



Environmental Policy Monthly

Environmental Protection Administration, R.O.C. (Taiwan)

Feature Column

Soil Remediation and Land Restoration

The EPA has worked for years to establish mechanisms for redeveloping land that has been listed as polluted sites as well as a reward system for developing remediation sites. These measures encourage people to observe remediation obligations when developing land so that polluted land can promptly be put back to use and to fulfill sustainable use goals for soil and groundwater resources.

The Soil and Groundwater Pollution Control Act (土壤及地下水污染整治法) was promulgated on 2 February 2000 to provide legal support for soil and groundwater pollution remediation work. By March 2009, a total of 2,018 parcels of farmland covering 471.7 hectares had been listed as pollution sites. Of these, remediation has been carried out at 1,352 sites covering a total of 320.6 hectares and representing 68% of pollution sites. Because it is sometimes difficult to determine who is responsible for polluting activities on contaminated farmland, the Soil and Groundwater Pollution Remediation Fund (SGPRF) funded the remediation of most farmland sites. By 2008, this fund had paid for NT\$414 million of remediation work.

By the end of March 2009, gas stations, large-scale storage tanks, illegal dumping sites, abandoned

factories, and military bases accounted for a total of 253 pollution sites covering 709.3 hectares. Remediation has already been carried out on 55 sites covering 54 hectares, removing 2.1% of sites from the list of polluted sites. Still, 198 sites covering 655.3 hectares await remediation. Remediation at most of these sites is carried out by the polluters or other responsible persons. As remediation work usually extends for a few years, unknown factors frequently cause delayed remediation.

Countermeasures to Solve Bottleneck in Remediation Work

In order to continually promote soil and groundwater pollution remediation work, the EPA will come up with countermeasures to remove the following bottlenecks and limiting factors which are causing delays to

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remediation work, and ultimately to increase the percentage of completed remediation at pollution sites.

1. Polluter unknown (or no one responsible for site)

Problem: At sites where the polluter is unknown, the landowner is not responsible for remediation and remediation is thereby delayed.

Countermeasure: Conduct health and environmental risk assessments and adopt further administrative control measures based on assessment results. For serious pollution cases the SGPRF can be used to make improvements. Revisions to the Soil and Groundwater Pollution Control Act require those related to the land (landowners, land users, land caretakers) to take responsibility as good managers and heed their obligations.

2. Inadequate investigation of site characteristics

Problem: Polluters are mostly unwilling to invest resources into carrying out detailed and comprehensive site investigations, and often ask construction consultant companies to immediately carry out pollution improvements. This not only delays the effects of improvement measures but can even redistribute the pollution and complicate the situation resulting in a lower percentage of completed remediation sites.

Countermeasure: Apart from strengthening education about the importance of investigation work, the EPA will develop a manual of investigation techniques and enforce proper execution by the polluter.

3. Expensive investigation costs

Problem: Establishing soil sampling and groundwater monitoring wells often requires the use of large machinery. It costs about NT\$120,000 to hire a machine to make a standard 12-meter monitoring well, and further expenses are required for follow-up management and maintenance. Pollution controls often require precision instruments and analysis. The cost of sample testing becomes even higher when pollutants are not evenly distributed throughout the site and many samples are necessary.

Countermeasure: Stay abreast of international development trends in rapid pollution screening and assessment technology, and promptly introduce these applications in Taiwan. The EPA will also develop a reference manual to help lower the costs of investigation work.

4. Drawn out investigation procedures

Problem: Due to the unique characteristics of each pollution site and the fact that the nation's environmental agencies lack investigation experience, scholars and experts are organized into working groups to handle investigation affairs. In many cases, data is often lacking, meaning that more time is required to provide adequate data. This can draw out investigations by months or even years and delay remediation work.

