



Environmental Information

## Bureau of Environmental Monitoring and Data Processing: The EPA's Information Clearinghouse

Many of the EPA's services are intimately connected with everyday life. For instance, the EPA's daily air quality forecasts, just like weather forecasts, are something people look at before they leave their house in the morning and throughout the day. The EPA's Bureau of Environmental Monitoring and Data Processing is responsible for air quality monitoring and issues these forecasts. Apart from strengthening monitoring quality and continuing to improve its equipment, the Bureau of Environmental Monitoring and Data Processing is also planning the creation of a national environmental database over the next ten years. When completed, this database will provide the public with answers to routine environmental quality queries and will be used to support environmental education and public awareness.

The Bureau of Environmental Monitoring and Data Processing serves as the EPA's technical staff and is responsible for environ-

mental monitoring, providing environmental information, and updating and preserving data. The public is most familiar with the air quality forecasts that the Bureau publishes in the media every day. The Bureau collects air quality data at monitoring stations throughout Taiwan; although it consists of only a few brief figures, this is the EPA's information service that connects most directly with people's lives and brings them the most immediate convenience.

The EPA Bureau of Environmental Monitoring and Data Processing will provide even more services starting this year. Other than using its professional expertise in information technology to support and integrate environmental databases established by the EPA's various service bureaus and implement interdepartmental computerization of documents, the Bureau will also be taking a brand new approach to maintaining and upgrading monitoring equipment and tabulating and analyzing data.

In particular, Director General Young Chea-yuan (楊之遠) has

announced that the Bureau will focus its efforts on the following areas:

**1. Replacement of the Taiwan-wide air quality monitoring network and improvement of monitoring functions:**

The 66 automatic air quality monitoring stations established by the EPA in 1993 have been in operation for nearly a decade, during which time they have successfully provided air quality data—including baseline data and multi-year trends—for the whole of Taiwan. These stations' equipment will be gradually replaced over a four-year period, after which they will be able to detect such items as ozone precursors, fine particulate matter (PM<sub>2.5</sub>), and carbon dioxide. This represents a significant enhancement of the system's functioning.

**2. Intensive monitoring of dust storms in China (see feature article, EPM Vol. IV, Issue 9):**

Since dust storms in China are having an increasingly severe influence on air quality in Taiwan, the EPA has organized scientists and researchers at domestic

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academic institutions and made available equipment for use in the "Intensive Chinese Dust Storm Observation Project." This project will consist of intensive high-resolution spatial and temporal monitoring of Chinese dust during the spring of this year (January to May) in an effort to determine whether dust from China may affect Taiwan. The project will also conduct health assessment and forecasting tasks.

The implementation of this project will enable the EPA to establish an early warning system for dust blown in from China. In addition, satellite data analysis, lidar monitoring, and automatic and manual sampling and monitoring of particulate matter (PM<sub>10</sub>) promise to provide a much clearer understanding of the effect of Chinese dust on air quality in Taiwan, which in turn will guide the EPA's future response measures.

### 3. Project to integrate water quality monitoring:

and the coordination of operations and integration of data have always consumed an overly large share of administrative resources. In addition, this situation has had a negative impact on the quality, continuity and integrity of data.

Facing up to these circumstances, beginning this year the EPA is striving to better integrate resources and safeguard the quality of data by placing water management work under centralized management. Under this scheme the EPA will issue contracts for the monitoring of 83 rivers and waterways, 58 reservoirs, 342 groundwater wells, 97 locations at sea, and 10 coastal recreation spots in northern, central and southern Taiwan. Centralized management will strengthen oversight of data quality and clearly demarcate the scope of local bodies of water, avoiding redundant sampling, using monitoring resources in a more effective manner and simplifying administrative load.

important environmental protection installations. For instance, there is a 720° dynamic image of the National Institute of Environmental Analysis and a three-dimensional view of the Lutsao Incinerator (鹿草焚化爐).

To find out about users' preferences and provide environmental information fitting needs even more closely, a questionnaire survey form is posted on the website. To ensure complete and correct information, each of the EPA's bureaus has assigned an employee to bear responsibility for web site maintenance and regular follow-up. The EPA hopes that its new website format will be even more effective at disseminating environmental information and fostering policy dialog.

### Resource Sharing and Public Service—EPA to Establish an Environmental Database

To effectively integrate nationwide environmental data and information, enhance the real effectiveness of the government's environmental protection and sustainable development decision-making and uphold the principles of information sharing and openness, the EPA is enlisting the support of industry, government, universities and research institutions, applying the newest information technologies, and utilizing systematic and standardized methods for the purpose of planning and compiling a nationwide environmental database. The participants of the Economic Development Advisory Conference also resolved to support the establishment of this environmental database.

According to Director-General Young, the database project has the four goals of establishing an environmental database framework, planning an environ-

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## Under this scheme the EPA will issue contracts for the monitoring of 83 rivers and waterways, 58 reservoirs, 342 groundwater wells, 97 locations at sea, and 10 coastal recreation spots in northern, central and southern Taiwan.

