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Feature Column

Air Pollution from China: Impact and Outlook for Taiwan

Long-range transmission of air pollutants from China and the resulting impacts on Taiwan in recent years highlight the truth that environmental protection knows no borders. As Taiwan addresses concerns about air quality and environmental ecology, consideration must be given not only to domestic monitoring work, but also to strengthening cooperation on international and cross-strait environmental monitoring in the future. This will become increasingly important for Taiwan in its work to improve environmental quality.

In recent years, China's booming economic development has generated large amounts of industrial pollutants and hazardous materials due to increased energy consumption. Statistics show that China's carbon dioxide, sulfur dioxide and atmospheric mercury emissions are now the largest in the world. Overdevelopment has led to desertification and an increase in the frequency of dust storms. Taiwan's close proximity puts it directly in the path of long-range air pollutants from China during the northeastern monsoon throughout winter and spring. Pollutants include hazardous substances such as acid rain, dust storms, sulfur oxides, mercury and dioxin. The effects on human health, air quality and ecology cannot be overlooked.

Long-range Air Pollutants Degrade Environment and Health

Dust storms: China experiences an average of over ten dust storms per year, and the storms are increasing in intensity. Every year from October to May an average of four to five dust storms affect air quality in Taiwan (from just once in 1998 to nine times in 2004). Taiwan's air quality has been noticeably affected by dust storms from China twice since the winter of 2007~2008. On 30 December 2007, northern Taiwan PM_{10} increased to 219 micrograms (μg) per cubic meter (about 4~5 times background levels). Following the northeastern monsoon, the dust completely covered Taiwan and 47 air quality monitoring stations recorded poor air quality (PSI>100).

In early March this year (2008), China experienced its worst dust storm, which not only affected five

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provinces and 300 cities, but also had an impact on Japan, South Korea and Taiwan, causing some elementary schools in Japan and Korea to cancel classes. Taiwan was most greatly affected on March 3, when 43 air monitoring stations throughout Taiwan measured suspended particulates in excess of 200μg/m^3. The Wanli monitoring station in northern Taiwan measured maximum hourly suspended particulates at 253μg/m^3 (5~6 times the background values). The Annan monitoring station in Tainan City, southern Taiwan, recorded notably poor air quality with suspended particulates at 355μg/m^3. East Asian nations continue to keep watch of dust storms in China.

Health risks: China's dust storm season causes significant increases in not only suspended particulate concentrations but also sulfates. Industrial SO_2 emissions are also carried by the northeastern monsoon to Taiwan. Long-range transmission of foreign pollutants has a considerable effect on Taiwan. EPA studies in 2002 show the spores of many species of fungi are present in higher concentrations during the dust storm season than during other times. It is shown that dust storms have an impact on the concentration of fungal spores in northern Taiwan. When dust storms reach Taiwan, the number of people that check into emergency health care on that day or following days is greater than the average number of emergency patients in that month. The number of emergency patients peaks three to four days after dust storms arrive in Taiwan.

Atmospheric mercury: In April 2006, the EPA established an international standard air quality background monitoring station on Mt. Lulin at 2,862 meters elevation to monitor the effects of foreign long-range air pollutants. Two years of monitoring have shown average concentrations of gaseous elemental mercury (GEM) are highest when air masses from China's industrial areas reach Taiwan. In October 2007, GEM reached 2.42 ng/m^3, which is about twice as high as background levels in summer. This attests to high concentrations of atmospheric mercury in air masses from China.

Monitoring results from early January 2008 show that atmospheric mercury concentrations were noticeably higher during the dust storm season. The highest concentrations were 5.4 ng/m^3, far greater than the background level of 1.1 ng/m^3. This shows that the range of impact from China's dust storms on Taiwan affects elevations as high as 3,000 meters. The EPA has conducted studies and monitoring on the long-range transmission of mercury pollution through Taiwan-US technical agreement plans with the USEPA.