Countermeasures:

a. Develop technical manuals on remediation and investigation to assist those responsible for remediation, consulting organizations, environmental agencies and investigators. Promptly put together remediation plans.

b. Adopt principles for approving remediation plans and technical stages of investigation, and mandate regular evaluation of implementation results so that timely adjustments can be made based on actual implementation conditions to make up for shortcomings in initial planning.

Selecting Appropriate and Low-Cost Remediation Technology

5. High remediation costs and sub-standard treatment facilities

Problem: As Taiwan does not have off-plant treatment facilities, polluted soil cannot be put in landfills and frequently must undergo in-situ procedures similar to those used for hazardous industrial waste. This is an expensive way to treat soils with low levels of contamination.

Countermeasures:

1. Promote reuse of polluted soil, for example as a cement additive

2. Encourage the establishment of polluted soil treatment or storage plants

3. Different choices of remediation technology can influence remediation costs

In the future related policies will focus on the following:

1. Utilize the SGPRF to systematically establish a list

of priority mechanisms and procedures.

Priority remediation sites should be first dealt with at the current stage, and then investigation work can be expanded to abandoned factories and illegal dump sites that are potentially seriously polluted. Remediation will be carried out according to short-, medium-, and long-term objectives primarily in the following two categories:

 Chart 1: Sites removed from lists by the end of March 2009

Cumulative totals of all listed sites		Removed from list of sites required to comply with regulations in Article 8 concerning appropriate measures to be taken within a given time		Removed from list of pollution control sites		Sites removed from groundwater pollution restricted use areas and restriction measures		Total	
Number of sites by category	Area	Parcels	Area	Parcels	Area	Parcels	Area	Parcels	Area
Farmland 2,018	471.7	8	0.6	1,344	320.0	0	0	1,352	320.6
Gas stations 101	16.5	22	5.8	6	0.8	0	0	28	6.7
Storage tanks 14	211.8	4	24.0	1	10.0	0	0	5	34.0
Illegal dumping sites 7	10.4	0	0.0	1	3.0	0	0	1	3.0
Factories 97	403.5	13	4.9	5	4.6	0	0	18	9.6
Other 34	67.0	1	0.0	2	0.9	0	0	3	0.9
	1181.0	48	35.4	1,359	339.3	0	0	1,407	374.7

a. **Illegal dumping sites:** Over the years, the EPA has listed 175 illegal dumping sites so far. Although investigations into the characteristics of waste materials have already been completed, soil and groundwater pollution have still not been confirmed at many sites. A four-year pollution survey plan has been developed to provide further screening and analysis in order to ensure sustainable use of soil and groundwater resources.

b. **Abandoned factories:** Due to the large number of abandoned factories, sites with the greatest potential for heavy pollution will be prioritized according to a four-stage pilot survey plan, selecting factories most representative of onsite pollution investigation and verification. This will be a catalyst for all members of society to place more importance on the problem of soil and groundwater pollution. In the future comprehensive evaluation plans will be drawn up based on past years of actual implementation experience.

2. **Establish a comprehensive soil and groundwater pollution health risk assessment system and continually reevaluate the system.**

The EPA will revise health risk assessment methods using established localized parameters and models. The EPA will also plan the establishment of a system for public participation and expert representatives for the benefit of follow-up health risk assessment. Risk assessment concepts can be applied to set up appropriate scoring criteria and compile a prioritized list of pollution sites to receive remediation. This is expected to expedite pollution site remediation.

3. **In accordance with the pillars of current environmental policy—Pollution elimination for ecological conservation; and Keeping clean neighborhoods with lifestyles of health and sustainability—the EPA will promote the following work:**

a. **Promote green remediation:** This year the EPA will work with agricultural agencies to assist the promotion of applications to restore soil pollution sites. The EPA will also assist each pollution site to include energy conservation and carbon reduction measures when planning improvement, control and remediation work. This will curb energy consumption and pollution in the remediation process.

b. **Research and develop green remediation technology:** Plans have been made to invest NT\$2 million in 2010 toward a study on “Green Remediation Technology for Heavy Metal Contaminated Soil.”

c. **Promote energy conservation and carbon reduction:** This year the EPA has already set up the Ecolife Web site on the gas station reporting center to help local environmental agencies assist gas stations in complementing energy conservation and carbon reduction work.

