



Feature Column

Review of 2003 and an Outlook on the New Year

Looking back on 2003, several major environmental policies were unveiled, including the restricted use policy on plastic bags and tableware, the establishment of Taiwan's first Environmental Science and Technology Parks, and the launch of a new environmental information system. Under Administrator Chang's leadership, the EPA will continue to carry out existing policies and has also planned with keen determination a new year of innovative environmental protection policies, focusing on three primary aims and six major tasks.

One of the foremost environmental protection policies to take effect last year was the establishment of the first Environmental Science and Technology Parks. Seven county and city governments vied for the chance to build an ESTP within their jurisdiction. Benzhou Industrial Park (本洲工業區) in Kaohsiung County was

chosen as the site for the southern ESTP and Fenglin Development Park (鳳林開發區) in Hualien County was selected as the site for the northern ESTP. The southern ESTP had a head start in obtaining land, enabling it to begin operations on April 11, 2003. It will thus have comparably more preparation time than the northern park to attract investors and begin construction. Currently, both southern and northern ESTPs are at the stage of contracting out construction work (please see EPM Volume 6, Issues 2, 5 and 9).

In order to spread word of Taiwan's ESTPs, encourage foreign companies to establish opera-

tions in the parks and raise the level of international environmental technology, former EPA administrator Hau Lung-bin (郝龍斌) led a delegation to Singapore and Germany in September 2003. The delegation took advantage of this opportunity to meet with related parties and hold informational briefings, inviting foreign companies to establish operations in Taiwan's ESTPs (please see EPM Volume 6, Issue 9).

Plastics Restriction Policy Leads to Record Low Garbage Amounts

The Restricted Use Policy on Plastic Shopping Bags and Plastic Dis-

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Promoting food waste recycling is one of the focal policies for both central and local governments this year

posable Tableware (塑膠袋及塑膠類免洗餐具限制使用政策) was one of the most indicative policies set forth by the EPA in recent years. Former EPA administrator Hau Lung-bin made a special effort last year to widely publicize the EPA's determination on this policy. As a measure to encourage and raise the level of public support for this policy, the EPA broadened the policy's implementation outcomes last year by providing loan interest subsidies to plastic bag manufacturers affected by this policy, and subsidies to restaurants that switched to using reusable tableware (please see EPM Vol.6, Issue 2). Fortunately, owing to the backing of Premier Yu and the full initiative taken by the EPA, as well as widespread citizen support, the restricted use policy on plastics has showed no signs of faltering. In effect for already a year now, the policy has made great strides toward reducing the nation's consumption of plastic (please see EPM Vol.6, Issue 7).

Although most citizens have been highly cooperative with this policy, the reduction rate of plastic bags and plastic disposable tableware after one year has been less than ideal for small-scale food and beverage vendors. In response to feedback from the private sector and related industries, it is deemed that certain revisions should be made to the policy in consideration of actual circumstances. After carrying out a review and evaluation of the policy, the EPA has drawn up a modified plan, which will be enacted after discussion with all related parties (please see EPM Vol.6, Issue 12).

Owing to recent efforts made by the government and the private sector to promote environmental policies in resource recycling and waste reduction, waste clearance volumes have seen negative

growth since 1998 and have been steadily decreasing by more than 7% annually over the past three years. Since the restricted use policy on plastic bags was implemented in 2002, waste reduction efforts have already seen marked results in terms of household garbage. The daily per capita volume of waste cleared away has steadily declined from 1.135 kg in 1998 to 0.829 kg in 2002. This marks a fourteen-year record low, already far below the 1988 level of 0.86 kg. It is evident that this environmental policy has already successfully achieved source reductions (please see EPM Vol.6, Issue 11).

thereafter. With such outstanding results, the EPA is preparing to announce the second group of vehicles required to install GPS before the end of February 2004. The first and second groups comprise a total of 1,000 waste clearance vehicles to be included in this monitoring system.

Environmental Information System Serves More People Faster

Working to actualize the *Basic Environmental Act* (環境基本法) and coordinate with the e-Taiwan Project (數位台灣計畫), while at the same time making environmental information more

Administrator Chang said that the EPA's future administrative efforts will focus on environmental education, environmental coordination and pollution prevention incentives.

Stepping up efforts to track and control the flow of industrial waste, the EPA began introducing GPS technology in 2002. Widespread cooperation from industry in installing this new equipment has led to positive implementation results. The second group of waste clearance vehicles required to install GPS equipment was announced in October 2003, and the EPA will proceed to further announce the third, fourth and fifth groups of clearance vehicles required to install GPS equipment from mid-2004 to the end of 2004. By that time, all of 2,000 waste clearance vehicles will have been fitted with GPS technology.

The first group of clearance vehicles was fitted with GPS two years ago, and since then 260 vehicles have been regularly monitored under this instantaneous tracking system. This had an intimidating effect on waste clearance organizations and not one violation has been recorded

transparent, accessible and relevant to people's daily lives, the EPA has combined information on air and water quality into one easily searchable environmental information system. As of October 2003, this information system has been online, providing the public with round-the-clock instant service. Citizens need only visit the EPA website to obtain the latest information about their living environment and gain an in-depth understanding of the environment around them (please see EPM Vol.6, Issue 10).

