IWMF development since the EOI exercise would be taken into account.

The review found that thermal technology has played a key role in waste treatment in other countries. In some

jurisdictions such as Germany, South Korea, and Taiwan, the proportion of MSW treated by thermal treatment technologies has increased in recent years. For Japan and Singapore, the thermal treatment proportions have, however, slightly decreased due to increases in recycling. New large scale MSW incineration plants continued to be commissioned in these countries.

In addition, the review found that the trend of using MBT plants for mixed MSW treatment continued, particularly in Europe. This re-affirms AG's recommendation that MBT of MSW could be considered at a relatively small scale.

### Thermal Technologies

Thermal technologies currently used for MSW treatment include incineration, gasification, plasma gasification and pyrolysis. An evaluation of these technologies is summarised as follows.

#### Incineration

Moving grate, fluidised bed and rotary kiln are the three known incineration technologies adopted for the treatment of mixed MSW. The review has indicated that fluidised bed incineration system is more commonly used for more homogenous waste such as sludge. If it is applied on mixed MSW, the waste needs to be pre-treated and shredded into small homogenous pieces prior to incineration. Currently, this technology is not commonly adopted for treatment of mixed MSW, and the waste facilities applying this technology are generally small units.

The review concluded that rotary kiln technology is primarily used for treatment of hazardous waste. Its use for mixed MSW is quite rare and of limited capacity. Contrasting with the other two forms of incineration technologies, the unit and plant capacities of the moving grate system are the highest. Moreover, it was found to be the only technology that is proven to treat large quantities of waste (i.e. over 3,000 tpd).

Given these findings, the review has recommended that moving grate incineration be considered for the IWMF Phase 1 development. In addition to its proven track record for large scale application, the moving grate incineration technology also has the following advantages –

- (i) currently, there are over 10 major suppliers with good track records for the provision of this technology. This will likely mean healthy competition at the tender selection stage;
- (ii) it has the highest capability to treat different sizes and qualities of the mixed MSW;
- (iii) this technology possesses the least operational complexity; and
- (iv) it requires the least capital and operating costs, and land space for development.

#### Gasification

The review found that until 2008, only approximately 90 gasification plants have been installed in the world for MSW treatment. This number is very small when compared with over 900 moving grate incineration plants that have been installed worldwide.

For gasification applications, pretreatment of MSW to fine granules is generally required as this technology, when compared with incineration, is less robust in treating mixed MSW of different sizes and qualities. So far, this technology has been adopted only for relatively small scale MSW treatment. The review has also found that some key gasification suppliers have recently withdrawn from the international market.

In view of its limited track record for large scale MSW treatment, the incapability of treating MSW with varying sizes and qualities, and the limited number of suppliers, the review considers that gasification technology is not suitable for the proposed IWMF development.

#### Plasma Gasification

Plasma gasification is mainly adopted for treating specific wastes, such as hazardous wastes or even low-level radioactive wastes. For MSW, application of this technology entails pre-treatment of the mixed waste to make it a more homogeneous feedstock. The review found that since the EOI exercise, there has been no noticeable major development of this technology for MSW treatment. The technology is used elsewhere only for relatively small scale MSW treatment. Therefore, the review considers that the plasma gasification technology is not suitable for the proposed IWMF development.

### Pyrolysis

Up to 2008, there were some 30 pyrolysis plants for MSW treatment in various parts of the world. Application of pyrolysis for mixed MSW treatment is limited and this technology is not suitable for large scale uses. This treatment method requires pre-processing of mixed MSW. In general, pyrolysis system requires higher capital cost than the incineration systems. It was also found that a key pyrolysis supplier in Japan has recently withdrawn from providing new pyrolysis systems for waste treatment. Having considered this, and the limited number of such plants and its small-scale of application, the EPD is of the view that the pyrolysis technology is not suitable for application in the proposed IWMF.

### Sorting and Recycling Technologies

The review also identified that for sorting and recycling of MSW, the technologies available include: mechanical treatment alone ("MT"); mechanical and biological treatment ("MBT"); biological and mechanical treatment ("BMT") and mechanical heat treatment ("MHT").

Among the various sorting and recycling technologies, the review noted that application of MHT for MSW treatment had not been commercially proven. As for MT, the technology could only recover recyclables, without stabilising the waste residues. Both MBT and BMT technologies could recover materials and energy from the MSW and produce a more stable waste residue. Considering that MBT normally requires smaller land intake than BMT, EPD proposes that MBT be adopted for the sorting and recycling plant as a component of the IWMF.

Currently, there are over 200 MBT plants for MSW treatment worldwide and the biological treatment stage of the MBT could be either composting (aerobic) or anaerobic digestion. After evaluation, the review has recommended adoption of the anaerobic digestion process because it can produce biogas for energy generation and achieve a comparatively higher waste volume reduction with less land requirements than the composting process.