Dioxin: According to monitoring conducted by Academia Sinica's Research Center for Environmental Change, the Taipei Basin background measurement of atmospheric suspended particulates

International standard background air quality monitoring station on Mt. Lulin

containing dioxin is recorded at 245 pg-TEQ/g. During dust storms, this jumps to over 490 pg-TEQ/g. This year the dust storm season had its greatest impact from 13~20 March 2006, with twenty-fold increases in atmospheric dioxin concentrations. This shows that northeastern monsoons not only result in long-range transmission of dust from China to Taiwan, but also persistent organic pollutants (POPs).

Strengthening Cooperation on International and Cross-Strait Environmental Monitoring

To better understand the effects of long-range air pollutants on Taiwan and the global environment, in recent years the EPA has actively participated in international environmental monitoring cooperation with the USEPA, NASA and NOAA. With the EPA's endorsement, the National Central University and the EU signed a memorandum of cooperation to monitor greenhouse gases over the Pacific Ocean. The EPA also promotes international environmental cooperation by exchanging monitoring data and through joint observation programs with neighboring countries in Southeast Asia. This helps the region stay abreast of long-range air pollutants, and ensures a more accurate overall estimate of the effects of China's dust storms and industrial pollutants on Taiwan and the global environment.

Fully equipped roof of the Mt. Lulin air quality monitoring station

Cross-strait cooperation: China regards meteorological data as national security information not to be disclosed, leaving the rest of the world in the dark about distribution of dust storms and industrial pollution in China. This makes it difficult to make immediate forecasts and estimates of long-range effects on the environment. Currently, exchange can only be carried out through research organizations such as Academia Sinica, academic organizations such as the National Central University and the Chinese Cultural University, and China's related environmental monitoring or research organizations. The scope of accessible data is considerably limited. It is therefore hoped that China can disclose environmental monitoring data and related research for the benefit of both sides in cooperating on environmental monitoring issues.

Air Quality

Air Pollution Fee Reduction Regulations Enacted

On 7 March 2008, the EPA promulgated the Regulations on Air Pollution Control Fee Reductions for Public and Private Stationary Pollution Source Air Pollution Control Equipment. Enterprises that install effectively operating air pollution control equipment at stationary pollution sources can enjoy up to a 30% reduction on air pollution control fees.

The EPA delineates two main categories of air pollution reductions. The first category addresses costs of installing pollution control equipment. Businesses are eligible for reductions toward the costs of installing new control equipment. The goal of this measure is to reduce business expenses and increase willingness to install pollution control equipment. The second type of reduction goes toward operation and maintenance costs of control equipment to encourage businesses to keep control equipment in optimal working condition.

Before installing new equipment to control SO_X, NO_X or VOCs, businesses can apply with their local environmental protection bureau for reduced air pollution control fees, for up to 30% of equipment price. Those with existing VOC control equipment installed after 2002 are eligible for a 15% reduction. If businesses do not apply for reductions on equipment purchases or if they have already obtained purchase

price reductions, after five years they can apply for reductions of expenses on consumable items. The EPA estimates that implementation of this regulation will reduce up to 9,000 tonnes of SO_X, 15,000 tonnes of NO_X and 29,000 tonnes of VOC air pollution emissions.

The EPA states that economic incentives encourage businesses to proactively invest in air pollution prevention work to reduce air pollution emissions and improve air quality. Assistance provided by the government through air pollution control fee reductions can cut business expenses on air pollution control fees and operating costs. This measure will not only lead the development of the domestic pollution control equipment industry, but will also increase competition and benefit the economy. For more information, please call 02-2311-7722 ext. 2750.

Climate Change

2008 Environmental Car and Motorbike Models Announced

Environmentally friendly vehicles with low pollution, low noise and low fuel consumption features are an international trend. The EPA announced the 2008 annual list of environmental car and motorbike models in Taiwan.

The EPA's evaluation of environmental cars is primarily based on vehicle exhaust and noise emissions as well as fuel consumption data announced by the Bureau of Energy, Ministry of Economic Affairs. The evaluation targeted 110 car models and 12 motorbike models that obtained EPA certification of emissions testing qualification before 31 December 2007. Seven cars and six motorbikes were selected based on the three selection criteria of pollution, noise and fuel consumption. Apart from three foreign models of cars, all other models were manufactured in Taiwan.