Expanding Investigation of Pollution Sites to Improve Quality Control

The EPA has taken the initiative to make sure that each type of pollution site is considered when managing land quality, not only in terms of preventing illegal dumping or the careless spread of pollutants, but more significantly to lead corporate markets to consider land quality factors in land pricing. Land quality management will thus become an integral part of property management.

Current soil pollution problems are just the tip of the iceberg. In the future, the EPA will continue to make every effort to invest resources in investigating pollution sites and carrying out timely remediation and restoration to prevent pollution from worsening and to manage land quality. How to rapidly achieve comprehensive control and pollution prevention in the face of potential risks is an important task for the future of sustainable land management in Taiwan. This calls for concerted effort of the EPA and all citizens.

General Policy

EPA: Quieter Times to Be Achieved within 6 Years

EPA Minister Stephen Shu-hung Shen recently stated that the EPA will spend NT\$4.8 billion over the next six years to promote the "Plan for Creating Sustainable and Excellent Environmental Sanitation." By combining the efforts of governmental and private organizations it is hoped that a fundamental change in Taiwan's overall

environment can be achieved. The idea is to turn Taiwan into the "Switzerland of the East" by providing residents with cleaner, quieter, more natural living conditions in more attractive towns and villages.

Minister Shen points out the international trend for countries to progress from the former era of environmental sanitation based solely on the eradication of diseases toward a new era centered upon the overall health of citizens, with the concept of environmental amenity as the final goal. Continued development and investment in public works has brought Taiwan firmly into the "healthy environment era" and, by taking Europe and North America as models, the "era of environmental amenity" should be achievable.

Toward this end, the EPA is currently drawing up the "Plan for Creating Sustainable and Excellent Environmental Sanitation" which, when implemented, will result in a significant improvement in Taiwan's environment. The four main areas where most of the work will be focused are:

- Building a system of multi-level personnel mobilization.
- Improving environmental sanitation in urban and rural areas.
- Creating model areas that have excellent environments.
- Restoring the pristine beauty of coastal areas.

The task of building a multi-level system of personnel mobilization will see the EPA giving subsidies to all of the municipalities around the island to assist in the setting up of 60 patrol teams. These teams will be provided with digital cameras and GPS equipment, and will conduct daily patrols of inspection routes with EPA volunteers looking for violations such as the dumping of waste soil or dog feces. They will post the results of their inspections on the EPA's EcoLife Web site blog, and will immediately inform the relevant units so that immediate action, whether cleaning up or issuing fines, can be taken. Online reporting also means that each time the patrols decide to conduct the clean-up task themselves, a digital record will be added to municipal statistics for use as the basis of performance awards.

Improving environmental sanitation in urban and rural

areas will be the responsibility of local municipalities, which will be able to make improvements in line with one of the 14 environmental sanitation sustainability indicators. Such options include beautifying roads, buildings, and vacant plots of land; removing debris and pollutants from drains and gullies; and improving the cleanliness and sanitation of public restroom facilities. The EPA will give subsidies to all of the municipalities around the island to improve environmental sanitation in 800 villages annually (400 for 2009).

Creating model areas that have excellent environments will be done in stages. The first stage will involve a competition within each municipality in which townships and/or urban districts will compete by creating and promoting environmental measures that accord with at least 7 of the 14 environmental sanitation sustainability indicators. Each winning township, as judged by the municipal government, should also have used their own ideas to beautify the local environment by highlighting some of the unique aspects of their area. The second stage will involve a national contest at the end of 2009 to select 3~5 of the winning townships to become model environmental areas. It is hoped that these model areas will stimulate economic growth by having enough of a feel of a cultured European city to attract Taiwanese visitors who might otherwise spend their money on a trip to Europe.