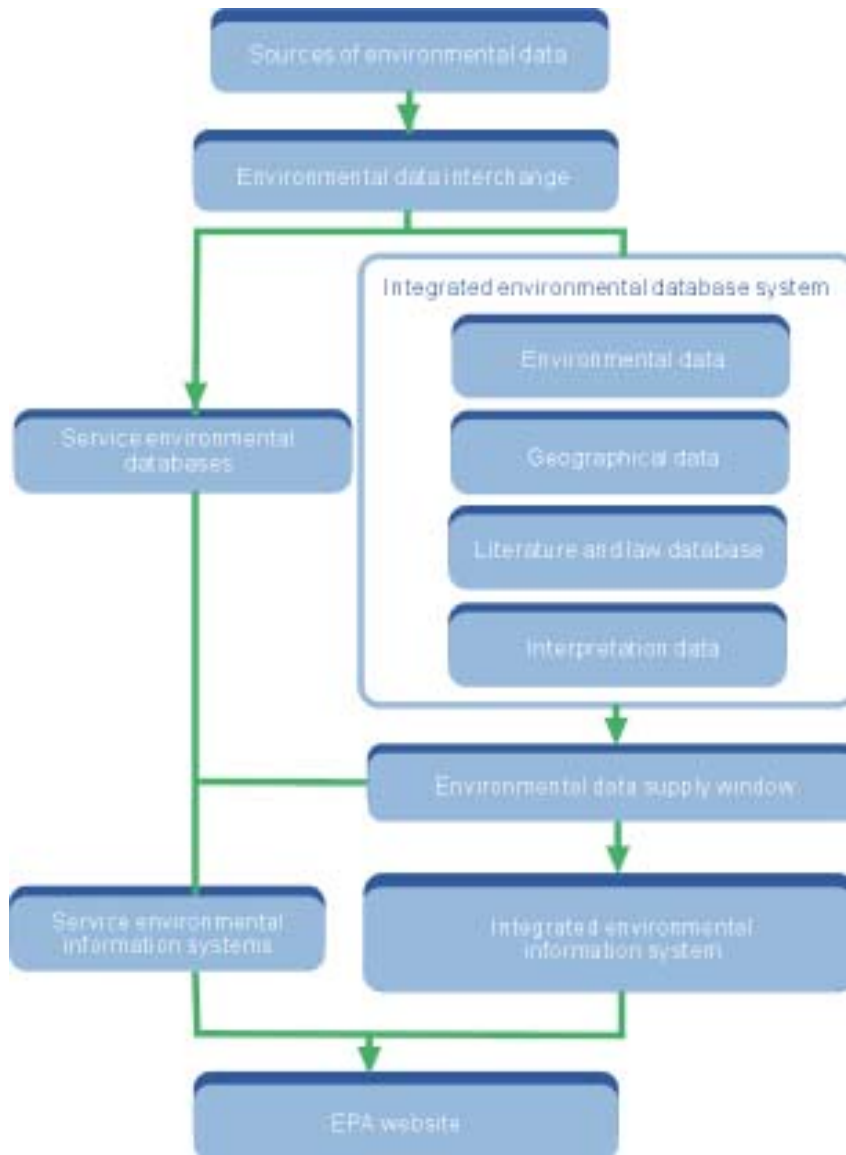
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To keep tabs on the quality of water in the environment, over the years local environmental authorities and the EPA's various bureaus and offices have monitored rivers and waterways, reservoirs, groundwater and the sea. But in the absence of a single agency possessing overall coordination and management duties, and due to the broad scope of bodies of water, it has proved hard to delineate zones of responsibility,

### 4. Updating of the EPA website:

The EPA's website has presented a new face to the world since the beginning of this year. Besides making queries more convenient, the homepage now features brand-new visual effects and an updated classification system better meeting user needs. Content includes more extensive profiles of the EPA's bureaus and offices, audiovisual presentations by top executives, and more images of

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*Information flow for the EPA web site*

mental database compilation organization, establishing a data interpretation and data quality control system, and drafting standards for management and publication of data and information.

After completing planning of a database framework and implementation organization last year the EPA then organized an “Environmental Database Steering Committee.” This steering committee, under the National Council for Sustainable Development, is headed by EPA Deputy Administrator Lin Tashiung and overseen by the Bureau of Environmental Monitoring and Data Processing. Apart from assigning relevant units

responsibility for collecting data and compiling environmental databases, the steering committee is also exchanging environmental information with other government agencies and establishing sharing and coordination mechanisms.

Starting this year the database project is being implemented by government agencies, research organizations and private firms. Under the two-stage implementation format, the first stage will include the integration and filing of environmental data and the upgrading of hardware. This stage, scheduled to last until 2005, will also see the development of data management systems responsible for interpretation and quality

control. The collected data will eventually be made available for public query and application. During the second stage, scheduled to last from 2006 to 2010, the body of data will be expanded and deepened; the focus of efforts will shift to the development of service systems and value-added applications.

When completed, the environmental database will be able to meet the needs of various kinds of forecasting applications. These will eventually include an “Environmental Protection Strategy Planning System” to assist decision-making, an “Environmental Information Sharing System” meeting the environmental information needs of other government agencies, environmental protection organizations, and international cooperation organizations, and an “Environmental Information Publication System” providing routine environmental quality information and educational news, strengthening data circulation at government agencies, and supplying agencies with needed environmental data. In addition, a “Sustainable Development Decision-Making Support System” will be developed to supply the environmental information needed to assist and support sustainable development research.

As for whether the database will overlap with databases compiled by other agencies, the EPA stresses that because each agency has its own distinct sphere of authority, this will not occur. The creation of the environmental database will involve communication and coordination with various agencies, and data will be exchanged, integrated, and shared. This process of drawing on each organization’s strengths will rule out any overlap.