### Associated facilities

In reviewing the development of MSW incineration plants elsewhere, the consultant established that some plants have incorporated social, recreational and educational facilities to enhance their social acceptance. These associated facilities are generally well received by the public. It is therefore considered worthy to consider the possibility of incorporating some associated facilities in the proposed IWMF development.

Both of the two potential sites for the IWMF phase 1 development are located adjacent to the sea and in quite remote locations. Considering these site characteristics, common social and recreational facilities – such as community halls, swimming pools, tennis courts – may not be suitable. Instead, the associated facilities may be used to demonstrate waste-to-energy concept and advanced waste treatment technologies to the community. The following preliminary options, which could make use of part of the surplus energy generated by the IWMF and be built *in situ* or adjacent to the IWMF, may be worth exploring –

- (i) Educational centre cum Waste Technology Museum – which would focus on themes relating to waste treatment and education. The facility could comprise exhibition hall, interactive (computer) game gallery, lecture theatre and round site touring route via a visitor corridor;
- (ii) Eco-tourism Park – which could comprise greenhouse and botanic garden with a wide collection of flora species; an ecology centre displaying information on the local faunal species and providing venues for environmental activities. A good example is the Yumenoshima Tropical Greenhouse Dome in Japan which utilises energy provided by the adjacent Shin Koto Incineration Plant; and
- (iii) Recreational facilities – such as heated swimming pools, which can utilise part of the energy generated by the IWMF.

In addition, as the Shek Kwu Chau site is surrounded by a marine environment with diverse ecology and the surrounding water is a major habitat for marine life, consideration could be given to building a facility in or adjacent to the IWMF to promote marine ecology education and conservation.

## REGIONAL & INTERNATIONAL

### CHINA

#### China keen on low-carbon economy

Beijing's iconic Olympic venue – the Bird's Nest – might have been a little bit different if it were built today. "I would choose to use solar film to power air-conditioners in the Bird's Nest instead of the current ground-source heat pump," said Ding Gao, an engineer involved in construction of the landmark building.

Ding, director of the Building Energy Engineering Center of China Architecture Design and Research Group, said China's recent keen interest in low-carbon economy has boosted the development and implementation of "green" technology.

Many Chinese entrepreneurs and analysts agree that low carbon development has gradually become a trend in China. The trend was propelled by Chinese leaders' commitment to sustainable development.

President Hu Jintao in September told global leaders at the United Nations climate change summit that China will "step up efforts to develop a green economy, a low-carbon economy and a circular economy." He promised that the country, the world's third largest economy, would endeavor to cut carbon dioxide emissions per unit of gross domestic product (GDP) by a "notable margin" by 2020 from the 2005 level.

As a sign of the low carbon fervor, the three-day World Low Carbon and Eco-economy Conference attracted 500 enterprises from 25 countries and more than 1,300 government officials, business executives, foreign ambassadors and international organisation representatives. The Conference passed a declaration calling for all nations and businesses to develop low carbon and eco-economy to tackle global warming and other environmental issues.

Despite positive reactions from the public and industrial sectors, Chinese energy experts warned that China's road to industrialisation through low-carbon path would be hard.

A report, jointly issued in September by more than 100 Chinese energy experts, said China might reduce the intensity of carbon dioxide emissions with a persistent policy of energy saving and emissions reduction. However, without long-term substantive technology transfers and financial support from abroad, it will be difficult for China to significantly reduce total carbon dioxide emissions.

Zhang Kunmin, vice president of Chinese Association on Sustainable Development, said low carbon development is a systematic and complex process, which requires the joint efforts of the Chinese government and companies as well as international cooperation.

"China has a long way to go on the road of developing a low carbon economy," Zhang said.

[XinhuaNet.com, 21/11/2009]

### JAPAN

#### Emissions target in doubt

Japan could weaken its target for a 25 percent cut in greenhouse gas emissions by 2020 if all major emitters do not reach agreement on an ambitious global climate pact, the environment minister said on Friday. "The possibility is not zero," Sakihito Ozawa said, but declined to say what alternative target Japan had in mind.

[China Daily, 24/10/2009]

### HONG KONG

#### HK\$97,000 electric car unveiled

Hong Kong's first home-grown electric vehicle to hit international market, "Mycar", was officially launched from its birthplace yesterday. The environmentally-friendly, zero-emission vehicle can be charged on any normal household power outlet. The retail price of a Mycar will be only HK\$97,000.

Jointly developed by the Hong Kong Polytechnic University

(PolyU) and EuAuto Technology Limited (EuAuto), the Mycar is the first Hong Kong developed vehicle which is in full compliance with European standards. It also meets Hong Kong's roadworthiness requirements and has recently been granted vehicle type-approval as a private car.

The Mycar has been granted a World Manufacturer Identification (WMI) Code earlier this year. It has already been sold in several European countries including the UK, France, Italy, Austria and Denmark.

Building on the success of the Mycar, both PolyU and EuAuto hope to integrate advanced technology to improve overall performance of the vehicle. It is planned at the beginning of next year that lithium-battery and upgrade versions of the Mycar will be introduced. These versions are expected to bring a significant improvement in terms of mileage and speed.