The first year (2009) of the 6-year plan will see efforts focused on five projects:

- Establishing an organization structure for the various blogs that will be set up
- Setting up a service network for volunteers
- Thorough implementation of the patrol-report-clean up system
- Increased supervision of the maintenance of public toilet facilities
- Mobilization of all relevant personnel for major clean-up operations

Water-Polluting Manufacturers' Undue Profits to Be Confiscated

The EPA will start enforcing new water pollution prevention policies, including the confiscation of the undue profits manufacturers make during the time that they intentionally allow effluent from their factories to pollute water sources.

EPA Minister Stephen Shu-hung Shen chaired the "symposium on New Water Pollution Prevention Measures" on 16 March 2009, during which he revealed a raft of revolutionary new measures ready for implementation. The heads, deputy heads, and relevant section chiefs from the environmental protection bureaus of the 25 municipalities were also in attendance to discuss the new measures.

The new measures rolled out by Minister Shen include:

- Inspections to ensure that water-pollution prevention equipment at the effluent source is functioning properly, in addition to the current testing for pollutants in effluent
- Raising standards for effluent quality so that they are in line with average values used in Europe and North America
- Allowing manufacturers to request that water samples taken from their factories' discharge pipes are tested by different testing organizations

- Promoting continuous automatic monitoring of effluent quality

- Retroactively confiscating the undue profits manufacturers and other involved parties make during the time that they intentionally allow discharge from their factories (e.g. via hidden pipes) to pollute water sources

Minister Shen pointed out that one of the main reasons for the stricter measures was a shocking recent case in Kuanyin Industrial Park, Taoyuan County, in which a member of the public reported suspicious discharges coming from the Combined Wastewater Treatment Plant. Investigation by the EPA discovered a hidden discharge pipe that had been discharging effluent into the sea for a lengthy period of time.

This was the first case in which the EPA had been able to fine a violator according to the new "undue profits" regulations, which Minister Shen believes to be the most effective weapon in the new arsenal of measures. The EPA calculated the amount of effluent that had been discharged illegally on the basis of the



▶ *The Symposium on New Water Pollution Prevention Measures*

plant's effluent production volumes and the volumes normally transported away or stored. The EPA then used the fee scale that the plant's operator uses to charge the park's manufacturers for the treatment of factory effluent to calculate the fine to be levied.

Other units that were involved in the case and fined were the Kuanyin Industrial Park Service Center (NT\$600,000); RSEA Engineering Corp., which was acting as a proxy operator and was fined the amount of undue profits of NT\$130.51 million; and the Ministry of Economic Affairs' Industrial Development Bureau,

which was fined NT\$5.43 million.

The EPA will soon be formulating new standards for effluent discharge that may include not only the current maximum values but also daily, weekly, and monthly average values as is common practice in Europe and North America. These values will be of future assistance to the competent authorities when assessing water quality. It is expected that weekly average values will be set first for the drainage systems of large industrial parks.

EIA

New Environmental Impact Assessment Regulations Announced

The EPA has formulated two new regulations to help developing agencies and industry competent authorities hold public briefings and public hearings according to the Environmental Impact Assessment Act and in compliance with the principles of disclosure of information and public participation. The protocols were announced on 1 April 2009, and will go into effect on 11 June 2009.