The public can use this online information system to inquire into environmental quality in all counties, cities, or townships. Information available through this service includes air quality data, water quality data, amounts of waste cleared away and resources recycled in various counties and cities, pass rates of tap water quality tests, and environmental statistics over the years. Citizens can also take advantage of the GIS function and statistical charts provided on this sys-

tem to look up electronic maps made by regional monitoring stations as well as charts depicting trends of change in environmental quality. This online environmental information system is indicative of substantial improvements made by the EPA in terms of making environmental information transparent and instantaneously accessible.

A significant change in EPA personnel occurred last year during September due to a controversial referendum held in Pinglin. Hau Lung-bin (郝龍斌) submitted his resignation from office as EPA administrator in early October and Premier Yu Shyi-kun appointed acting administrator Chang Juu-en (張祖恩) to take Hau's place. Days later, Premier Yu announced the official succession of Chang to the office of EPA Administrator on October 22. Administrator Chang will pilot the EPA's team of experts and continue to carry out existing environmental policies, contributing his talent and determination to assure the sustainable development of Taiwan's environment (please see EPM Vol.6, Issue 11).

Vision for the New Year: Three Priorities & Six Tasks

In office for three months already, Administrator Chang expressed his outlook for upcoming tasks in the new year. Chang underscored that in terms of resource sustainability, source reductions should be adopted at the point of waste production so as to reduce the overall generation of waste. Moreover, resources should be sorted and recycled so that materials are returned to the production cycle and reused. Only by fostering a society that recycles its resources will we be able to stride toward sustainable development of the environment. Society needs to realize that waste materials put in the proper place are actually resources that can be

cycled and reused. Keeping in mind the Earth's limited resources, we should employ every possible means to sort, recycle and reuse all resources. Hitting the message home, Administrator Chang has designated 2004 as "The Year of Sorting Garbage for Zero Waste."

For starters, the scope of food waste recycling will be strategically broadened this year. Data taken from a public opinion poll reveals that 90.3% of the public, 87% of junior college students and 83.4% of high school students are willing to cooperate with home, school or community recycling programs to either reuse or compost food waste. This year the EPA will undertake full-scale promotion of food waste recycling, broadening the scope to include all of the nation's 25 counties and cities. This year's goal is to recycle 900 tons of food waste per day.

As for large garbage items, Administrator Chang indicated that the EPA will establish furniture recycling/repair centers in certain cities and counties. Twelve counties and cities are planning to set up repair depots for large waste items, making use of old factory buildings. These centers will be designed to recycle around 45 tons of large garbage items per day. Controls requiring factories to recycle their products will also be kept in place. For example, the EPA will announce scrap bicycle tires to be added to the list of mandatory recyclables this year, while also canceling used lubricants from the list. A total of 32 items will be included on the list of mandatory recyclables, which is estimated to account for upwards of 700,000 tons of recycled resources per year.

The EPA will also continue promotion of the Environmental Science and Technology Park Plan, encouraging research and development companies to enter the

northern and southern ESTPs. The plan aims to strengthen the functioning of Taiwan's recycling industries by upgrading efficiency and management technology to turn waste materials into resources. As industries have demonstrated a strong degree of willingness to participate, the EPA has asked the Executive Yuan to increase the overall number of ESTPs to be established.

Administrator Chang summarized by saying that the EPA's future administrative efforts will focus on three primary aims — environmental education, environmental coordination and pollution prevention incentives — to accomplish the following six major tasks:

- 1) promote environmentally friendly lifestyles (household clean-ups, green procurements, encourage new models of environmentally friendly lifestyles)
- 2) increase full public participation (environmental issues website forums, environmental national affairs forums)
- 3) publicize environmental information (put environmental information online, digitize environmental monitoring information and make it public)
- 4) establish a more positive image of environmental protection facilities
- 5) recycle and reuse resources on a greater scale
- 6) reduce pollution emissions

All plans call for treating issues from a holistic perspective and integrating resources to manage objectives and let the EPA's vision unfold through tangible methods. The entire staff at the EPA will continue to work in unison with the public to create a high quality living environment and become a progressive nation in terms of environmental sustainability.

General Policy

Third ESTP to Be Announced Soon

After a period of intense bidding and screening, the northern and southern Environmental Science and Technology Parks (ESTPs) have already successfully begun inviting firms and carrying out preparatory work and preliminary construction. There are high expectations that the location for the third ESTP will be announced in early 2004. Last year's goal to announce the construction of three ESTPs nationwide has finally been attained.

As the first and the second ESTPs entered the stage of contracting out construction work, the application process was already underway for the third ESTP. The bidding period lasted for three months, and November 28, 2003 marked the deadline for the application process. Four cities and counties presented their proposals. The EPA intends to finalize review and evaluation procedures in early 2004, at which time the location of the third ESTP will be announced.