The Hong Kong Innovation and Technology Commission has injected HK\$2 million to support Mycar's further research and development.

[China Daily, 24/10/2009]

### MALDIVES

#### Climate change bigger challenge than terrorism: Maldives President

With global warming threatening to render an estimated 300,000 people refugees every year, climate change is a far bigger challenge than international terrorism, Maldives President Mohamed Nasheed said.

"Climate change is going to affect a large number of people through flash floods, diseases and massive human displacement due to sea level rise, besides creating food scarcity," the Press Trust of India cited him as saying at a talk on 'Environment and Conflict Resolution' in India.

Whilst pointing out that the Maldives and other small islands have already started feeling the heat of global warming, Nasheed called upon the global community to take urgent and immediate steps to arrest the menace.

"It is important to defend the Maldives which is on the front line of climate change. If it can happen today to our nation, tomorrow it can happen with you as well," he said appealing for immediate flow of funds for mitigation measures.

He described climate change as a far bigger challenge than international terrorism or piracy. Nasheed favoured a greater role for emerging economies like India and Brazil in combating climate change, saying that they should be included in the UN Security Council because global warming will also have impact on security.

Nasheed said conflicts will also increase due to climate change and the refugee problem will become serious.

"The refugee problem will be the main issue. There is an estimate that climate change will result into 300,000 refugees a year. The nearby nations will turn into refugee camps," the President said, quoting various studies.

According to reports, the island's 360,000 citizens would be forced to evacuate as the nation is facing threat of submergence due to the rise in the sea level.

The President also had a word of advice for India; he said that New Delhi needs to focus on clean technologies, such as renewable energy, to meet its energy needs so that carbon emissions could be reduced.

[Bernama.com, 24/10/2009]

### MALAYSIA

#### Asean environment ministers set up working group on climate change

Asean environment ministers have established a working group to promote closer and deeper regional cooperation on climate change.

The group, set up at the 11th Asean Ministerial Meeting on the Environment held in Singapore, would also respond effectively to global efforts in addressing climate change issues, said a statement issued by the Natural Resources and Environment Ministry here.

The statement also said that the ministers discussed efforts taken to address land and forest fires and the transboundary haze pollution issue, in light of the moderate intensity of the El Nino effect by the end of this year.

The ministers also adopted a mechanism to ensure coordinated efforts among member countries to control tanker desludging activities at sea and to promote proper disposal of tanker sludge at approved disposal facilities.

The ministers are scheduled to meet again in 2010 at the 12th Informal Asean Ministerial Meeting on the Environment in Brunei.

[Bernama.com, 29/10/2009]

### KUALA LUMPUR

#### Promote green technology at all levels

The government's plan to establish a RM1.5-billion fund to promote green technology will encourage more companies to go green, according to the Centre for Environment, Technology and Development Malaysia (Cetdem).

In welcoming the initiatives announced by Prime Minister Datuk Seri Najib Tun Razak Friday, Cetdem executive director Anthony Tan Kee Hua said, however, that in order to boost local use of green products, the government should impose regulations to make it compulsory for manufacturers of green products, such as solar cells, to sell a certain percentage of their products locally. He said this was necessary because at present all these manufacturers were exporting their products overseas while local consumers would have to buy such products at higher import prices.

Najib, when tabling the 2010 Budget in the Dewan Rakyat, announced that the fund would be used to promote the supply and utilisation of green technology. The fund enables green technology producer and consumer companies to obtain soft loans to finance their activities. The scheme is expected to benefit more than 140 companies when it is launched in January next year. Priority will be given in government procurement programmes to environment-friendly products and services that comply with green technology standards.

On awareness of, and educational programmes on, green technology, Tan said these should be integrated in the national education system with emphasis on the pre-school and primary school levels so that it would become a culture.

Lauding the formation of the Public Land Transport Commission (SPAD), Tan said the authority should also look into ways to incorporate green technology in public transportation, such as using bio-fuel.

[Bernama.com, 23/10/2009]

### PHILIPPINES

#### Legarda stresses good governance to climate change

Senator Loren Legarda stressed on Sunday the need for good governance for communities to meet the challenges of climate change and reduce disaster casualties and damage.

In a "Global Assessment Report on Disaster Risk Reduction 2009: Executive Brief," Legarda said the world as a whole must act immediately to reduce climate disaster risks. The global picture has been grim. In the year 2008 alone the world saw 321 natural, mainly climate-related disasters which killed about a quarter of a million people and affected more than 200 million lives.

"The total economic cost was a stunning USD180 billion, which is twice the average annual economic losses of the past seven years. And the region of Asia and the Pacific has borne much of the brunt, accounting for more than 80 percent of the global loss of life," she said.

Legarda said about 70 to 80 per cent of disasters have been climate-related.

"And yet, given the gloomy scenario of climate change, more disasters are expected to happen. Indeed, climate change and disaster risks have become one of the greatest challenges to human development the world faces today," Legarda added.