The environmental impact assessment (EIA) review process requires industry competent authorities to send developing agencies' environmental impact statements to environmental agencies. After the environmental review committee approves the statement, the developing agency must immediately hold a public briefing at the locality where the development project is to take place. The EPA has announced a new regulation to ensure that developing agencies follow protocol when holding this public briefing. The new regulation pertaining to the holding of EIA public hearings can be found online at <http://ivy3.epa.gov.tw/epalaw/search/LordiDispFull.aspx?type=03&lname=3200>

Development activities that are expected to seriously impact the environment must undergo the second stage of environmental impact assessment. Developing agencies are required to send the environmental impact statement to the related authority and hold a public briefing. After the environmental agency determines the context of the assessment, the developing agency is required to draft a preliminary environmental assessment report. The industry competent authority shall then hold a local public hearing at the development site. The preliminary environmental assessment report shall be sent to the EPA and be reviewed by the environmental impact assessment review committee.

The protocol for the holding of this public hearing has also been announced and is posted online at <http://ivy3.epa.gov.tw/epalaw/search/LordiDispFull.aspx?type=03&lname=3190>

The new regulations regarding public hearings require developing agencies to follow the following protocols pertaining to notification of the public hearing:

- a) Notification must be given at least 10 days before the hearing in the form of a written letter that states the time, location and method of the hearing. It must also state the name of the developer, the location of development, and a summary of the development project. The letter shall also list other invited organizations and people and the purpose for the hearing.
- b) The agencies to be invited to the hearing should include at least all the organizations invited by the competent authority for the review of the environmental impact statement.
- c) The local civil interests organizations to be notified must include at least the representatives for the jurisdiction (township or city) in which the development project is proposed.
- d) The invitation should be sent to the local village or

borough chief, who is required to invite local residents to participate.

The industry competent authority should publish details of the public hearing on its Web site, or adopt another suitable method of announcement, at least 10 days before the public hearing is to be held.

The location of the briefing should be chosen according to specifications written in the regulations, and should be held in the local activity center of the proposed development project. However if the development activity is located within the property of the developing agency, unless certain site safety considerations or other reasons preclude the entry or exit of participants, the briefing should be held in the meeting room of the premises.

The developing agency should select a meeting place based on a reasonable assessment of the potential number of participants. If the number of participants is greater than the capacity of the chosen venue, a representative of each group or village (borough) should be asked to enter the venue. Every effort should be made to ensure all parties have opportunities to express their views.

Participants who disagree with the content of the meeting records taken by the developing agency should submit a written statement to the developing agency within 15 days of the record being made public. The developing agency should send out a reply within 15 days and forward a copy of their reply to the industry competent authority. More information on the above protocols can be obtained by calling 02-23117722 ext. 2700.

Recycling

Recycling Applications to Be Digitalized in Two Stages

As a part of the EPA's ongoing work to systemize and raise the efficiency of resource recycling in Taiwan an online application system will be made available in 2009, doing away with the need for the more labor-intensive filling in and mailing of paper forms. Applications will be received in two stages—starting on 1 April 2009 and 1 July 2009—and will be of most benefit to the 75 recycling centers that meet the current requirements for receiving subsidies.

The first stage will be for applications concerning the recycling of waste electronic appliances and communication devices, waste dry-cell batteries, and waste lamps. The second stage will be for waste plastic and non-plastic containers, waste tires, waste lead acid batteries and waste lubricants. The online application system is fully in keeping with the national goal of "energy conservation and carbon reduction," helps to raise competitiveness, and is also good for the operators' corporate image.

In order to ensure that the operators of recycling centers that receive subsidies thoroughly understand the online system and how to operate it, the EPA held three explanatory meetings in March 2009 in north, central, and southern Taiwan. The meetings were attended by 138 people from recycling centers and auditing and certification agencies, which all expressed satisfaction with and support for the new system.

The new system employs a method of managing related information that allows the user to enter

basic information just once, which the system then recalls automatically at every stage of the application process. This method prevents errors arising from repeated keying in of the same information, leads to quicker analysis of the application, ensures that auditing and certification data is correct, and guarantees that subsidies are issued correctly. In the future, subsidized recycling operators, auditing and certification agencies, and the EPA will all have more efficient online access to information about auditing, certification, evaluations, inspections, and follow-up inspections for each application.