In order to invite more firms to set up in the ESTPs, the EPA held eight domestic briefings last year, reaching an attendance of over 400 companies. Overseas briefings were also held during September and October in Koln, Germany, and in Northern Kyushu, Japan. Meanwhile, to fulfill the objective of designing the parks as model "eco-towns" that cycle resources, the EPA led 19 people from Hualien County Government, Kaohsiung County Government, and the Industrial Technology Research Institute to attend a ten-day training course in Northern Kyushu, Japan on "resource-cycling eco-towns."

As for this year's focal work on the ESTPs, the first goal is to proceed with the planning for the third park. Equally important is building an administrative and research building for the southern and northern parks. The southern park finished contracting out construction work in December

2003, while the northern ESTP will finalize contracts by the latter half of this year. Meanwhile, the EPA will assist each park with the work of inviting firms and attracting companies to establish in the parks. The government will offer subsidies for mass production, land leases, and research and development.

In addition, one of the main focuses this year is to promote the construction of "eco-towns." Related programs for eco-towns in both the southern and northern parks include community ecological planning, beautification projects, water reuse projects, an environmental monitoring program, river basin remediation, energy conservation, greening, biodiversity fortification, ecological resource surveys, and a disaster prevention program. Both short-term and long-term projects will be launched, lasting from a minimum of one year to a maximum of six years. All projects will be successively initiated this year.

Based on the contents of the proposal approved by the Executive Yuan, this year the project budget will be a total of NT\$750 million to be allocated for implementation of related work. This budget will primarily be applied toward:

1. Park Planning: NT\$15 million will be used to subsidize the planning of the third ESTP and second stage planning of the southern and northern ESTPs.

2. Park Facility Construction: NT\$168 million has been allocated for the second stage of the southern administrative research building; NT\$116.8 million dollars has been allocated for the first stage of the northern administrative research building.
3. Eco-Town Construction: NT\$160.2 million has been allocated for "eco-town" construction in both the southern and northern ESTPs.
4. Firm Establishment Subsidies: It is anticipated that five companies will establish in the southern park. Production subsidies will be one tenth of the total investment in production facilities, to a maximum of NT\$25 million; a budget of about NT\$82.76 million has been allocated for this purpose this year. Total subsidization for land leasing is NT\$24 million. For research and development, NT\$5 million will be subsidized for each project; ten projects are expected, so a total of NT\$50 million has been allocated.

News Brief

Vehicle LPG Subsidized NT\$3 Per Liter

Encouraging citizens to use LPG for vehicles and thereby reduce air pollution emissions, the EPA has drafted the *Regulations Governing Allowances to Reduce the Price of Liquefied Petroleum Gas* (降低車用液化石油氣售價補助辦法) to complement Article 18~4 of the *Air Pollution Control Act* (空氣污染防治法). In order to make the policy more clear-cut regarding the EPA subsidy of NT\$3 per liter, and also in consideration of actual experience in past implementation practices, Article 6 of the Regulation has been revised. The formula for calculating the subsidy has been deleted and the original statement, "maximum subsidy of NT\$3 per liter," has been revised to specify that every liter of LPG for vehicle use shall be subsidized by NT\$3.

The EPA anticipates profit from ESTPs to be ten times the cost. If the government puts in NT\$5 billion to establish the parks, investments from local firms are expected to reach about NT\$12 billion. This would result in an annual production output of around NT\$35 billion and will create employment for four to five thousand

people. Furthermore, each park can generate about 2.5 million tons of usable recycled materials and thus reduce government expenditure on waste disposal fees by over NT\$2.5 billion, for a total savings of NT\$25 billion in ten years.

For more information, please call 02-2311-7722 ext. 2640.

Waste Management

"Zero Waste" : New Direction of Waste Management

Source reduction and recycling are the primary strategies for waste management as the EPA works toward sustainable use of resources and the international trend of "zero waste." These two strategies are central to the EPA's new waste clearance and disposal policy. After this new policy takes effect, it is estimated that after several years of waste reduction and recycling efforts, the amount of waste disposed of in 2020 will be only 25% of the waste generated in 2001.

Early on in Taiwan's history, waste management basically consisted of unmethodical dumping. Finally in 1984, the Central Government formulated the Municipal Garbage Disposal Plan (都市垃圾處理方案) to effectively dispose of waste, primarily in landfills. The plan assisted local governments to appropriately dispose of waste by first establishing garbage landfills that conform to sanitation requirements.

The public's continually rising expectations of environmental quality have made it increasingly difficult to obtain land for garbage landfills. Ever-maturing waste incineration technology in advanced nations made it possible for the government to formulate the Garbage Disposal Plan (垃圾處理方案) in 1991, which adopted incineration as the prime method of waste disposal and landfilling as only an auxiliary method. After several years of hard work and improvements, the amount of waste to receive appropriate disposal rose from 2.4% in 1984 to 96% in 2002. Heavy promotion of

resource recycling in 1998 has helped raise the national recycling rate to 15.5% of the total amount of garbage.