Leading first place was Smart 1.0 followed by Toyota Prius (Hybrid) 1.5, Suzuki SX4 1.6, Nissan Tiida 1.6, Toyota Vios 1.5, Toyota Yaris 1.5, and Honda Civic 1.8. As for motorbikes, KYMCO GP 125 took first place, with other winning models being SR G5 125, Yamaha New Vino 50, KYMCO JR 100, Sanyang RX 110 and Sanyang Fighter 125.

Evaluations were based on the following criteria:

1. Cars

Cars must comply with the following three standards: 1) Pollutant emissions must be lower than the Super Ultra Low Emission Vehicle (SULEV) standards (CO at 0.625 g/km and NO_X at 0.012 g/km) set by California, USA – currently the world's strictest emission standards. 2) Noise levels must comply with Taiwan's fourth stage control standards (acceleration noise within 74 decibels and idle noise at 96 decibels). 3) Fuel consumption must be at least 14.5 km/l. The top seven models were then ranked based on total emissions of non-methane hydrocarbons (NMHC), carbon monoxide and NO_X.

2. Motorbikes

Pollutant emissions must comply with Taiwan's fifth stage emission standards which went into effect on 1 July 2007. Noise levels must be within Taiwan's fourth stage control standards (ranging from 72~80 decibels during acceleration and 84~94 decibels during idle, based on different emission levels). Fuel consumption must be at least 42.0 km/l for motorbikes with exhaust volumes from 50~100cc. The top six models were then ranked based on total emissions of hydrocarbons (HC), CO and NO_X.

The EPA's goal in announcing the top environmental motor vehicles is to give consumers information on which to base their purchase of new models. It also reminds citizens to make their purchase decision based on environmental factors (low emissions, low noise levels, and low fuel consumption) rather than just appearance, price and features.

For more information, please call 02-2311-7722 ext. 2750.

General Policy

The Parliament Magazine Reports Taiwan's Environmental Policy

The global community is taking notice of Taiwan's international cooperation in greenhouse gas reductions. The 31 March 2008 issue of The Parliament Magazine reported an interview with Taiwan EPA Minister Winston Dang regarding Taiwan's efforts to reduce greenhouse gases. The article marks the first time for this influential EU magazine to report on Taiwan's environmental issues.

With the Taiwan EPA's endorsement, the National Central University and the European Union signed a memorandum of understanding in Belgium on 18 February 2008 regarding a cooperation plan to monitor greenhouse gases over the Pacific Ocean. Taiwan's participation fills a crucial gap in this global monitoring plan by gathering data from the western Pacific Ocean, which was otherwise restricted due to aircraft traffic. EPA Minister Winston Dang was present for the signing of this MOU.

EPA Minister Dang addressed officials, experts, scholars, civil organizations and international media of EU states engaging in environmental protection affairs, emphasizing that Taiwan's lack of membership in the UN makes it all the more difficult for Taiwan to take action in the international arena. Despite this hurdle, Taiwan and the EPA are still willing to participate in international cooperation plans involving greenhouse gas reduction-related issues, and actively seek opportunities to participate in international cooperation. Dang believes that Taiwan's efforts to seek sustainable development of the environment will eventually be recognized and affirmed by the international community.

The Parliament Magazine article focused on Taiwan's efforts to curb greenhouse gases, willingness to strengthen environmental cooperation and exchanges with the EU, and dedication toward addressing the impacts and challenges of climate change. EPA Minister Winston Dang mentioned that the problem of greenhouse gases cannot be solved by one nation alone – it is necessary for all nations to join forces against this problem. In September 2006, Taiwan led developing nations with the unprecedented proposal of a draft Greenhouse Gas Reduction Act, and in July 2007 launched a national greenhouse gas registry. This legislation seeks to register up to 80% of greenhouse gases emitted by the energy and industrial sectors in Taiwan within three years. Considerable effort is going toward developing local voluntary reduction schemes and implementing various ground level actions that simultaneously achieve Taiwan's objectives for both greenhouse gas mitigations and economic development.