By eliminating the material and labor costs of time-consuming paperwork, the new online system will most benefit the 75 recycling centers that meet the current requirements for receiving subsidies. The system can also provide analysis of statistics, which benefits the operators by providing them with accurate, up-to-date data. The EPA also gains from the more efficient management of the subsidized operators that the system allows.

Auditing /certification agencies can also access the system's databases to help them in the tasks of checking comparative data on the volumes of each type of recyclable waste and issuing auditing certification. Eliminating the need for these agencies to build their own management systems saves labor

and reduces capital expenditures. The establishment of the system and the adoption of digital information management has been a great boon for subsidized operators, auditing and certification agencies, and the EPA alike.

Noise Control

Taiwan's First "Quietness Logo" Selected

After six months of deliberations following a contest, the EPA announced on 24 March 2009 that Taiwan's first national "quietness logo" had been selected. The logo will be available for downloading from the EPA Web site without charge from municipal environmental protection department Web sites and will be displayed in many public premises. As highly-civilized societies generally value quietness and respect for others, it is hoped that the future ubiquity of the logo will remind local citizens to lower their voices when talking in public.

A small but loud minority of local people have the distressing habit of talking loudly (whether face-to-face or on cell phones) in such public places as hotels, hospitals, restaurants, or on planes, trains, and buses. Another common annoyance is the sound of cell phones ringing at high volume, and the perpetrators of such anti-social behavior often seem impervious to the disapproving glances tossed their way. It is hoped that the logo will act as a reminder of the need to cultivate better manners. However, the EPA stresses that displaying the logo does not mean that a system of fining loud behavior is being enforced.

The winning logo was chosen from a total of 245 designs that were entered into the contest and is composed of three simple design elements: A house, a sign language gesture, and a smile.

The house represents public premises, where quietness is most required; the finger-on-lips gesture symbolizes quiet speech; the smile symbolizes contentment and social harmony. The logo's function of reminding people to be quiet in public places is easily recognizable from the sign language gesture.

The EPA points out that displaying similar logos in public premises to remind people to talk quietly is already common practice in Japan and other developed nations. The quietness logo will be displayed in easily-noticeable locations in any public space where quietness is deemed necessary to remind the public to talk quietly and switch their cell phones to vibration mode. The EPA will be running a number of campaigns and activities to promote awareness of the logo. The EPA is also calling upon the management units of public premises where quietness needs to



▶ Minister Shen (second from left) in his new role as the "Quietness Ambassador," with the quietness logo in the center.

be maintained to take action themselves to manage noise. This can be done by installing and maintaining soundproofing and other noise-reduction equipment and by actively educating staff and members of the public.

The EPA has also produced a short movie on how to use the logo and Minister Shen will serve as the "Quietness Ambassador." The quietness logo can now also be downloaded from the EPA Web site: <http://ivy1.epa.gov.tw/noise/>

Toxic Substance Management

EPA Warns of Penalties for Unpermitted Online Selling of Environmental Agents

In 2008, environmental protection agencies checked the labeling of 32,584 items labeled as environmental agents that were available in stores and found that 98.9% were up to standard. Random testing of 141 environmental agent products revealed up 5 that did not meet required standards; fines have been issued and the products in question will be removed from store shelves within a given deadline. The EPA reminds members of the public that selling or advertising environmental agents online is a violation of the Environmental Agents Control Act and is liable to result in a fine.

Every year EPA officers conduct random inspections of environmental agent products that are being sold in retail outlets around the island (supermarkets, general stores, drugstores, wholesale

stores and dime stores). This is to check that the products are labeled correctly; random analysis is also done to see if the contents are as labeled and meet required standards.