For more information, please call 02-2311-7722 ext. 2340.

## General Policy

# Administrator Hau Reappointed; Urges EPA to Keep Up Good Work

Having received much praise from all quarters, EPA Administrator Hau Lung-bin was reappointed by the new Executive Yuan Premier following the recent cabinet reshuffle. Apart from expressing his appreciation for his reappointment, Hau also took the occasion to encourage his colleagues at the EPA to keep working hard to improve the quality of the environment in Taiwan. The focus of Hau's efforts during this year will include the implementation of environmental protection policies,

## restriction of plastic bag use, improvement of air quality, and response to international environmental protection conventions.

Dr. Hau Lung-bin was reappointed to his post of EPA Administrator by new Executive Yuan Premier You Hsi-kun on January 21<sup>st</sup> (Hau reassumed his post on Feb. 1). At the EPA executive board meeting of January 22<sup>nd</sup>, Hau stated that, to increase the public's confidence in the EPA, most of the environmental protection policies implemented in the past will be continued and implemented with even greater efficiency and vigor, while the institution of new policies will be accompanied by enhanced public awareness measures.

Hau noted at the meeting that Premier You had praised the EPA's performance and invited him to stay at his post. In addition, former Premier Chang Chun-hsiung also publicly commended the EPA's hard work while inspecting the results of hog farm relocation from the banks of the Kaoping River on Jan. 20<sup>th</sup>. Furthermore, public opinion

surveys indicate that the public has regained its confidence in the EPA's ability to fulfill its mission. Hau therefore expressed his deep appreciation of and gratitude towards all his colleagues at the EPA for their part in this achievement.

After ten months at his post, Hau's environmental policy implementation accomplishments are striking. These have included the problem-free removal of illegal smelters from along the Erhjen River, the relocation of hog raisers from the banks of the Kaoping River, and the active detection and closure of illegal pollution sources throughout Taiwan. These actions have resolved in one stroke major pollution headaches that had persisted for twenty or thirty years.

Looking ahead towards the new lunar year, Hau pointed out that key future tasks will include the three-stage phase out of the use of plastic bags and disposable dishes, establishment of environmental industrial parks (such as recycling demonstration zones), thoroughgoing remediation of river and waterway pollution,

## News Briefs

### *Administrator Inspects Hog Farm Removal in Southern Taiwan*

Administrator Hau Lung-bin visited the Meinung area in southern Taiwan on January 12<sup>th</sup> to inspect the ongoing removal of hog raisers from water source areas and learn more about the small number of hog farms that will not or cannot cease operations. Apart from praising and encouraging local government authorities for their diligent implementation of this work, Hau also reiterated the EPA's determination to carry through its policy of eliminating water source pollution from hog raisers. The EPA intends to join forces with other government agencies and the local authorities in implementing strict measures

against any hog farms still in operation, and will continue to do so until there are no hogs left in areas that supply drinking water to the Greater Kaohsiung area. (See EPM Vol. IV, Issues 4 & 12)

### *Ban on Water Polluting Behavior Announced*

In accordance with Article 28-5 of the *Water Pollution Control Act* (水污染防治法), the EPA announced on January 2<sup>nd</sup> of this year that "behavior sufficient to cause water pollution" would henceforth be prohibited. The EPA's announcement contained a list of specific types of prohibited behavior considered sufficient to pollute various classes of bodies of water. These types of polluting behavior include both that caused directly by human development and that occurring unintentionally as a result of natural phenomena. The types of behavior

listed by the EPA include human development in which dredging, emplacement of pipelines, or other engineering in or adjacent to rivers and waterways causes water quality to deteriorate beyond certain standards; as well as instances in which the owner or manager of a project is caused by natural disaster, emergency, or other natural phenomena to introduce pollution into a body of water or within a specified distance from the shoreline of a body of water, and the owner or manager cannot complete removal of the pollution or prevent the pollution from entering the body of water or approaching the specified distance from the shoreline before the deadline stipulated by the competent authorities.



ongoing implementation of total air pollution emission controls in the Kaohsiung-Pingtung region, and the country's response to international environmental protection conventions (such as the Kyoto Protocol).

Addressing the challenges of the future, Hau encouraged his colleagues to respond with alacrity and follow through with the work at hand to ensure that Taiwan's mountains are eternally green and its waters eternally clear.

### Water Quality

## Administrator: We will Never Allow a Repeat of Amorgos Incident

**Underscoring his resolve that no oil spill similar to last year's Amorgos incident shall happen again, Administrator Hau Lung-bin announced on the first anniversary of the incident that the day would henceforth be known as "Taiwan Marine Disaster Memorial Day," and that the EPA would represent the government in demanding NT\$ 1 billion in compensation from the Amorgos' owners and insurance company.**

At a press conference held in January to mark the first anniversary of the Amorgos oil spill, Administrator Hau Lung-bin announced that the day—January 14<sup>th</sup>—would henceforth be known as "Taiwan Marine Disaster Memorial Day." And reflecting

the severe damage to the marine ecology caused by the spill, after careful calculation of damages, the EPA will represent the government in demanding NT\$ 1 billion in compensation from the Amorgos' owners and insurance company.

Designation of January 14<sup>th</sup> as "Taiwan Marine Disaster Memorial Day," said Hau, represents a hope that the government and people will learn an unforgettable lesson. From this time on, Taiwan must make preventing marine pollution a clear priority and strive to ensure that no similar oil spills ever occur.