The Parliament Magazine serves as an important channel for communication among EU states. The implications of this feature article are therefore important for Taiwan as a non-member of the UN as it gives EU states a greater understanding of Taiwan's efforts to reduce carbon dioxide emissions. In the future, the EPA will continue to update The Parliament Magazine on Taiwan's environmental policy to raise Taiwan's visibility and increase the EU's understanding of Taiwan.

The content of The Parliament Magazine article on Taiwan can be found on the EPA's website (http://www.epa.gov.tw).

Environmental Information

3D Environmental Maps Available for Download

The EPA's geographic information system (GIS) has been renovated to provide 3D environmental maps that can be downloaded for free. This service is a boon to schools of all levels for making educational materials, and helps citizens keep up with environmental information in their vicinity. The system can be found at http://edb.epa.gov.tw/epagdc2.

The EPA has produced over 90 environmental protection-related maps under 10 environmental themes. The maps integrate geographic information using attractive colors and overlays of environmental facilities which can be used as base maps. The system provides elevation parameters and geographic analysis data in three dimensions. Landscapes are shown through geographic parameters, landforms, topographical profiles, and 3D virtual reality, describing terrain and slope direction for reference to assist with various environmental management tasks.

The website interface includes geographic portrayal of environmental information such as water pollution control areas, motorbike check-up stations, and recycling plants. This is provided to the public as important environmental information to reference when purchasing housing or checking on the environment where you live.

The EPA indicates that GIS is gaining increasing everyday usage in many applications, in line with the Council for Economic Planning and Development (CEPD)'s Ten-Year National GIS Establishment and Promotion Plan. The EPA will continue to strengthen GIS functions and introduce service oriented architecture (SOA). More added-value geographic data and mapping applications and services will be provided over the Internet in the future.

For more information, please contact 02-2311-7722 ext. 2330.

EPA's geographic information system (GIS) on its webpage

Toxic Substance Management

28 Pollutants Including Nonylphenol Proposed to Enter Drinking Water Quality Standards

The EPA has screened a list of 28 proposed domestic emerging pollutants not yet regulated under drinking water quality standards. Basic information will be established and random testing will be conducted for these 28 substances, including nonylphenol.

The EPA states that some drinking water passes through media that is potentially exposed to pollutants which could pose health risks. This concern gave rise to the "Drinking Water Source and Water Quality Standards Pollutant Screening and Monitoring Plan," a three-year plan that started in 2007. The plan has resulted in a proposed list of 28 emerging pollutants not yet regulated under drinking water standards. Basic information will be established and random testing will be conducted for these 28 substances. The list of pollutants contains three types of bioaccumulative pollutants (nonylphenol, di(2-

ethylhexyl) phthalate (DEHP), and bisphenol A) and persistent organic pollutants (POPs) (see chart).

The EPA indicates that Taiwan produces approximately 30,000 tonnes of nonylphenol every year, 30~40% of which is used for domestic purposes, mostly as a surfactant or as a raw material in other chemical products. Nonylphenol inhibits

List of 28 newly added pollutants to be considered for future regulation

Category	No.	Chinese term	English term	USEPA Carcinogen Group
Pathogenic protozoa	1	糞便性大腸桿菌群	Fecal Coliform	—
	2	大腸桿菌	*Escherichia coli*	—
	3	隱孢子蟲	*Cryptosporidium*	—
	4	梨形鞭毛蟲	*Giardia Lamblia*	—
Metabolic products	5	微囊藻毒-LR型	Microcystins-LR	—
Disinfectant by-product	6	鹵乙酸類	Haloacetic acids (HAAs)	Monochloroacetic acid: — Bichloroacetic acid: B2 Trichloroacetic acid: C
	7	醛類	Aldehyde	B1
Pesticide	8	陶斯松	Chlorpyrifos	D
	9	大滅松	Dimethoate	—
	10	福瑞松	Phorate	D
	11	托福松	Terbufos	—
Volatile organic compound (VOC)	12	二氯甲烷	Dichloromethane	B2
	13	1,1-二氯甲烷	1,1- Dichloroethane	C
	14	1,2-二氯丙烷	1,2- Dichloropropane	B2
	15	順1,2-二氯乙烯	Cis-1,2-dichloroethene	D
	16	反1,2-二氯乙烯	Trans-1,2- dichloroethene	D
	17	四氯乙烯	tetrachloroethene	—
	18	一氯苯	Chlorobenzene	D
	19	1,2-二氯苯	1,2- Dichlorobenzene	D
	20	1,4-二氯苯	1,4- Dichlorobenzene	C
	21	甲苯	Toluene	—
	22	乙苯	Ethylbenzene	D
	23	二甲苯	Xylene	—
	24	苯乙烯	Styrene	C
Metal	25	鋁	Aluminum	—
Persistent organic pollutant (POP)	26	壬基酚	Nonylphenol	—
	27	鄰苯二甲酸二(2-乙基己基)酯	Di-(2-ethylhexyl)phthalate	B2
	28	雙酚A	Bisphenol A	—