Based on the recently released *Global Assessment Report on Disaster Risk Reduction*, Legarda stated disaster risks



will only be reduced if countries successfully address the three underlying drivers of risk: poor urban governance, ecosystem decline, and vulnerable rural livelihoods.

Explaining further, Legarda said that improving urban governance involves: stopping corruption and enforcing building codes, among others; protecting ecosystems which involves protecting forests, cleaning rivers, and stopping pollution, among others; and enhancing rural livelihoods, which means improving agricultural productivity and better supporting farmers.

For good governance, she cited Japan where 22.5 million people are exposed annually to typhoons, compared to 16 million people in the Philippines. However, the estimated annual death toll in the Philippines is almost 17 times greater than that of Japan. Overall, Legarda said tropical cyclone mortality risk in low-income countries is approximately 200 times higher than in countries of the Organisation of Economic Cooperation and Development (OECD), for similar numbers exposed.

On ecosystems, Legarda said, over the last century, the proportion of land area covered by forest in the Philippines has fallen from 22 percent in 1990 to just 19.4 percent in 2000.

As recorded, large area of natural forests have been converted to tree plantation, mining and marginal upland agriculture, which gave a 1.4 per cent average deforestation rate from 1990 to 2000, the highest among Asian countries.

[Philippines News Agency, 25/10/2009]

## CANADA

### Climate change protests held across Canada

Recently, thousands of people turned up on the streets of dozens of cities across Canada to take part in the global "Day of Action" to urge for more efforts to control climate change. About 150 events were staged in Canada, including people riding bikes in Montreal, ringing church bells in Victoria, and other different activities.

The events, which kicked off first in Australia and involve people in 181 countries, are organized by [www.350.org](http://www.350.org), a group dedicated to reducing the amount of carbon dioxide in air to 350 parts per million or less. Scientists say that number is the safest limit for carbon dioxide levels in the air. The world is currently over that number, at 383 parts per million on average.

Canada has the largest number of events worldwide, behind the United States.

[Philippines News Agency, 24/10/2009]

## AUSTRALIA

### Bushfires burn as Australia prepares final ETS laws

After months of political haggling the Australian government will unveil its revised carbon trading laws this week, with a vote expected by the year's final day of parliament on Thursday.

"Everyone in Australia ... this weekend would work it out that we are among the hottest and driest continents on Earth. We will feel the effects of climate change fastest and hardest," said Prime Minister Rudd, referring to more than 80 bushfires in Australia already this year, and temperatures over 40 degrees Celsius (104 degrees Fahrenheit).

"We must act this week and the government will be doing everything possible to make sure that that can occur," he said.

Climate Change Minister Penny Wong said that an amended ETS would be presented to opposition parties on Tuesday for their consideration before a vote in the Senate.

"We anticipate that we will be in a position to put a very clear offer to the opposition on Tuesday morning," Wong told Australian television. "The (opposition) coalition negotiators know broadly where we are likely to land."

The scheme, due to start in July 2011, will cover 1,000 of Australia's biggest polluters and will be the second domestic trading platform outside of Europe, putting a price on every tonne of carbon emissions.

The debate is being closely watched overseas, particularly in the United States where lawmakers are debating their

own proposals. Neighbouring New Zealand is also trying to pass revised emissions trading laws.

Australia, the world's biggest coal exporter, produces about 1.5 percent of global emissions and is one of the world's highest per capita emitters of greenhouse gases. Australia has now set a reduction target of 5 to 25 percent, with the upper level kicking in if a strong agreement is reached at U.N. climate talks in Copenhagen.

Australia's Greens, who plan to vote against the ETS laws, released legal advice warning that any attempt to strengthen pollution reduction targets after the laws are passed could trigger billions of dollars in compensation to industries.

The legal advice said that permits to pollute purchased in the ETS would be legally deemed personal property under the constitution, and if the government changed the value of personal property it must be done on just terms.

"The Rudd government's targets have failure written all over them," said Greens Senate leader Bob Brown. "Yet the ETS legislation will lock them in until 2020 since any increase will trigger compensation claims worth billions of dollars."

*Bernama.com*, 22/11/2009

### Smokers contaminate computers

Computer giant Apple is refusing to honour warranties on broken machines belonging to smokers.

Apple has already declined to work on at least three machines in the US, claiming the inside mechanisms were so heavily coated in tar and potentially poisonous substances they posed a health risk to technicians working on them.

Victorian work – safety authorities said any employer had the right to prevent employees from performing tasks considered hazardous to their health. That potentially opens the way for other computer manufacturers, as well as other industries, to implement similar policies against smokers, with several Melbourne PC repair shops prepared to follow Apple's stance.

"The tar build-up in a computer sticks to the components and they don't cool. If a breakdown is caused by a customer's use or misuse, manufacturers shouldn't be liable and I can see manufacturers refusing to repair equipment based on misuse or mistreatment by customers," said Paul Pritsis of Another World Computer Centre.