*The Amorgos resting in waters near the Lungkeng Conservation Area*

The Amorgos oil spill caused severe damage to Taiwan's marine ecology, particularly in coastal waters in the Lungkeng Conservation Area (龍坑自然生態保護區). Located on the eastern side of Cape Hsinchia (新岬角) at the southernmost tip of Taiwan, this conservation area contains a host of scenic landforms such as fringing reefs, sea cliffs, canyons, and caves. The undersea terrain is particularly varied along the coast from Fengchuisha (風吹砂) to Lungkeng. Soft coral grows in abundance in this beautiful underwater kingdom, and large fish thrive in the vicinity of reefs. In addition, the lush algae gardens along this coast provide an ideal nursery for young fish, shrimp, crabs, and other shellfish.

That's the way things used to be. After the Amorgos spill, the

underwater scenery has been devastated, the food chains sustaining the ecological system have been ruptured, and a broad swathe has been taken from the local flora and fauna. All in all, the losses have been vast and incalculable.

As for the cleanup of the oil spill and disposal of the Amorgos, the EPA has confirmed that all oil and contaminated sand had been removed by June 2001, but because the Amorgos broke into several sections after being battered by last year's typhoons, it will be very difficult and costly to remove all of the ship's hull from the area where it ran aground. The Ministry of Transportation and Communications is drafting an updated removal project, and expects to complete work by the end of July 2002.

Progress is being made with regard to demand for compensation. Hau used the press conference to reveal to the public for the first time that compensation of NT\$ 1 billion will be demanded from the Amorgos' owners, including NT\$ 100 million to cover the government's cleanup expenses and NT\$ 900 million as compensation for ecological damage and restoration expenses.

Hau announced that the demand for compensation will be formally submitted to the shipowner's insurance company, and it is hoped that a reasonable compensation agreement can be reached within three months. If no agreement can be reached, a lawsuit may be filed in the district court with jurisdiction over the area in which the incident occurred. And if necessary, the EPA has likewise not ruled out presenting an international lawsuit in the courts of Norway, the nation in which the insurance company is located.

## Waste Management

# Hau: Restrictions on Plastic Bags and Disposable Dishes “Imperative”

Despite previous postponements, the EPA has finally set July 1<sup>st</sup> as the date for initiating the first stages of its plastic shopping bag and disposable dishes use-restriction policies. Administrator Hau has declared these policies “imperative.” The first stages of these policies will target the retail outlets and eating facilities of government-run organizations and schools.

The EPA has officially set July 1<sup>st</sup> as the kick-off date for the first stages of both its plastic shopping bag and disposable dishes use-restriction policies. Following careful evaluation, the EPA has adopted a simultaneous implementation strategy in order to make it easier for the public and enterprises to coordinate with these two nationwide policies. Administrator Hau Lung-bin, declaring these policies “imperative,” said that he would not back off in his fight to implement these policies no matter how great the resistance becomes, and pledged that he would resign in order to take responsibility if these policies are not successfully implemented.

The EPA hired The Gallup Organization to conduct a survey of public opinion concerning these policies in November. The survey revealed

that 90% of the public and 85% of enterprises are willing to cooperate with these use-restriction policies. “Environmental considerations” was the primary reason cited for supporting these policies.

state-run enterprises and military installations will be prohibited from providing plastic shopping bags. The second stage, currently set to begin on January 1, 2003, will see the EPA extend this ban

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The EPA will implement its plastic shopping bag use-restriction policy over three stages. In the first stage, scheduled to commence on July 1<sup>st</sup>, shops at government agencies, schools,

to retail outlets with floor space of thirty-three square meters or more. These include department stores, supermarkets, franchised convenience stores, retail mega stores and franchised fast food



*Administrator Hau presents previously-designed environmental bags at the*

restaurants. While the EPA has yet to set an implementation date for the third stage, it has selected bakeries, laundromats and retail stores not designated in stage two as the targets of this final stage.

installations for the first stage of implementation. These establishments will be strictly forbidden to provide disposable dishes on-site. However, those offering carry-out and delivery services will not be

mental shopping bag design contest. It hopes this contest will encourage the public to take up the habit of carrying personal shopping bags and reusing plastic bags. Anyone can enter and the top prize is NT\$ 200,000. Administrator Hau even personally presented the EPA's previously designed environmental bags at the announcement of the contest in order to encourage public participation.

The manufacturers of plastic goods and raw materials, expecting their operations to suffer, have requested that the Legislative Yuan and Presidential Office postpone the implementation of these policies. However, despite the challenges facing these manufacturers, Administrator Hau has declared these policies "imperative" for the sake of the environment

For more information, please call 02-2311-7722 ext. 2610.

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**Statistics show that Taiwanese consumers use nearly 20 billion plastic bags every year. That's about two and a half bags per person per day. ...plastic now accounts for a high percentage of the nation's municipal waste volume, around 20% of in recent years, twice as high as the 10% seen in other developed nations.**

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Statistics show that Taiwanese consumers use nearly 20 billion plastic bags every year. That's about two and a half bags per person per day. The result of this excessive use is that plastic now accounts for a high percentage of the nation's municipal waste volume, around 20% of in recent years, twice as high as the 10% seen in other developed nations. Similarly wasteful behavior is also seen in the use of disposable dishes in Taiwan.