The EPA indicated that waste materials should be reused to the fullest extent possible. In light of the trend of "zero waste" proposed by certain progressive countries, and the fact that it has already been twenty years since Taiwan initiated the Municipal Garbage Disposal Plan in 1984, it was necessary to review and re-think Taiwan's waste management strategies. The EPA has already made a comprehensive review of past waste management policies and has drawn up the "Waste Management Plan: Review and Outlook for the Future" to help plan a new direction for waste management for the next twenty years.

This report set forth the following concrete measures to reduce waste and eventually achieve the goal of zero waste: 1) implement the *Resource Recycling and Reuse Act* (資源回收再利用法); 2) strengthen implementa-

tion of resource recycling; 3) promote sorting of garbage and the pay-per-bag fee collection system; 4) strive for more efficient sorting, recycling, reuse and disposal of food waste, large garbage items and non-combustible garbage; 5) reinforce waste clearance and disposal system and promote cross-county and cross-city cooperation in managing waste; 6) review and formulate measures on establishing garbage disposal facilities.

As for waste reduction, the EPA has actively promoted resource recycling in recent years and will increase the number of mandatory recyclable items in the future. Other measures include strengthening implementation of the *Resource Recycling and Reuse Act* to enforce the reuse and recycling of resources, and progressively promote green design, green consumerism and green procurements. Guidance, controls and incentives will be jointly used to promote the manufacture and use of products that: 1) are made from materials or designs that are biodegradable, easily disassembled or recyclable, 2) contain a certain percentage of renewable resources, and 3) are marked with the recycling logo. This ensures that renewable resources with economic value are reused or returned to the manufacturing process where technologically feasible. Mandatory waste recycling and the pay-per-bag fee collection system will gradually achieve waste reduction goals, and recycling rates are expected to reach 38% by 2020.

To quell reservations that the general public may have toward incineration plants, before garbage enters the disposal system, it will first be sent to waste screening plants to thoroughly sort waste into combustibles, non-combustibles, items inappropriate for combustion and recyclables. Only combustibles will be sent to incineration plants, thus decreasing the negative impact

of incineration on the environment and allowing incinerators to become "clean" electricity generation plants. Non-combustibles and items inappropriate for combustion will be reused or brought to a place for final disposal. For incineration plants that are already in operation, the EPA will strengthen operations and management at these facilities and ensure proper environmental supervision. Counties and cities are encouraged to cooperate by

providing mutual assistance in jointly resolving waste management problems. Addressing the problem of bottom ash generated by incineration processes, the EPA plans on constructing two incineration bottom ash separation plants, which will separate useful bottom ash for reuse. In addition, a regional incineration fly ash melting plant will be established to fulfill the objective of zero waste through reducing waste volume and reusing resources.

der 100 meters in altitude; Class II areas – hilly and mountainous terrain (excluding those hilly areas accounted for in Class III areas), wetlands, important bird habitats, national forests, coastal regions, coastal protected areas; Class III areas – all types of protected areas that serve as bases for protecting wildlife (national parks, nature reserves, wildlife refuges, major wildlife habitats, and national forest reserves).

EIA

EIAs to Assess Wildlife Ecology

In an effort to advance environmental impact assessment standards, the EPA has just announced newly drafted EIA technical guidelines that take into consideration the impacts of development activities on wildlife ecology. This inclusion will ensure that EIAs adhere to ecological concepts and give developers a more clear-cut technical code to rely on.

Based on the *Work Criteria for Environmental Impact Assessments of Development Activities* (開發行為環境影響評估作業準則), the EPA announced the *Technical Guidelines for Assessing Wildlife Ecology* (動物生態評估技術規範) on December 29, 2003, clearly delineating work procedures for assessing wildlife ecology. The guidelines provide categorical methods for protecting wildlife ecology when project proponents carry out EIAs on wildlife ecology in the future.

The EPA entrusted professors from the Institute of Ecology and Evolutionary Biology of National Taiwan University to help develop the *Technical Guidelines for Assessing Wildlife Ecology*. Experts and scholars and related organizations convened to discuss and draft the guidelines. Categorical survey methods were drawn up for different types of animal species. Three classes of environmentally sensitive areas were delineated and guidelines were drawn up to state the varying numbers and frequencies of sur-

veys required, depending on the environmental sensitivity of the area for each proposed development activity.

The EPA specified that currently the three zones of environmentally sensitive areas include: Class I areas – flat non-hilly terrain un-

The EPA indicated that *Technical Guidelines for Assessing Wildlife Ecology* require development agencies to consider the impact that development activities will have on habitat and the degree to which they disturb flora and fauna. Assessments should be carried out on any potential impacts brought about by development activities including chemical pollution, physical changes that affect life forms and habitat, and the introduction of nonindigenous invasive species. Concrete countermeasures should be drawn up to mitigate or remedy any damage, and protect wildlife ecology.