However, *Consumer Affairs Victoria* said vendors must still abide by the law and, regardless of Apple's policy in the US, Australian consumers could be protected under Victoria's *Fair Trading Act*.

Apple Australia did not return *Sunday Herald Sun* phone calls asking if the US policy would be implemented in Australia.

[*Sunday Herald Sun*, 29/11/2009]

## AFRICA

### Africa demands reparation for ills committed by major polluters

At the end of the 7th world forum on sustainable development held on Oct. 9-11 in Ouagadougou, the capital of Burkina Faso, Africa, which is expected to speak with one voice in Copenhagen, demanded reparation for the ills committed by major polluters. The cost is estimated at U. S. \$65 billion.

The Ouagadougou forum also put emphasis on the integration of policies, programmes and development strategies in the region to adapt to climate change. The forum, among others, voiced the need to promote exchanges of experience and share the existing expertise.

The Ouagadougou declaration asked for support for the Bali recommendations. These recommendations envisioned the gas emission reduction after the Kyoto Protocol expires in 2012, a mechanism of measuring the reduction, the impact on degradation and deforestation of the forests (REDD) and negotiations on sustainable management of forests (REDD+).

African countries anticipated the creation of a special fund which is to be principally contributed to by the developed countries.

The declaration suggested the increase of carbon wells through various programmes of reforestation and the conservation of forest ecosystems as well as support for African agriculture.

The measures are important, coming before the expiry of the *Millennium Development Goals* so that there is a sustainable management of land, water resources, animal resources and the promotion of ecologically sustainable agriculture, according to the document.

The declaration urged immediate action to reverse the tendency towards degradation of the hydraulic and terrestrial resources, while fighting against coastal erosion in Africa.

The heads of states and governments present at the forum also wished to mobilise regional capacities to curb emissions of substances detrimental to the ozone layer. To that end, the leaders proposed an African observation team to monitor the cross-border movement of dangerous waste materials.

African leaders called for support to their demand for the *Global Environmental Fund* and for maintaining the achievements of the Kyoto Protocol, especially the reduction of gas emissions from developed countries and assistance to the developing countries for adaptation, alleviation, access to appropriate energy and transfer of technology. They asked for the commitment of industrialized nations to cut gas emissions by 40 percent from 1990 levels by the year 2020.

The leaders demanded the process be accelerated to create a department for African environmental programmes at the African Bank of Development (AfBD), saying they are still awaiting a decision by the African Union, which already asked to AfBD to carry out a feasibility study for the establishment of a permanent Secretariat for African Fund for sustainable development.

The African leaders also warned that climate change would give rise to more immigration and consequential social conflicts, urging countries on the continent to have programmes in preparation for the worst situation. They expressed unanimous support for massive increase in production of solar energy, hydroelectricity and wind energy to cover Africa's needs from now till 2030, while developing transportation which emits less fumes.

They also called on the international community to support the *New African Green Revolution* and existing programmes for reforestation of African countries.

In order to defend a common position for Africa, the forum authorised Burkina Faso President Blaise Compaore to take all necessary measures to ensure that the points in the declaration are made part of the agenda in the Copenhagen conference on climate change in December.

[*XinhuaNet.com*, 13/10/2009]

## THAILAND

### Bangkok climate talks signal tougher global negotiations ahead of Copenhagen conference

Driven by political interests, the Copenhagen climate change talks were "doomed to be uneven," Chinese climate policy experts said after the preliminary Bangkok talks. Copenhagen represents one of the world's last chances to sign a deal to replace the current climate treaty.

The Bangkok talks, held from Sept. 28 to Oct. 9, was the second-to-last negotiation session before the Copenhagen conference, a summit in December in Denmark, where it is hoped leaders will sign a deal to replace the Kyoto Protocol to curb the causes of global warming.

However, Su Wei, who headed China's delegation to the climate negotiations in Bangkok, said some developed countries adopted a "passive attitude" to combating climate change during the talks.

"They neither offered satisfactory plans on their own planned emissions cuts, or as to capital and technological transfer to developing countries; nor did they respond positively to developing nations' suggestions on these aspects," said Su, director of the climate change policy department of the National Development and Reform Commission.

"The talks involve a conflict of interests, so it cannot run smoothly," Qi Jianguo, an economic and environmental policy researcher at the Chinese Academy of Social Sciences, told Xinhua. Qi said the climate negotiations

were politically driven and “any concession means possibly more responsibilities and payment.”

Since the outset of the world-wide economic slowdown, developed countries have expected the climate change issue to become a new economic growth engine and “any sort of compromise would affect economic interests,” he said. But Qi said the great amount of green house gases (GHG) emitted by developed countries in the past had already damaged the world’s environment.

He said, “It’s almost impossible for the Copenhagen conference to produce outcomes that meet the demands of all parties.” “The Bangkok talks were a trial of the Copenhagen conference,” Qi said.

China, among the majority of developing nations, insists that industrialised countries to cut emission by at least 40 percent of the 1990 level by 2020, the frame-work of which was implemented by the Kyoto Protocol in 1997.