The EPA, following a review of methods adopted in other developed nations, has determined that, for waste that is difficult to recycle and poses a serious threat to the environment, use restriction has been the best weapon for achieving waste reduction goals. Consequently, the EPA has added use-restriction articles into the newly-revised *Waste Disposal Act*. It expects these regulations, to be implemented gradually so as to limit the possible negative impact on the public and businesses, to achieve the ultimate goal of waste reduction.

For its disposable dishes use-restriction policy, the EPA has selected restaurants and stores at government organizations, public and private schools, government-run enterprises, and military

subject to this ban. The disposable dishes targeted under this policy are cups, bowls, plates, saucers and boxes that are intended to be used just once.

In addition to these use-restriction policies, the EPA is also currently sponsoring its first public environ-

## Environmental Activities

### **NT\$ 200,000 Top Prize for Environmental Bag Design**

Scheduled to begin immediately, the EPA's environmental shopping bag design contest will offer an unshared first-place award of NT\$ 200,000, and Administrator Hau has appealed to citizens to come up with their best ideas for the environment. This activity is being carried out in conjunction with the *Use-Restrictions on Plastic Shopping Bags* (購物用塑膠袋限制使用), which will be enforced by the EPA starting on July 1<sup>st</sup>. To call attention to the environmental concept of reuse, all designs entered in the contest must meet the conditions of low production cost, durability under repeated use, attractive and appealing styling, water-resistance and washability, large capacity, easy loading, and convenient carrying. Designs must also take into consideration feasibility of manufacturing and mass production.

### **Battery Recycling Training Camp Held**

The EPA held the "Battery Recycling Commando Training Camp" on January 27<sup>th</sup> in Taipei's Taan Forest Park. This outdoor activity gave each participant a chance to learn through game-playing about the proper recycling of dry cell batteries. Since the EPA has begun full-scale implementation of dry cell battery recycling, the public no longer has to classify used dry cell batteries: All dry cell batteries can now be brought to convenience stores and other designated spots for recycling.

### **Full-scale Mobilization for "National Cleanup Week"**

Each year the EPA extends the popular custom of cleaning up for the Lunar New Year by designating the week before New Year's Eve "National Cleanup Week." The EPA appeals to citizens to take advantage of this week to clean up the environment inside and outside their homes, and focus particular attention on indoor and outdoor environmental sanitation. This year's "National Cleanup Week" was during the week of Feb. 4~10.



## General Policy

# New Policies for a New Year

**The EPM presents an overview of some of the major policies being pursued within the EPA this year, including more stringent dioxin emissions standards for steel smelters and fluorescent light tube recycling.**

The EPA is implementing many new environmental measures in 2002. This article highlights some of the major policies set for implementation or continuation this year in the areas of air pollution control, water quality protection, waste disposal, green procurement, environmental analysis and recycling. The EPA wants to remind the public to take advantage of the various subsidies being offered and hopes that the business community will cooperate with the new environmental regulations affecting it.

In the area of air pollution control, new 0.5 nanogram dioxin emissions values for electric arc furnaces at newly-established steel factories took effect on January 1<sup>st</sup>. These more stringent values are a positive step towards improving air quality and protecting human health. And in preparation for the importation and manufacturing of large-engine motorcycles set to be permitted six months after Taiwan's accession to the WTO, the EPA has already added emissions standards for large-engine motorcycles to Article 6 of the *Emission Standards for Vehicular Air Pollutants*. These standards went into effect on January 1<sup>st</sup>. The EPA, with the goal of improving urban air quality, will also be introducing a number of subsidies aimed at reducing emission from

non-stationary pollution sources. These subsidies include those for the purchase of electric scooters and electric bicycles, for the purchase of low-pollution fuel injection scooters and for turning in old high-pollution motorbikes and automobiles.

Addressing water quality, the EPA has named 2002 "River and Waterway Pollution Clean-up Action Year." The prime targets of the EPA's river remediation work this year are the Erhjen River, Chiangchun River, Nankan River, Peikang River, Chungkang River, Putzu River, Kaoping River, Koya River and Tienbao River. Also, aiming to allay public anxiety that arose in response to the multiple discoveries of rice fields polluted with heavy metals last year, the EPA will launch a massive inspection campaign intended to completely wipe out all heavy metal pollution sources. The primary targets under this crackdown are a total of 570 factories, including electroplating and metal finishing plants, plastic stabilizer manufacturers and leather tanneries in Taoyuan County, Changhua County and Kaohsiung County.

The EPA will continue to promote its classification and grading controls and facilitation plan for industrial effluence sewer systems at Taiwan's 40 industrial parks. It plans to evaluate and integrate its information system for permits and inspection controls for effluent sewer systems and establish an abnormal analysis tracking and supervision control system. The EPA will also carry on with its marine pollution remediation projects and strengthen marine emergency response capabilities in order to prevent damage to marine environments.

Waste disposal efforts this year are headed by the implementation of two major policies: the promo-

tion of recycling demonstration zones and the implementation of the first stages of use-restriction policies for disposable dishes and plastic shopping bags (see EPM Vol. 4, Issue 11 for the policy on disposable dishes and the article on page 6 of this issue for the policies on plastic shopping bags and disposable dishes). The EPA will also introduce its "Taiwan Landfill Seepage Regional Centralized Treatment Demonstration Plan" in 2002. On January 2<sup>nd</sup>, the EPA implemented its *Permit Application Fee Standards for Public and Private Waste Clearance and Disposal Organizations* (公民營廢棄物清除處理機構申請許可案件收費標準). These standards unify permit application fees for these organizations.