Note 1: USEPA carcinogen groups. Group B: possible carcinogen to humans. B1: Limited evidence of carcinogenicity to humans. B2: Abundant evidence of carcinogenicity to animals, but lacking evidence of carcinogenicity to humans. C: Possibly carcinogenic to humans (insufficient evidence of carcinogenicity to

animals, and no evidence of carcinogenicity to humans). Group D: Unable to classify carcinogenicity to humans.

Note 2: Data source referenced: 2008 research plan conducted by the EPA, Executive Yuan "Drinking Water Source and Water Quality Standards Pollutant Screening and Monitoring Plan (1/3)" (EPA-96-U1J1-02-102). Executing organization: Tamkang University Department of Water Resources and Environmental Engineering. Project director: Prof. Kang Shyh-fang. Assistant director: Prof. EE Chang. Consultants: Prof. Jiang Ben-ji and Prof. Wang Gen-shu.

the development of male sex organs in animals and increases the growth the uterus of mammals, resulting in altered menstrual cycles and reduced sperm count. Nonylphenol is also an endocrine disruptor and can have an impact on ecosystems.

DEHP is extensively used in everyday settings and in the industrial manufacture of PVC and polypropylene (PP) as a plasticizer. Human exposure occurs mainly through breathing, eating, drinking or skin contact. Toxicology data shows that DEHP disrupts the endocrine system and is an environmental hormone. The effects of its toxicity are most apparent in the liver and testicles. Studies conducted by the USEPA show that the risk of cancer from DEHP occurs at concentrations of $0.3x10^{-4}$ mg/l.

Bisphenol A is a raw material used in the manufacture of epoxy resin, polycarbonate, polyarylate, and fire retardants. Bisphenol A has been confirmed to disrupt the endocrine adjustment mechanism in animals making them lose sexual characteristics and reproductive ability. It is listed as an environmental hormone.

The EPA indicates that new pollutants are emerging due to the continual invention of new products. These new pollutants can enter drinking water sources through different paths including the discharge of industrial wastewater, household wastewater, or solid waste. It is therefore necessary to establish a sound screening mechanism to screen all possible newly emerging pollutants that could enter drinking water sources. After making an overall assessment of human health risks, treatment technology, testing analysis, and economic feasibility, these pollutants may be included under drinking water quality standards at the outset to safeguard drinking water quality.

The screening of these 28 pollutants was conducted with reference to recommended pollutants listed in drinking water quality standards by the WHO, EU, US, Canada, UK, Japan, New Zealand, and Australia. Related experts were then convened to screen out 28 pollutants that could be present in domestic water sources, and prioritize these for control under drinking water quality standards.

The EPA will post basic data on the 28 screened pollutants on its drinking water global information system, which can be found at http://tsm.epa.gov.tw//drinkwater. For more information, please call (02) 2311-7722 ext. 2850.

Water Quality

River Use Classification Expanded

Based on over 20 years of changes in how we use rivers, the EPA has carried out a year-long study to formulate newly added water zones and revise water body classifications to accord with the current status and requirements of water body uses.

Of all of Taiwan's river systems, 24 water systems are under central government jurisdiction and 91 water systems are managed by county and municipality governments. The former were demarcated as water zones in a 1981 study on water pollution prevention in Taiwan. Designated water zones and water body classifications of major rivers were then successively announced from 1982. Over the last 20 years the uses of these major rivers have changed, and the EPA has conducted a year-long study to draw up new water zones and revise the classification of water bodies.