China, however, at the cost of slowing its own economic growth, has set targets of cutting energy intensity by 20 percent and cutting emissions of major pollutants, such as carbon monoxide and sulfur dioxide, by 10 percent from 2006 to 2010. China’s stance was backed by India.

Shyam Saran, Indian Prime Minister’s Special Envoy who attended the Bangkok talks as a senior delegate, told Xinhua that developed countries, especially the United States, should take the lead in climate change mitigation and adaptation efforts.

India agreed last month to quantify emission reductions, though not in a legally binding form, into “a broadly indicative number that can be shared with the rest of the world.”

“But one sanguine sign is that all parties have shown willingness to compromise,” Qi said.

The “cautiously optimistic” view was also shared by Wu Changhua, the Greater China director of the Climate Group. Wu said nations would possibly sign agreements in “certain areas” at the Copenhagen conference, such as relating to prevention of deforestation and climate change adaptation processes. But it would be difficult for nations to reach consensus on capital and technological transfer, as rich nations were short of funds during the economic downturn, she said.

She said the United States’ domestic politics shadowed the stance of the U.S. in climate talks as the *American Clean Energy and Security Act (ACES)*, aimed at mitigating climate change, would not likely to be passed by the Senate by the end of 2009.

The new climate bill, proposed by U.S. Senators John Kerry and Barbara Boxer, requires a 20 percent cut in GHG emissions from the 2005 level by 2020, compared to the 17 percent cut negotiated in the U.S. House of Representatives.

But many U.S. lawmakers worry that the bill would hurt economy.

Even if it were passed, the act would still have been viewed as “too weak” to tackle dangerous consequences of climate change, observers said.

The last round of climate talks before the Copenhagen conference will be held in November in Spain.

[China View, 12/10/2009]

## INDIA

### Indian state bans dolphin hunting

A couple of days after declaration of dolphin as a “national aquatic animal”, Chief Minister Nitish Kumar in the northern Indian state of Bihar has directed the state authorities to stop dolphin hunting in the river Ganges.

*Gangetic* dolphin, a highly endangered species, was declared National Aquatic Animal at the meeting of *National Ganga River Basic Authority* in New Delhi on Monday.

Instructions from Chief Minister Nitish Kumar have been passed to senior officials, including sub-divisional officers, magistrates, police officers and block-development officers to ensure close surveillance and to act swiftly to stop hunting of the aquatic animal.

Schools have been told to take steps to create awareness among the students about the *Gangetic* dolphin, which would boost eco-tourism in the region. Due to excessive pollution in Ganga and poaching, there are less than 2,000 dolphins left in the country.

All this has prompted the *International Union for Conservation of Nature*, a forum of conservationists, NGOs and government agencies, to categorise it as an endangered species.

*Gangetic* dolphin is an endemic species of the Ganga, Brahmaputra and Meghna river systems, which extend from the foot of the Himalayas to the tidal zone in India, Bangladesh, Nepal and Bihar.

[XinhuaNet.com, 09/10/2009]

## USA

### Traffic lights synchronisation to ease pollution in Los Angeles

Los Angeles is becoming the greenest city in the United States as travel time and pollution from vehicles idling at intersections are drastically slashed following synchronisation of over 80 percent of its traffic lights, Mayor Antonio Villaraigosa said Thursday.

A project called “Automatic Traffic Surveillance and Control” was recently completed in the Hyde Park West area, bringing the total number of synchronised traffic lights to 3,597 out of 4,400 in the city.

Based on analysis of real-time traffic conditions, the synchronized system, along with others that have already gone into operation, turns lights from red to green in a more traffic-orderly manner.

As a result, travel speeds on roads that have been put under the control of synchronised lights could improve by as much as 13 percent, while delays at intersections may be reduced by up to 24 percent. The city hopes to have all of its traffic lights synchronised by 2012.

[XinhuaNet.com, 09/10/2009]

## EUROPEAN UNION

### European Commission calls for additional 50 billion euros in low carbon technologies

The European Commission has said that an additional investment of 50 billion euros in energy technology research will be needed over the next 10 years in order to develop by 2020 the necessary low-carbon technologies needed to address climate change.

EU Energy Commissioner Andris Piebalgs, said: “Previous industrial revolutions have proved that the right technologies can transform for the better the way we live. Today we have a unique opportunity to change an energy model based on polluting, scarce and risky fossil fuels, into a clean, sustainable and less dependent one. All depends on choosing the right technologies.”

The commission, together with industry and the research community, has drawn up technology “roadmaps” which identify key low-carbon technologies with strong potential at EU level in six areas: wind, solar, electricity grids, bio-energy, carbon capture and storage, and sustainable nuclear fission.

The additional investment would cover basic and applied research, demonstration and early market take-up costs, said the Commission.

[XinhuaNet.com, 08/10/2009]

## UNITED KINGDOM

### Ireland to join North Sea scheme to combat pollution

Ireland’s Exclusive Economic Zone waters are soon to be incorporated into the Bonn Agreement in a bid to combat illegal and accidental pollution.