The primary focus of the EPA's performance evaluation work will be the promotion of its green procurement program. Beginning this year, the EPA will require each government agency to fully implement green procurement. Their green procurement ratios must reach 50% of their annual budgets.

The EPA's endeavors in the area of environmental analysis this year will be highlighted by the formulation of the *Environmental Analysis Act* (環境檢驗法). The lives, property and safety of the public have been negatively impacted because there have never been regulations governing the quality of domestic environmental analysis. This act is meant to rectify this situation by providing a legal basis for environmental analysis. The EPA also aims to further its cooperation with academic and research institutes and to promote the participation of private enterprises in environmental analysis. This will include the provision of technical support to these institutes and enterprises. (See feature article on page 1 of



this issue for more information on the policies of the Bureau of Environmental Monitoring and Data Processing.)

Last year's announcement in April of the fluorescent light tube recycling program marks a significant addition to the EPA's recycling policies. This program officially kicked off on January 1<sup>st</sup> of this year. The EPA has already presented a package of related regulations and recycling enterprises have already begun trial runs under this program.

#### **Air Pollution**

## **EPA-MOEA Meeting Achieves Consensus**

**The EPA and MOEA conducted their second inter-ministerial policy coordination meeting on January 28<sup>th</sup>. At this meeting, the two cabinet-level bodies reached agreement on eleven issues, including measures for complying with the UN Framework Convention on Climate Change, the crackdown on illegal filling stations and subsidies for methane power generation. The EPA and MOEA heads have both expressed their great satisfaction with the outcome of the meeting.**

EPA Administrator Hau Lungbing invited Minister of Economic Affairs Lin Hsin-yi (who has since been appointed Vice Premier) to the EPA for their second policy coordination meeting in just over half a year on January 28<sup>th</sup>. The first meeting took place early last July following the Economic Development Advisory Conference. In addition to jointly proclaiming their satisfaction with the resolutions of their first meeting and the policies

that have been implemented based on these resolutions, Hau and Lin also expressed their hope that these meetings would lead to the establishment of a constructive and permanent channel for communication and cooperation that would help the EPA and MOEA strike a balance between environmental protection and economic development.

Following the exchange of a wide range of opinions, the EPA and MOEA passed a total of eleven proposals at this coordination meeting. These proposals address the formulation of basic environmental standards, factory guidance and upgrading, the establishment of small-scale LPG filling stations, the training of filling station employees, environmental investigations, the clampdown on illegal filling stations, and government water and power shut-offs and guidance for illegal electroplating factories and other unregistered factories. Other issues discussed at the meeting include compliance with the UN Framework Convention on Climate Change (UNFCCC), the distribution of policy responsibility among government bureaus and subsidies for methane power generation.

The EPA and MOEA aim to complete specific implementation plans and assign policy responsibility at the earliest possible date. It is hoped that these policies will help to resolve the difficulties faced by enterprises in their efforts to balance development with environmental protection and to quickly prepare for the possible challenges to domestic enterprises and Taiwan's energy structure that might arise from globalization.

As part of the accepted proposals, the EPA agreed to the MOEA suggestion to encourage enterprises to obtain ISO 14001 environmental management certification. The two agencies

also agreed to cooperate on R&D for economically viable dioxin control technology for steel industry electric arc furnaces.

The EPA will draw up a promotion plan in line with the UNFCCC so as to make early preparations for the Kyoto Protocol, which are likely to take effect this year. During the meeting, the EPA gained acceptance for its special request that the MOEA reevaluate the package of energy and industry policies for meeting National Energy Conference emissions reduction targets. Also, in order to encourage methane power generation, it was agreed that the EPA's Air Pollution Fund would allocate subsidies of up to NT\$ 50 million annually for a maximum of five years. As for budget requirements in excess of these subsidies, the MOEA has agreed to provide additional subsidies of up to NT\$ 20 million annually for these methane power projects.

After the meeting, Administrator Hau expressed his great appreciation for Minister Lin's tremendous support for environmental policies. This support, seen in such projects as the establishment of and policy EIA for the Kaoping River water source quality protection zone, the relocation of metal smelters from the Erhjen River to industrial parks, and the cooperation of MOEA-run Taiwan Sugar Corp. in the relocation and compensation of hog raisers, has allowed the government and enterprises to achieve a win-win situation. For his part, Minister Lin called on each government agency to abandon its self-centered attitude and join forces in fighting illegal operations so that legal enterprises can survive and a stop can be put to pollution. Economic development and environmental protection must move forward side-by-side in order to ensure true prosperity for Taiwan.

## EIA

## TQC in Eight Industrial Parks

**Beginning this year, the EPA will eliminate time-consuming EIA procedures for firms setting up factories in industrial parks (including export processing zones and science-based parks) with EIA procedures that include TQC. The initiative will start with eight industrial parks, including Changpin Industrial Park.**

The EPA announced on January 22<sup>nd</sup> plans to implement the conclusions of the National Economic Development Advisory Conference by allowing firms setting up factories in the 47 EIA-approved industrial parks (including export processing zones and science-based parks) with total quantity controls (TQC) to forego the EIA procedure as long as emissions do not exceed the acceptable total quantity limits. Initially, eight industrial parks, including Changpin Industrial Park, have implemented TQC.