► Environmental agents found with substandard active ingredients during random testing in 2008

Company		Product name	Manufacture date / batch no.	Active ingredients	Amount (%)		Margin of error (%)	
Location	Name				Amount stated on label	Actual amount tested	Margin of error	Legally accepted margin of error
Taichung County	Tyeng Long Incorporation (澄朗興業)	神奇殺圈	2008/3/3 01	Chlorpyrifos	1	0.6	-40	±30%
Taichung County	Tyeng Long Incorporation (澄朗興業)	淨滅鼠 (New Genmei)	2008/01/12 01	Brodifacoum	0.005	0.0011	-78	±50%
Taichung County	Tyeng Long Incorporation (澄朗興業)	熱煙技 (Fogger-Tec)	2008/3/12 01	Cypermethrin	0.3 0.9	0.14 0.33	-53.33 - 63.333	±30% ±30%
Kaohsiung City	GoMy Inc. (松晏)	螞蟻-98 (Ant-98)	2006/6/21 705744	Borax	3	6.12	104	±12
Taipei City	S. C. Johnson & Son Taiwan Ltd. (台灣莊臣)	雷達液態殺蟻劑 (Raid Advanced Ant Control)	2007/5/7 7	Borax	4.05	8.95 (calculated amount of anhydrous borate: 4.7)	+16	±12

In 2008, 32,584 individual environmental agent products were inspected and 352 were found to be substandard, either due to being out-of-date (the most common reason) or because the information on the label was incomplete. Of the 141 products that were subjected to content analysis, 5 were found to be substandard and fines of NT\$60,000~NT\$300,000 were meted out. The manufacturers and importers were also ordered to take back the substandard products within a given time limit.

When EPA officers discover out-of-date environmental agents in a store, they first request that the store's management remove the items from the shelves and then inform the manufacturers/importers to reclaim them. If, however, a follow-up inspection reveals that the retail outlet still has out-of-date environmental agents on its shelves, then the store's owner is liable to a fine of NT\$30,000~NT\$150,000.

EPA officers also uncovered cases of online vendors selling nine pesticide products, and have informed the relevant environmental protection bureaus of their

identities so that fines of NT\$20,000~NT\$60,000 can be issued. In another case, six fake environmental agents were discovered, which resulted in fines of NT\$300,000. A smaller fine of NT\$30,000 was handed down to a tourist who was caught selling a small amount of an environmental agent intended for personal use.

The EPA stresses that selling and advertising environmental agents online without a proper license (such as those issued to regular vendors of environmental agents or pest-control operators) is a violation of the Environmental Agents Control Act. Online vendors are urged to be fully aware of the limits of their rights as members of online auctions and to abide by the letter of the law. Online auction companies are also urged to act responsibly and inform vendors of the relevant legal restrictions to avoid violating the Environmental Agents Control Act and possibly incurring a fine. Members of the public are also reminded that any environmental agents bought on trips overseas are limited to personal use and cannot be sold or auctioned in Taiwan.

Environmental Sanitation

"Environmental Aestheticians" Ready for the Front Lines

On 30 March 2009 Minister Stephen Shu-hung Shen gave a speech at the Environmental Aestheticians Pep Rally, in which he pointed out that the EPA-subsidized hiring and training of "environmental aestheticians" by the various counties and municipalities has been completed. These personnel will soon be patrolling villages around the nation, reporting problems, and assisting village administrators to organize their own environmental patrols. The personnel will also be communicating through the EPA's EcoLife Web site to ensure that the system of multi-level personnel mobilization is activated quickly for clean-up operations.

Minister Shen attended the rally to specifically give encouragement to the "environmental aestheticians." During his speech he reiterated the EPA's commitment to the four pillars of the government's environmental policy: Energy conservation and carbon reduction to cool the earth; Resource recycling for zero waste; Pollution elimination for ecological conservation; and Keeping clean neighborhoods with lifestyles of health and sustainability. Minister Shen went on to point out that increasing the powers and responsibilities of local authorities to maintain environmental sanitation, mobilizing the general public, and integrating the contributions of volunteers can all help to achieve the four goals. He also pointed out that the EPA's one-stop EcoLife Web site also has a key role to play by making it easier to work with residents of

designated voluntarily-maintained areas and facilitate the establishment of a platform for residents to interact and record achievements of environmental activities. EcoLife is also facilitating the growth of a huge online community of environmentalists who can now be mobilized at a moment's notice.