Development agencies have often

GIS was used to create this map showing distribution of environmentally sensitive areas in Taiwan.

used unsuitable survey or assessment methods in the past. On the one hand they are incapable of giving an accurate picture of the environmental status and evaluation results; on the other hand improper capture or survey methods often disrupt wildlife ecosystems. The new comprehensive system of standards has been designed to enhance quality of environmental impact assessments and shorten

the time required for reviews.

The EPA indicated that it has already announced new technical guidelines for assessing air quality, roadway traffic noise, construction project noise and railway noise, environmental vibration, air traffic noise, vegetative ecology and now the *Technical Guidelines for Assessing Wildlife Ecology*. For more information, please call 02-23117722 ext. 2740.

of manpower or expertise, or facilities that are not large enough at certain garbage landfills.

The EPA indicated that the current stage of work in this plan targets plants that are still in the planning stages. Two planning sessions were convened in November and December 2003, where consultancy organizations were entrusted to carry out feasible plans for four plants in Hsinchu County, Pingtung County, Hsinchu City, and Taichung City. Of these four plants, feasibility assessment reports for the plants in Hsinchu County and Pingtung County will be completed by mid-February 2004. Feasibility assessment reports for the other two plants in Hsinchu City and Taichung City will be submitted in March. Meanwhile, the EPA will confirm environmental impact assessment results in March, and if necessary will propose alternative sites to ensure the successful launch of the third planning session.

Waste Management

Seven Leachate Treatment Plants to Be Built Within Three Years

While incineration is now the primary method of municipal waste disposal in Taiwan, landfilling is the next most feasible disposal method in situations where incineration is inapt, such as in areas without incineration plants, during periods when incineration is temporarily suspended, or when waste volumes burgeon following a disaster. One of this year's focal tasks is to construct landfill leachate treatment plants. Plans have been drawn up to build seven such plants before 2006.

Taiwan has already shifted its waste management policy to focus on source reductions and reuse and recycling. Before construction is completed on large-scale incinerators throughout the nation, auxiliary waste disposal methods such as landfilling is necessary in the meantime. The EPA's waste management plan for this year involves the following tasks:

1. Subsidize the 21 regional sanitary landfills established in Ilan County, Yunlin County, Hsinchu County, Taoyuan County and Taitung County, where ratios of proper waste management is relatively low. This will increase landfill capacity by two million cubic meters
2. Subsidize the restoration and reuse of 25 county and city landfills. This plan is estimated to fully recover 40 hectares.
3. Entrust private sector to handle cross-county waste clearance

and disposal. Transport waste from townships in water source protection areas to lower areas for disposal.

4. Complement the "Doubling Tourist Arrivals Plan" (觀光客倍增計畫) by reinforcing environmental clean-up and maintenance along routes to scenic areas and nearby areas.

According to the Executive Yuan's instructions, the Landfill Leachate (and Septic Sludge) Centralized Treatment and Construction Plan (垃圾掩埋場滲出水(含水肥)區域集中處理廠興建計畫) should be made part of the Taiwan Area Waste Management Follow-up Plan (台灣地區垃圾處理後續計畫). The total cost of the plan is around NT\$500 million, which will cover the construction of seven leachate treatment plants by 2006. These plants will help solve pollution problems stemming from inability to appropriately handle leachate due to inadequate collection facilities, lack

As for the other treatment plants, the EPA will continue to oversee three originally agreed upon subsidized projects. The local governments of three septic sludge treatment plants in Bali, Taipei County; Chengsi, Tainan City; and Tainan City, have taken the initiative to make improvements on their own. These three plants plan to contract construction work by the end of 2003, begin construction this year (2004), and complete construction by the end of the year.

As for the expected future benefits of these construction plans, the EPA expressed that the primary focus is to select suitable sites or find existing larger-scale landfill leachate treatment plants with suitable locations. The goal is to adopt regional centralized treatment models, improve treatment facilities, and expand treatment capacity at these sites. It is hoped that these sites will be trans-

formed into regional centralized treatment plants that effectively combat problems arising from inappropriately handled landfill leachate. At the same time, this

plan will help solve the long-standing problems associated with septic sludge treatment.

For more information, please call 04-2252-1312.

Waste Management

Clearance and Disposal of Industrial Waste to Be Contracted Separately

The EPA has amended the problem in which county/city competent authorities had no way of knowing whether an enterprise's industrial waste clearance and disposal contract had been first signed by their clearance organization or their disposal organization. Related regulations have been modified to stipulate that if more than one party is commissioned for clearance and disposal, the serviced enterprise must prepare two separate contracts for each different service provider. This stipulation will take effect one year from its announcement and violators will be fined.

Referencing revisions made to the *Waste Disposal Act* (廢棄物清除處理法) on October 24, 2001, the EPA has wielded the authority granted by the new version of this Act to make revisions to the *Criteria Governing Methods of and Facilities for Storage, Clearance, and Treatment of Industrial Waste* (事業廢棄物貯存清除處理方法及設施標準) on September 25, 2002. The revised standards were made to fit in better with actual implementation circumstances.