Earlier this month in Bonn, Germany, North Sea states and the European Community agreed on a framework for a revised action plan (Bonn Agreement) that will strengthen joint prevention and response to marine pollution caused by shipping, other maritime activities and offshore structures

such as oil rigs and wind farms.

Wolfgang Tiefensee, Federal Minister of Transport, Building and Urban Affairs, Germany, congratulated the Bonn Agreement Contracting Parties on their 40 years of work. He said that he was convinced that in the future the Bonn Agreement will continue to make a positive impact on the environmental status of the North Sea and surrounding areas by 2020, a goal that was set by the *Integrated Maritime Policy for the European Union and its Marine Strategy Framework Directive*.

The latest meeting saw a unanimous response from all eight North Sea States (Belgium, Denmark, France, Germany, the Netherlands, Norway, Sweden, the United Kingdom) and European Community representatives, to protect the North Sea against risks from maritime activities.

The Bonn Agreement has acknowledged the sizeable growth of offshore wind-farms by recognising the need to incorporate their specifics into the Agreement.

In a statement from the Bonn Agreement, Ms Pia Bucella, Chair of the Bonn Agreement and Director at the European Commission, concluded a tribute to the 40th anniversary proceedings saying, “I am convinced that the Bonn Agreement Action Plan, addressing some of these challenges, has the potential to become a key milestone in the further development of the Agreement.”

[Epoch Times, 14/10/2009]

## PACIFIC ISLANDS

The Paradise Forests of Papua New Guinea, Solomon Islands and Indonesia are among the most culturally rich and biodiverse areas on earth. But, multinational logging companies are plundering the Paradise Forests for cheap timber to sell in countries like Australia.

In Papua New Guinea (PNG) and Solomon Islands, Greenpeace programmes are helping to give the forest back to indigenous communities. It is a slow process, but the programmes are making a difference. The aim is to end illegal logging and ensure a safe future for the forests.

In September 2009 a team of scientists discovered a ‘lost world’ in an ancient PNG crater. They found 40 previously unidentified species, including giant butterflies, cuscus and frogs. What a remarkable discovery! Can you believe that there are animals and plants here that the world hasn’t even discovered yet?

Unfortunately, the forests are not remote enough to keep away industrial logging companies. Many unique endangered species are under threat, including the Bismarck flying fox, Queen Alexandra’s birdwing (the world’s largest butterfly) and several species of tree kangaroo.

There is another side to unsustainable logging that affects us all. Forest destruction is responsible for about 20% of global greenhouse gas emissions, fuelling climate change. A 2008 report by the University of Papua New Guinea states that 83% of PNG’s accessible forest area will be cleared or degraded by 2021 if current trends are allowed to continue.

Greenpeace hopes to save the Paradise Forests by :

- forcing governments to safeguard forests under law and to enforce harsher penalties on illegal loggers
- helping landowners set up sustainable eco-forestry enterprises
- promoting *Good Wood* alternatives to consumers.

Every second of every day, 1.5 acres of the world’s rainforests are destroyed forever. Indonesia’s forests are so damaged that it now has more endangered species than anywhere else on Earth.

[Greenpeace Australia Pacific Newsletter, 26/11/2009]

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.

## Members of ADVOCASIA



### An Association of Asian Commercial Law Firms

#### Adelaide, Australia

**NORMAN WATERHOUSE**  
Level 15, 45 Pirie Street, Adelaide 5000  
South Australia  
Tel: (618) 8210-1200  
Fax: (618) 8210-1234

#### Melbourne, Australia

**MADDOCKS**  
140 William Street, Melbourne  
Victoria 3000, Australia  
Tel: (613) 9288-0555  
Fax: (613) 9288-0666

#### Perth, Australia

**KOTT GUNNING**  
Level 8, AMP Building  
140 St Georges Terrace  
WA 6000, Australia  
Tel: (618) 9321-3755  
Fax: (618) 9321-3465

#### Sydney, Australia

**COLIN BIGGERS & PAISLEY**  
Level 42, 2 Park Street  
Sydney, NSW 2000 Australia  
Tel: (612) 8281-4555  
Fax: (612) 8281-4567

#### Beijing, China

**JINCHENG & TONGDA LAW FIRM**  
11th Floor, 22 JianGuoMenNei Avenue  
Huaxia Bank Building  
Beijing 100005, P.R. China  
Tel: (86) 10-8523-7766  
Fax: (86) 10-6526-3519

#### Hong Kong, China

**FRED KAN & CO.**  
Suite 3104-07, Central Plaza  
18 Harbour Road Hong Kong  
Tel: (852) 2598-1318  
Fax: (852) 2588-1318

#### Inner Mongolia, China

**JIANZHONG LAW FIRM**  
The Middle Part of Jianshe Road  
Baotou, Inner Mongolia  
P.R.China  
Tel: (86) 472-7155473  
Fax: (86) 472-7155474