The EPA has trained 1,234 "environmental aestheticians" not only to increase their chances of employment but also to help show others in towns and villages around the nation how to use the EcoLife platform to record administrative and performance-related details relating to their patrolling of the voluntarily-maintained areas and the promotion of the "Tidy Neighborhoods Campaign." Recording details on the platform also allows for the exchange of experiences and ideas.

The holding of the pep rally was specifically intended to encourage individual citizens, citizen groups, and government agencies to adopt a voluntarily-maintained area and join in the "Tidy Neighborhoods Campaign" and the "5S Cleanliness Campaign." By drawing on the power of mass support and through unfaltering attention to detail,

the quality of residential environments in Taiwan can be raised quickly and effectively. The EPA is especially hoping that mayors and council leaders will persuade the village and borough chiefs under their jurisdiction to participate so that the system of multi-level personnel mobilization can work effectively.

News Briefs

Upstream Water Quality Meets Standards in 5 Major Rivers

In order to solve the long-term problem of slurry from pig farms contaminating drinking water sources, in the year 2000 the EPA completed the task of closing down all of 4,000 plus pig farms in the midstream and upstream areas of five of Taiwan's major rivers (Kao-Ping River, Zengwen River, Touchian River, Tamshui River, Dajia River) and compensating the owners. In the eight years since then, not one of the farms has been found to have reopened. The average value of ammonia in the Kao-Ping River as measured at the Dashulan testing station (where drinking water is taken from) is now at about 0.2 mg/L, which is within the safe limit for drinking water.

Combined Air-Land Inspections of Pollution Sources in Taipei

On 2 March 2009, the EPA conducted large-scale combined air-land inspections of major pollution sources in Taipei County. These included factories and asphalt concrete plants in the Dahan and Taliakeng river basins and the large Wugu refuse landfill. The aerial inspections were a joint effort between the EPA's Bureau of Environmental Inspection's Northern Branch Monitoring Team, the Taipei County EPB and the National Airborne Service Corps, a unit of the Ministry of the Interior. Twelve polluting factories were prosecuted under the Air Pollution Control Act and Waste Disposal Act. As a result, mainly for failing to effectively filter pollutants in their gas emissions or not storing and recycling waste as required by the regulations.

52 Tonnes of Recyclables from 2009 8-Day Religious Procession

The EPA's 2009 Matzu Procession Clean-up recycling educational activity that ran in conjunction with the annual Matzu pilgrimage concluded on 29 March 2009. Over 1,000 environmental volunteers from groups and companies in four counties took part. The volunteers set up 6,000 100%-recycled cardboard bins along the route of the procession, as well as numerous recycling advice stations. Twenty-seven local firms provided manpower and financial support. During the eight days and seven nights of the procession, over 52 tonnes of recyclables were collected, the equivalent of 2.6 million 600ml PET bottles, which was an increase of 11 tonnes compared to last year.

Selection for Corporate Environmental Protection Awards Begins

The EPA is now welcoming entries for the 18th R.O.C. Corporate Environmental Protection Awards. The deadline for applications is 31 May 2009. Details on how to apply and the rules governing the selection process can be obtained from the EPA Web site <http://www.epa.gov.tw>. The winning firms will be chosen on the basis of their outstanding environmental performance and will be presented with their award at a public ceremony. The EPA would like to point out that various corporate factors have resulted in some major changes to this year's awards: There will now be two categories – manufacturing and non-manufacturing – from which a total of 10~12 winners will be chosen. Applications can be submitted by calling (02)2653-2286.

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