Existing regulations call for businesses to first sign a contract with a waste disposal company before signing a contract with a clearance company. However, the private sector has recently reflected that most industries have both clearance and disposal companies sign on one contract. This practice makes it impossible for county and city competent authorities to distinguish which company signed the contract first. This difficulty for the authorities in turn results in problems for industries. The content of this legislation has therefore been made more clear-cut and pragmatic to address this

problem.

On December 31, 2003, the EPA announced revisions to Article 37 in the *Criteria Governing Methods of and Facilities for Storage, Clearance, and Treatment of Industrial Waste*. The revisions retain the stipulations requiring each enterprise to first contract a disposal company. In the instance that different clearance and disposal companies are commissioned, separate contracts should be issued for each company. However, enterprises that are under a specified scale as announced by the EPA are allowed to have both clearance and disposal organizations sign on the same contract.

The EPA explained that there are many small businesses with only a relatively small amount of industrial waste requiring disposal. Disposal enterprises are generally less inclined to enter contracts with such small businesses. Moreover, most waste management companies handle both clearance and disposal, making it impractical for them to draw up separate contracts for their clearance and disposal services. Thus

the second clause in the revised article expressly notes that restrictions have been relaxed for businesses that have not reached a certain scale; such businesses are allowed to have both clearance and disposal organizations sign on one contract.

In consideration of the time it will take for industry to adjust to this revision, Article 38 of the Standards indicates that industries that have already entered contracts before the revision was announced will have one year from when the Standards are promulgated to get on track with updated procedures. If a business entrusts different organizations to handle clearance and disposal, it must now draw up separate contracts, one for each service. Companies that make this adjustment before the deadline will be exempt from fines.

News Brief

Draft Environmental Education Act Submitted for Review

Thanks to the current EPA Administrator's emphasis on environmental education policy, further progress has been made on the formulation of the *Environmental Education Act* (環境教育法). The draft Environmental Education Act was submitted to the Executive Yuan for review on January 6 after internal discussion and consensus among EPA authorities. Taiwan's Environmental Education Act, with precursors only in the United States and Japan, has its foundation in Article 9 of the *Basic Environmental Act* (環境基本法). The new Act, a veritable constitution for environmental education, adheres to a macroscopic outlook, encompassing the entire population and all age groups, and integrating science and technology with the ultimate goal of raising environmental awareness among citizens and establishing environmental protection concepts so that they become a regular part of daily life.

For more information, please call 02-23117722 ext. 2630.

Green Mark

The Green Mark Goes Global

Last year marked the tenth anniversary of the EPA's eco-labeling program, and over the past year 717 products received Green Mark certification. In addition to actively participating in the Global Ecolabeling Network (GEN), the EPA has also drafted a mutual recognition agreement with Japan to establish reciprocal Green Mark certification. These efforts will help Taiwan to keep in step with the advancements being made in the international community.

The EPA has been promoting the Green Mark system for the past decade now. During this time, the number of Green Mark labels issued has significantly increased each year. These efforts have propelled local enterprises and the public to embrace Green Mark products and green consumerism. Taiwan posted especially notable results last year (2003) in keeping pace with other countries in the GEN.

Last year the EPA adopted six categories of standards specifications including multi-purpose office machine products, and a total of 717 products received Green Mark certification. Even more encouraging is the positive show of support received for the newly established Green Purchasing Network, which attracted 307 members to join within just a few months of its inception. In reference to participation in GEN events, last year the EPA took part in the ISO TC 207 annual

conference, a Technical Assistance Program (TAP) with Mainland China, Japan, and Thailand, and the GEN annual conference and board of directors meeting. Regarding efforts to promote international certification for eco-labeling, Taiwan has been invited to join the draft work for collective core standards specifications on televisions, video players, and printers. Taiwan has also completed the drafting of a mutual recognition agreement with Japan, which will establish reciprocal Green Mark certification, making it easier for enterprises in both nations to seek certification.

Waste Management

Fast Food Chains Face Fines for Violating Recycling Regulations

Since July 2003, a trial policy has been in place requiring fast food chain restaurants to recycle resources. Owing to positive results during the trial period, the policy was formally put into effect on January 1, 2004. In the future, if restaurants stray from regulations requiring them to sort general trash, recyclables, and food waste, they will be fined from NT\$6,000 to NT\$300,000 depending on the gravity of the violation.

In order to follow through with source reductions as called for in the resource recycling policy, starting from July 1, 2003, the EPA has required 600 of the nation's fast food franchises to begin a trial run to sort their recyclables. Among the

The EPA's Green Mark Committee held its final meeting of the year on December 25, 2003. A total of 71 products applied for Green Mark certification and all received certification, with 65 new applications and six application extensions, including one for Epson laser printers. At the meeting, new standards specifications were also developed for air conditioner system chillers, which will take effect January 1, 2004.

For more information, please call 02-2311-7722 ext. 2910.

restaurants are McDonald's, Kentucky Fried Chicken, Mos Burger, Burger King, 21st Century, Ting Kua Kua, and Lotteria. After a half-year trial period, all restaurants have shown active cooperation, and the EPA decided

Customers are asked to pitch in for environmental protection by sorting recyclables after finishing their meal.

to put this policy into formal effect starting from January 1, 2004. An important part of the policy is to remind consumers to sort recyclables after they finish their meal and follow the mottos of "eating what you order" and "neatly sorting recyclables."