Revisions primarily focus on the 24 centrally regulated river systems, with the addition of the Tanshui River making a total of 25 water systems. Thorough surveys

have been taken of each water system's current status to record basic information, water resource usage, amounts of water used, amounts included in water rights, and quality of water used. Current and future water uses were evaluated and conclusions were drawn up for each water system.

After consultation with experts, changes were recommended for 10 of the 25 river systems, with changes to river segments in 2 water zones, and redrawing of river segments in 3 water zones. After reviewing river segment usage classification in the original 25 water systems, it was decided to upgrade the status of 3 river segments, and downgrade the status of 8 river segments. Among the redrawn river segments in 3 water zones, 6 were classified as Class II water bodies and 2 were classified as Class IV water bodies. In the near future the EPA will hold a public briefing to ensure these changes concur with current uses and needs. For more information, please call 02-23117722 ext. 2800.

Ecolabeling

Hotels Commended for Promoting Green Consumption

On 10 March 2008, the EPA held a joint awarding ceremony for the "2008 National Environmental Hotel Competition" and the "2007 Green Procurement Performance Awards for Enterprises and Organizations." A total of 19 hotels and 61 companies and organizations received awards, including The Westin and Fulltech Fiberglass Corp.

A total of 270 Internet users participated in the nomination of hotels for the 2008 National Environmental Hotel Competition. Among those nominated, 78 standard hotels and 39 tourist hotels qualified for the competition. Over 43,000 votes were received from Internet users, with the top five tourist hotels being The Westin, Naruwan Hotel, Lees Hotel, Howard Plaza Hotel Kaohsiung, and Parkview Hotel in Hualien. The top five standard hotels were The Landis, Xin-an Hotel, Fisher Hotel, Shanlin Yajing Hotel, and La Plaza Hotel.

During the award ceremony, each hotel's environmental ideals were introduced, and EPA Deputy Minister Chang Feng-teng presented the concepts of "Environmental Economy, Environmental Living, and Environmental Localization" to create new win-win opportunities for the economy and the environment.

In promoting environmental lifestyles and green consumption, apart from implementing government green procurement plans, in 2007 the EPA invited private enterprises and organizations to take green procurement initiatives of their own. A total of 1,532 companies responded with a combined green

Environmental cuisine displayed by awarded environmental hotels

procurement budget of over NT$600 million, marking a threefold increase since 2006. EPA Minister Winston Dang personally expressed words of praise and encouragement to companies with green procurement spending over NT$1 million. Companies with green procurement exceeding NT$20 million were Fulltech Fiberglass Corp., Wellpool Co. Ltd.'s Goldsun Factory, Yue Sheng Industrial Co. Ltd., Far Eastone Telecommunications Co., Farglory Construction, Formosa Advanced Technologies Co. Ltd., Formosa Taffeta Co. Ltd., Taiwan Semiconductor Manufacturing Company Limited, Taiwan Glass Ind. Corp. Hsinchu Plant, UMC, and Wistron NeWeb Corp.

All the selected environmental hotels had adopted water and electricity saving measures, for example, by reducing the frequency of changing towels and sheets, providing fewer disposable toiletries, implementing garbage sorting and recycling programs and using Green Mark products. These measures will become standard qualifying criteria for selecting environmental hotels in the future.

Waste Management

Air, Water, Waste, Toxics Permit Application Available Online

The EPA's integrated environmental management system (EMS) was launched on 1 August 2007, allowing businesses to work through a single portal website to confirm and file baseline data for permits, apply for various permits and make changes to data. This year the EPA will expand this system to allow applications for twelve categories of permits regarding air emissions, wastewater, solid waste, and toxics over the Internet. This measure will establish a comprehensive electronic reporting system to make it convenient for enterprises to file applications.

EPA statistics show there are currently 7,206 companies regulated for at least two different types of pollution, and 6,939 have already gone online to confirm baseline data. This is a confirmation rate of 96%, attesting to the effectiveness of this system.