#### Macau

**THE LAW OFFICE OF DR ANTONIO RIBEIRO BAGUINHO**  
Suite 1308, 13th Floor, Landmark Building No. 555  
Avenida da Amizade, Macau  
Tel: (853) 28705352  
Fax: (853) 28705351

#### Shandong, China

**SHANDONG QINDAO LAW FIRM**  
22/F, Northern Tower, Golden Square  
20 Hong Kong Road(M), Qingdao, P.R.China  
Postal Code 266071  
Tel: 86-532-85023128  
Fax: 86-532-85023080

#### Shanghai, China

**SHANGHAI UNITED LAW FIRM**  
14/F, China Insurance Building  
166 East Lujiazui Road  
Shanghai, P.R. China  
Postal Code 200120  
Tel: (86) 21-69419377  
Fax: (86) 21-68419499

#### Mumbai, India

**DHRUVE LILADHAR & CO**  
13-A/B, Ismail Building, 3rd Floor  
381, D.N. Road, Flora Fountain  
Mumbai – 400001 India  
Tel: (91) 22-2285-2362  
Fax: (91) 22-2285-5787

#### New Delhi, India

**O.P. KHAITAN & CO.**  
Khaitan House B-1,  
Defence Colony, New Delhi-110 024 India  
Tel: (9111) 2433-7516  
Fax: (9111) 2433-7958

#### Kuala Lumpur, Malaysia

**CHEANG & ARIFF**  
39 Court @ Loke Mansion  
No. 273A, Jalan Medan Tuanku  
50300 Kuala Lumpur, Malaysia  
Tel: (603) 2161-0803  
Fax: (603) 2161- 4475

#### Auckland, New Zealand

**HESKETH HENRY**  
41 Shortland Street  
Auckland, New Zealand  
Tel: (64) 9-375-8700  
Fax: (64) 9-309-4494

#### Manila, Philippines

**HERRERA TEEHANKEE & FAYLONA**  
5th Floor, SGV II Building  
6758 Ayala Avenue  
Makati City 1200, Philippines  
Tel: (632) 813-7111  
Fax: (632) 813-7881

#### Singapore

**MADHAVAN PARTNERSHIP**  
5 Shenton Way #26-01 UIC Building  
Singapore 068808  
Tel: (65) 6225-5111  
Fax: (65) 6224 3594

#### Colombo, Sri Lanka

**D.N. THURAIRAJAH & CO.**  
2nd Floor, Don Carolis Building  
Post Box.1464, No. 64, Keyzer Street Colombo-11,  
Sri Lanka  
Tel: (94) 1-439-798  
Fax: (94) 1- 448-002

#### Bangkok, Thailand

**APISITH & ALLIANCE**  
Wave Place, 7th Floor  
55 Wireless Road, Lumpini  
Pathumwan, Bangkok 10330 Thailand  
Tel: (66) 2655-2860  
Fax: (66) 2655-2868

#### Dubai, United Arab Emirates

**LUTFI AL BAHAR & CO.**  
Suite 804 A City Tower 2  
PO Box 8812, Dubai, United Arab Emirates  
Tel: (97) 14-321117  
Fax: (97) 14-311455

#### Ho Chi Minh City, Vietnam

**LUATVIET**  
Saigon Tower, Suite 908-909  
29 Le Duan Boulevard  
District 1, Ho Chi Minh City  
Vietnam  
Tel: (84) 8-824-8440  
Fax: (84) 8-824-8441

**Convictions under environmental legislation: September to November 2009**

[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:

*September 2009*

Twenty-eight convictions were recorded in September for breaches of anti-pollution legislation enforced by the Environmental Protection Department.

Twelve of the convictions were under the Air Pollution Control Ordinance, 9 under the Waste Disposal Ordinance, 5 under the Noise Control Ordinance and 2 under the Water Pollution Control Ordinance.

The heaviest fine in September was \$110,000, assessed against an engineering company which used powered mechanical equipment without valid construction noise permit.

*October 2009*

Twenty-seven convictions were recorded in October for breaches of anti-pollution legislation enforced by the Environmental Protection Department.

Twelve of the convictions were under the Waste Disposal Ordinance, 10 under the Air Pollution Control Ordinance, 3 under the Noise Control Ordinance and 2 under the Hazardous Chemicals Control Ordinance.

The heaviest fine in October was \$50,000, assessed against a company which imported controlled waste without a permit.

*November 2009*

Thirty-five convictions were recorded in November for breaches of anti-pollution legislation enforced by the Environmental Protection Department.

Thirteen of the convictions were under the Air Pollution Control Ordinance and 12 under the Noise Control Ordinance, 8 were under the Waste Disposal Ordinance and 2 under the Water Pollution Control Ordinance.

The heaviest fine in November was \$60,000, assessed against a company which imported controlled waste without a permit.

Printed Matter

Fred Kan & Co.  
Solicitors Suite 3104-07 Central Plaza  
18 Harbour Road Wanchai, Hong Kong



Printed on environmentally friendly paper.