EPA Administrator Chang Juu-en (張祖恩) stated that the nation's fast food chain restaurants serve approximately 400 million customers every year, most of whom are young students or families with children. Setting up recycling facilities in these restaurants will help reinforce the practice of sorting recyclables in people's daily lives. With hopes of achieving waste reduction through simple means, people will also be reminded to order only as much food as they can eat. Overall, this policy is expected to bring about tangible results in waste reduction, as six hundred fast food chain restaurants can recycle about 3,000 tons of paper eating utensils and 2,000 tons of food waste.

From July 1, 2003, all branches of the seven aforementioned franchises will set up recycling bins

next to in-store waste bins. After customers finish their meal, they will have to put leftover food in the 'food waste recycling' bin, and put recyclable items such as paper cups, paper bowls, paper plates, paper boxes and paper sacks into the 'recyclables' bin. Finally all other general waste items such as straws, lids, napkins, tray sleeves, paper packaging, condiment packets, spoons, stirrers, knives and forks should be put into the 'general waste' bin.

The EPA indicated that after this policy takes effect this January, the EPA will commence audits in two stages. First, a general survey will be carried out on a large scale. If any restaurants are found violating the new regulations, a special agent will be dispatched on an unscheduled basis to make a random inspection of garbage sorting practices. All waste will be re-sorted and weighed and if the restaurant is found to have over 10% of recyclables mixed in with non-recyclable garbage, they will be subject to fines ranging from

NT\$6,000 to NT\$300,000.

For more information, please call 02-2370-5888 ext. 3601.

General Policy

Administrator Chang Applauds Senior Sanitation Crew Workers

EPA Administrator Chang Juu-en met with 200 of the nation's outstanding senior sanitation workers in an awarding ceremony to commend their efforts and hard work. Chang passed out medals to each worker and spoke words of encouragement for these ground level sanitation crew workers. Chang also voiced his expectations for Taiwan to establish a "Zero Waste Recycling Society" and duly proclaimed 2004 "The Year of Sorting Garbage for Zero Waste."

News Briefs

First Large Waste Item Recycling Plant Commences Operations

Taiwan's first large waste item recycling plant, located in Rende Landfill, Tainan County, will soon officially begin operations. Old furniture will be refurbished by a carpentry guild at the Tainan penitentiary. Tainan County Chief Su Huan-chih (蘇煥智) and Tainan County Environmental Protection Bureau Director Lee Mu-sheng (李穆生) held a press conference on January 6, explaining expectations for this large waste item recycling plant to effectively reduce the amount of garbage as well as get people to value their belongings. Lee Mu-sheng pointed out that the EPA provided subsidies for establishing this large waste item recycling plant. After preliminarily screening discarded

furniture, items that can be recycled are sent to the Tainan penitentiary for refurbishing and other wooden materials are ground into sawdust. A second-hand furniture auction will be held when the plant opens and future auctions and various activities will be posted online. The earnings from auctions will be put into a fund for inmates.

HOLDERS OF BURNING PERMITS ARE EXEMPT FROM PENALTIES

On December 17, the EPA announced that in the future, parties who obtain a "Mountain/Forest/Field Burning Permit" for open fires are exempt from penalties in the *Air Pollution Control Act* (空氣污染防治法). Public and private organizations that obtain permits from the local fire fighting authorities according to Ar-

ticle 14 of the *Fire Control Act* (消防法) to burn in mountains, forests and farm fields, must also obtain permission from the local competent authorities. Permits will not be given for the following areas: 1) Class I Air Pollution Control Districts announced in Article 5 of the *Air Pollution Control Act*; 2) county or city districts where organizations exist for collective handling of agricultural wastes; and 3) within 300 meters of schools, hospitals, nursing homes or highways. Burning is limited to vegetative material and blight-causing pests. Local competent authorities have the right to suspend authorized burning activities on account of local air pollution and weather conditions. For more information, please call 02-2311-7722 ext. 2760.

Two hundred of the nation's best senior sanitation crew members were invited to attend the "2003 National Outstanding Senior Sanitation Crew Member Awarding Ceremony" held on January 5, 2004. EPA Administrator Chang Juu-en (張祖恩) praised their efforts and awarded medals to each of them, approximately one sixth of whom were females.

Administrator Chang indicated that even though the daily per capita generation of garbage has been tempering off in recent years, sanitation crews are still faced with quite an arduous workload. In light of this, the EPA has named 2004 "The Year of Sorting Garbage for Zero Waste." Chang calls upon the nation's citizenry to foster environmentally conscious and considerate habits by completely sorting out all household waste and recyclables. Not only will this help lighten the workload for sanitation crews but it will also raise the overall efficiency of waste clearance and disposal. With everyone's cooperation, Taiwan will regain a clean and tidy living environment and will be well on its way toward becoming a "zero waste society that recycles all of its resources."