From February to March 2008, the EPA has held 97 promotional briefings in all counties and cities to guide industries in using this single portal EMS website for all types of waste, as well as to file industrial waste clearance and treatment plans, make changes or adjustments, and report their waste clearance and treatment flow. The EPA also plans to integrate the second generation waste clearance and treatment organization permit system into this system to make it more convenient for public and private waste clearance and treatment organizations to apply for permits online as well as expedite the online review work of local environmental protection bureaus.

General Policy

Taiwan's Most Outstanding Senior Sanitation Employee in 2007

Remember MacGyver from the adventure television series several years ago? He always had the knack for calmly thinking matters through and using scientific methods to solve hopeless situations. Taiwan has a similar environmental hero, Mr. Zhaobin, also known as "the Beinan MacGyver." Zhaobin's most recent claim to fame is renovating a Beinan Township's out-of-service garbage truck, transforming it into a recycling truck. He was commended in 2007 as the most outstanding senior environmental sanitation employee.

Scenic Taitung County is the first choice of places to spend the weeklong Chinese New Year vacation. One hotspot in particular is the expansive Beinan Township, home of the famous Jhihben Hot Springs and other attractions including herbal medicine gardens and the Chulu Dairy Farm. Hoards of tourists flock to Beinan Township during holidays, especially over the Chinese New Year. The large amount of garbage left by tourists keeps the Beinan Township sanitation crew busy long into the evening, making them the last people in their township to enjoy their New Year's dinner.

Before his career in environmental protection, Mr. Zhaobin worked at a steel factory, which sparked his interest in mechanics. He became responsible for resource recycling affairs upon joining the sanitation crew in 1995. While on duty, Zhaobin noticed the insufficient capacity of recycling trucks, causing them to lag behind during garbage collection times. This delay was the cause of frequent citizen complaints. Putting his MacGyverism skills to work, Zhaobin transformed an out-of-service automatic-sealing garbage truck into an open carrier with an attached lift mechanism. This vehicle joined the recycling fleet on 15 February 2007, not only alleviating citizen complaints but also saving the cost of purchasing a new vehicle. Zhaobin has never taken a vacation, using his spare time to repair this vehicle and add other mechanical equipment. His hard work not only extended the lifetime of this vehicle but also saved money for the Beinan Township government.

News Briefs

Dry Cell Battery Recycling and Storage Standards Revised

In order to increase recycling efficiency and maintain environmental quality, the EPA promulgated revisions to the Waste Dry Cell Batteries Recycling, Storage, Clearance and Treatment Methods and Facility Standards (廢乾電池回收貯存清除處理方法及設施標準) on 27 March 2008. Clauses on smelting processes were added to the Standards. Restrictions were placed on manganese-zinc batteries and non-button alkaline manganese batteries with mercury content lower than 5ppm. The initial material input ratio of these batteries should not exceed 1% of all raw materials in the smelting process and should accord with related pollution control regulations to reduce the environmental loading.

On 1 September 2006, the EPA put into effect the "Restrictions on the Manufacture, Import and Sale of Dry Cell Batteries," to reduce waste at the source and put an end to environmental pollution from batteries with excessively high mercury content. This has effectively reduced market sales of mercury batteries. Additionally addressing international environmental trends and enhancing domestic-related treatment technology, revisions were made to the resource recycling ratios of NiCd batteries and other batteries. Companies engaged in domestic treatment of these kinds of batteries should submit reports on sorting efficiency and trial operations of treatment equipment. A six-month deadline was given to enterprises currently engaged in battery recycling and treatment as a measure to maintain the domestic treatment efficiency of waste batteries. During processes in the recycling, storage, clearance and treatment stages that are more likely to generate pollution, the EPA has strengthened related effective pollution control equipment and measures to make the management of battery recycling, storage, clearance and treatment procedures more comprehensive and attain environmental sustainability goals.