According to current EPA statistics, Changpin Industrial Park (彰濱工業區), Yunlin Offshore Industrial Park (雲林離島工業區), Gangshan Industrial Park (岡山工業區), Hoping Cement Industrial Park (和平水泥工業區), Hsinchu Science-based Industrial Park (竹科) and its Tunghuo (銅鑼) and Chunan (竹南) sites, Tainan Science-based Industrial Park (南科; sites I and II) and its Luchu (路竹) site, Tainan Hsinchi Industrial Park (台南新吉工業區) and other industrial parks that have undergone EIA review are now implementing pollution TQC. Firms that submit applications to establish factories in the abovementioned industrial parks, science-based parks and export processing zones will be

able to forego the EIA procedure as long as emissions do not exceed the acceptable total quantity limits. This plan will allow firms to save the time originally required to conduct the EIA and provide stimulus to the domestic economy without sacrificing environmental protection.

In the past, firms that wished to set up factories in EIA-approved industrial parks, science-based parks or export processing zones still had to conduct EIAs according to recognized EIA standards. This has always been a source of frustration within the industry.

After EPA review, regulations set in November 2000 made it possible for firms establishing factories in industrial parks and science-based parks to forego EIA review as long as emissions did not exceed acceptable total quantity limits. On October 3, 2001, the EPA further announced revisions to the *Standards for Determining Detailed Items and Scope of Environmental Impact Assessments for Development Activities* (開發行為應實施環境影響評估細目及範圍認定標準) in accordance with the conclusions of the National Economic Development Advisory Conference. The revisions allow development activities that have undergone EIA review and do not exceed acceptable total quantity limits for pollution to forego the EIA procedure with approval from the competent authority and competent authority in charge of the targeted industry.

Many development projects have already begun implementing TQC. The total quantity limits for pollution at the Hsinchu Science-based Industrial Park are currently undergoing review and approval, a process that is being closely watched by outsiders. The problem is that determining a common set of criteria among firms within

the industrial park, many of which have long been in operation, will take a fairly long time. There is also a great deal of controversy among firms over total quantity limits for emissions of VOC (volatile organic compounds) and acidic gases (such as sulfuric acid and hydrochloric acid). Currently, the Hsinchu Science-based Industrial Park administration is still in the final assessment stage.

The EPA notes that this measure will create a win-win economic and environmental situation since it will encourage enterprises to set up in EIA-approved industrial parks, science-based parks and export processing zones, and also aid land use control and environmental management in the abovementioned zones.

For more information, please call 02-2311-7722 ext. 2741.

## EIA

## Database of Environmentally Sensitive Areas Goes Online

**The EPA, in coordination with other government agencies, put its new “Searchable Database of Environmentally Sensitive and Specially Designated Areas” online in January. This website, by allowing developers to enter site coordinates or directly upload documents to check if proposed development sites are open to development or not, is intended to help developers avoid unnecessary disputes involving the selection of development sites.**

The EPA, having worked in coordination with such government agencies as the Council of Agriculture and the Ministry of

Economic Affairs, put the "Searchable Database of Environmentally Sensitive and Specially Designated Areas" online in January. This searchable database speeds up development plans by allowing developers to simply go online to check whether their proposed development sites are located in environmentally sensitive or specially designated areas. It will reduce costs associated with environmental impact assessment reports and reviews, thereby strengthening Taiwan's economic development and investment environment.

This new website, designed to meet the needs of developers, provides various methods for developers to enter the sites they are considering for development. These include entering site coordinates and directly uploading files onto the website. Once the development site is entered, it will be displayed on the screen for comparison with environmentally sensitive and specially designated