Administrator Chang indicated that the nation's sanitation and clean-up workforce comprises over 27,000 workers who engage in laborious work with little rest no matter how stormy the weather may be. They even had to risk their health during the SARS crisis in 2003 when disposing of waste from quarantined individuals. Chang expressed his admiration and appreciation for their contribution to the entire public.

Twenty-four of the most outstanding workers received special praise at the awarding ceremony. They, along with the other 176 workers were chosen by an EPA selection committee from over 27,000 sanitation workers. During the award-

ing ceremony, Administrator Chang congratulated these exceptional workers and on behalf of all

citizens, and expressed the highest admiration and appreciation for their many years of hard work.

News Briefs

Permits Required for Liquid Fuel Over Sulfur Content Limit

Continually taking steps to decrease air pollution, the EPA announced a revision to Article 28-2 of the *Air Pollution Control Act* (空氣污染防制法) on December 5, 2003. The new revision stipulates that liquid fuel with over 0.5% sulfur content in Taipei City, Kaohsiung City, Keelung City, Taipei County, Taoyuan County, Taichung County, Taichung City, Nantou County, Changhua County, Yunlin County, Chiayi County, Chiayi City, Tainan County, Tainan City, Kaohsiung County and Pingtung County, and liquid fuel with over 1% sulfur content in areas in Taiwan that are not listed above is designated as a substance prone to causing air pollution. Stationary pollution sources that use liquid fuel with sulfur content up to the restricted concentration, or organizations that sell such fuel to local stationary pollution sources, must first obtain a permit. For more information, please call 02-23117722 ext. 2778.

Nationwide New Year Clean-up Week on January 14

To complement the Executive Yuan's promotion of 2004 as the Year of Tourism and the annual custom to clean up households at the end of the Lunar Year, the EPA has scheduled activities throughout National Clean-up Week, January 14-20. Encouraging all citizens to join this annual household clean-up, all county and city Environmental Protection Bureaus (EPBs) and township halls have designated January 17 as a day for all to join in cleaning up the streets and residential environments. The public is reminded to make sure that all possible breeding pools of the dengue fever-carrying mosquitoes are eliminated. Participants in this activity will earn an "Environmental Protection Activist Card." An estimated 270,000 people are expected to join in this activity. Echoing this year's theme as "The Year of Sorting Garbage for Zero Waste," the EPA reminds citizens to cooperate in sorting and recycling garbage during the annual household clean-up. Various categories of recyclables will be picked up by local sanitation crews. Furniture and other large waste items should be set outside for clearance only at the date and time specified by the local EPB and sanitation crews. Citizens are asked not to randomly discard their garbage, and will be fined if they do so.

'National Clean-up Week' encourages all citizens to join in this annual household clean-up.

News Briefs

Awards Given for Top Performance in Industrial Waste Disposal and the Three Rs

To encourage and praise companies for their first-rate performance in the proper disposal of industrial waste and the reduction, recycling and reuse of resources, the EPA held the first "2002 Top Performance Awards for Industrial Waste Disposal and Reduction, Recycling and Reuse of Resources" awarding ceremony on December 1, 2003. Among the organizations participating in the selection for these awards included 26 enterprises from various fields including agriculture, industry, education, as well as medical institutions and science parks. Awards for excellent performance were given to nine enterprises and awards for good performance were given to four enterprises. The winning organizations were chosen for their sustainable business operations and concepts in sustainable use of resources, with a focus on implementing sustainable waste clearance and disposal, and reduction, recycling and reuse of resources. These organizations reduced their generation of waste through advancements in raw materials and production processes, giving priority consideration to recycling and reusing waste materials

and favoring sustainable development of alternative technology and materials to minimize the release of hazardous substances to the environment.

Green Mark Success Sharing Exhibit

The "Decade of Success for the Green Mark" and "Green Consumerism Takes Off in All Trades" were the themes of the "Green Mark Success Sharing Exhibit" held from December 18 to 20, 2003, by the EPA. Throughout the years of promoting the Green Mark in Taiwan, this was the first time

for businesses to display the success of their Green Mark products to the public. EPA Administrator Chang Juu-en stated that promotion of the Green Mark over the last decade has built up an average output value of NT\$50 billion per year and already 83 eco-label specifications have been developed. These rewarding results rank the Green Mark as the fourth most successful eco-labeling system in the world, and the second most successful in Asia. For more information, please call 02-23117722 ext. 2910.

EPA Administrator Chang delivers speech at the Green Mark Success Sharing Exhibit.

Environmental Policy Monthly, Taiwan, R.O.C.

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Editorial and translation support provided by:

Hui-kuo Consulting, Ltd.,
Sustainable Earth Network

The EPM has been published monthly since July 1997. The EPM is available on the EPA website at www.epa.gov.tw/english/EPM/.

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GPN: 2008600068
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行政院新聞局出版登記證局版北市誌
字第壹陸壹壹號

中華郵政北台字第6128號執照登記為
雜誌交寄