Recycling and Treatment Equipment Investment Reimbursement Procedures Revised

On 20 February 2008, the Executive Yuan promulgated revisions to the Waste Recycling, Clearance, and Treatment Industry Equipment or Technology Investment Reimbursement Regulations (廢棄物回收清除處理業購置設備或技術適用投資抵減辦法). This specifies that waste clearance and treatment companies and mandatory recyclables recycling and treatment companies should apply for proof-of-possession documents with the EPA within six months of the day after exchange of goods or within six months of the date of implementation of this revision for purchases of equipment or technology made from 1 January 2008 to 31 December 2009. The EPA made complementary revisions on 18 March 2008 to the Notification of Applications for Waste Recycling, Clearance, and Treatment Industry Equipment or Technology Investment Reimbursement (廢棄物回收清除處理業購置設備或技術適用投資抵減申請須知), and began accepting applications for investment reimbursements. The revised articles and investment reimbursement application form can be downloaded from the EPA's website (http://waste.epa.gov.tw).

People can subscribe to online news source through the EPA website

"EPA Meeting e-News" Available for Subscription

"EPA Meeting e-News" is the latest feature of the EPA website. People can subscribe to this online news source to receive the latest updates on environmental meetings, regulations, and news. The service helps those concerned about environmental issues stay abreast of all the latest news. Subscriptions are easily handled through the EPA website (http://www.epa.gov.tw) by clicking on "Subscribe to Environmental News"

and filling in your name and email.

The EPA indicates that in the past it only issued a notification of the "Environmental Impact Assessment Case Working Group Review Meeting Minutes" and announced related information on the EPA's Environmental Impact Assessment webpage. Now this information can be obtained by subscribing to the EPA Meeting e-News, ensuring news on the latest meetings is sent to individuals and groups concerned about environmental issues. Settings allow users to request instant email notification of news in a specific area of interest.

Activities

17th Corporate Environmental Protection Awards Announced

The EPA held the 17th Corporate Environmental Protection Award selection event to encourage industry to actively protect the environment. The registration deadline is 31 May 2008 (postmark date). Registration details and selection regulations are posted on the EPA website (http://www.epa.gov.tw). Companies selected for their outstanding environmental performance will receive awards and be announced to the public. The focus of this year's selection will cover five themes: "Environmental protection planning and management," "Promotion of clean production," "Effectiveness of pollution prevention measures, management and maintenance," "Waste treatment and final disposal," and "Promotion of environmental concepts and education." Apart from awarding the winners in public, the EPA will publicize their performance by holding a practical seminar and publishing feature articles on their good practices. Those interested in participating can send in their information before the end of May to the Department of Supervision Evaluation and Dispute Mediation, Environmental Protection Administration, Executive Yuan (No.83, Sec.1, Zhonghua Rd., Zhongzheng District, Taipei City). For more information on the 17th Corporate Environmental Protection Award, please call 02-2653-2286.

Digital Gap Shortened with Donated Recycled Computers

To decrease environmental loading, encourage reuse of resources, and shorten the digital gap between urban and rural areas, the EPA has garnered enthusiastic response and participation from all circles to donate nearly 10,000 reused computers to rural schools and schoolchildren of low income families over the last three years. This initiative provides more opportunities for learning and receiving new information in rural areas. The donation activity embraces the slogan, "Your old computer is their new hope," and will continue until 30 November 2008. Individuals, organizations and enterprises are welcome to donate retired or unused computer equipment to recycling points established in all counties and municipalities under this plan. Those interested in making a donation can find more information online at http://recycle.cier.edu.tw/ or by calling Ms. Wu at the donation hotline (0800-085717) to locate the nearest recycling point. Personnel can be dispatched to collect donations of at least 20 computers (including both mainframe and screen).

IWA Reps Meet with EPA Minister Dang

On 31 March 2008, International Water Association (IWA) Executive Director Paul Reiter and IWA East Asia-Pacific Regional Office Director Ryan Yuen met with EPA Minister Winston Dang to discuss international environmental issues and Taiwan's environmental policy trends. The International Water Association (IWA) is an internationally reputable NGO with over 10,000 members in over 120 countries. IWA plays a leading role in environmental issues related to water quality treatment, water resource usage, and greenhouse gas reductions. The IWA is planning to hold the 3rd IWA-ASPIRE Conference & Exhibition at the Taipei World Trade Center from 18~22 October 2009. Invited to attend this event includes environmental issues scholars, consultant organizations, and government officials from around the world, making the event advantageous to Taiwan's participation in international environmental activities.

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