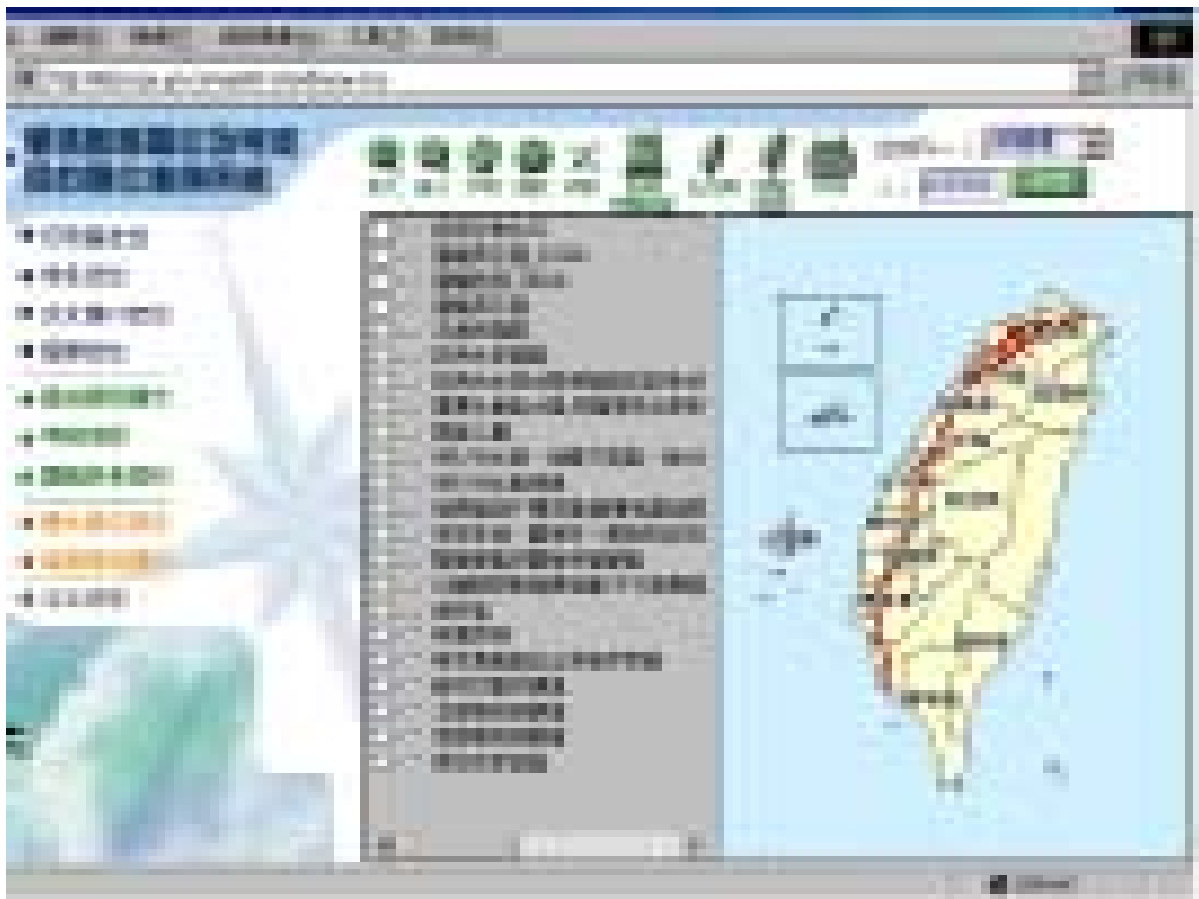
areas. This database is a valuable reference tool for developers and will help them avoid unnecessary disputes over the selection of development sites. For the convenience of developers, the website also lists application procedures for the various documents required by each government agency. This includes explicit lists of application procedures, necessary documents and application timetables.

In the past, the EPA's *Work Procedures for EIA Development Activity* required developers to respond to thirty-one survey items in order to determine whether their proposed development sites were located in environmentally sensitive or specially designated areas. However, developers were never sure to which agency they should apply, what documents they were required to provide, or how long the application process would take. The omission of required documents often led to delays in the presentation of

environmental impact statements (EIS) and even to unnecessary misunderstandings between developers and the government.

This database, which makes use of geographical information system (GIS) technology, was designed with simplicity of use in mind. Users can download free Autodesk MapGuide Viewer software directly from the website. Site searches can be conducted by entering place names, site coordinates, road intersections and administrative districts. The website also allows the user to adjust the magnification and position of the map image on their monitors.

In addition to regularly updating the information provided in this database, the EPA will also initiate short-, mid-, and long-term plans under its "Promotion Plan for the Establishment of Environmental Databases." This database is located at <http://kitty.epa.gov.tw/epa90-1/sys/begin.htm>



*The home page for the new "Searchable Database of Environmentally Sensitive and Specially Designated Areas".*



## Soil and Groundwater

## Old Filling Station Groundwater Pollution Survey Results

**The survey found that 19 filling stations that have been operating for ten years or more have been leaking fuel, and that it is highly likely this leakage has polluted nearby soil and groundwater. The EPA has already initiated various control measures and is pursuing follow-up work in order to prevent the spread of this pollution.**

The EPA, as part of its soil and groundwater pollution prevention efforts in 2001, targeted old filling stations in its "Survey of Potential Groundwater Pollution Sources." In this survey, EPA personnel made on-site inspections of groundwater pollution prevention facilities and monitoring equipment at 191 of Taiwan's older filling stations. Of these stations, 114 are operated by the state-run enterprise Chinese Petroleum Corp. (CPC) and 77 are run by private enterprises, and 189 had been in operation for at least ten years.

Inspectors detected high levels of volatile organic compounds, such as benzene, in the soil near 19 filling stations, 9.9% of the total number targeted in the survey. It is likely this pollution is the result of leaking fuel. Of these 19 stations, five are directly operated by CPC, ten are CPC franchises and four are Formosa Plastics franchises.

In response to these survey results, the EPA has demanded that filling station operators

immediately notify the government and initiate emergency response measures as soon as a fuel leak is discovered so as to limit the magnitude of this pollution. It has also required these operators to carry out pollution control and remediation work in order to ensure this leakage does not pollute nearby soil and groundwater.

The EPA has already requested the local environmental protection agencies within whose jurisdiction these polluted stations are located to verify the presence of soil and groundwater pollution at these stations. Preliminary findings from these inspections are expected within one month. Those stations that are determined to have caused pollution will be directed to inspect their fuel tanks and pipes for leaks. If fuel continues to leak or has already been detected floating on the watertable surface, the EPA will order station operators to implement such necessary immediate response measures as the repair or replacement of leaking tanks and pipes and the clean up of this leaked fuel.

Those stations that are proven to be pollution sources are required under the *Soil and Groundwater Pollution Remediation Act* to conduct environmental pollution surveys in order to determine the full degree of pollution. Whether or not these stations are listed as pollution control sites or remediation sites will be decided based on these survey results and preliminary assessments. Further studies will be conducted in order to evaluate the pollution's impact on the environment and determine the appropriate method of remediation.

The EPA will continue to conduct inspections of filling stations around Taiwan that have been in operation for ten years or more. It

will also set up a database with the information collected from these surveys in order to facilitate follow-up work.

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