



Feature Column

Fundamental Environment Act and Its Implications

The *Fundamental Environment Act* was finally promulgated at the end of 2002 after many years of deliberation, serving as a polestar for national environmental protection work. Government departments are currently compiling related regulations and plans in accordance with this act, as well as incorporating sustainable development objectives within government decision-making and policy implementation. By making information available and promoting environmental education, this act encourages citizens to get actively involved in environmental protection work.

Significance and History of Fundamental Environment Act

The "economic miracle," for which Taiwan is world renowned, refers to the great effort that Taiwan extended to build up its economy. Unfortunately, this miracle was accompanied by activities that pol-

luted and damaged the environment, which resulted in seriously degrading living environments and breaking ecological equilibrium. Despite numerous national laws to protect the environment, authority over existing regulations was distributed among many different government departments. Therefore, Taiwan set out to provide a comprehensive system and ensure that environmental concepts take firm root at both government and private levels. In doing so, it was found necessary to refer to legal standards established by other advanced nations. This research resulted in the formulation of the nation's *Fundamental Environment Act* (環境基本法), which

works to integrate guiding principles for all related legislation.

The first draft of the *Fundamental Environment Act* was drawn up by the EPA early on in 1988, and in May of the same year this draft was approved by the Executive Yuan and sent to the Legislative Yuan for review. The draft was then deliberated for nearly two years in the Legislative Yuan, where some of the original articles were put on hold. Afterward, in response to the changing times and the trend towards sustainable development, the EPA took the initiative to recall the draft act in 1996.

The EPA then completed an updated version of the draft *Funda-*

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Fundamental Environment Act becomes the source of legislation for NCSD.

mental Environment Act in 1999, and two Legislative Yuan committees – the Health, Environment and Social Welfare Committee and the Judiciary Committee – completed reviewing the draft act in June 2000. After two years of diligent effort pressing the issue from all sides, the Legislative Yuan finally passed three reads of this significant environmental act, thereby proclaiming a new era in which Taiwan would put the environment among its top priorities.

The regulations in this act that are under EPA jurisdiction can be divided into five categories, namely, the formulation of principle rules, administrative organization, preventative measures, control measures and relief measures. In actuality, legislation pertaining to the latter four of these categories had already been successively established since before 2001 with the enactment of other national environmental protection regulations. Thus the promulgation of the *Fundamental Environment Act* signified that Taiwan had already entered a stage of maturity in terms of establishing national environmental protection regulations.

Environmental Policy on Sustainable Development Takes Root

Apart from its important roles to guide, advocate and instruct, the most significant aspect of the *Fundamental Environment Act* is that it calls for the nation to set environmental protection as a higher priority. *Additional Article 10 of the Constitution* already stipulates that environmental and ecological protection shall be given equal consideration with economic and technological development. The *Fundamental Environment Act* however takes this one step further by laying down basic national long-term

benefits so that environmental protection is on the same level of importance as economic, technological and social development. However, in the event that economic, technological and social development poses serious negative impacts on the environment or threatens to jeopardize the environment, then environmental protection should be set as top priority.

The most significant aspect of the Act is that it calls for the nation to set environmental protection as a higher priority.

The *Fundamental Environment Act* safeguards Taiwan's environmental quality by referring to examples set by the United Nations and other countries in prioritizing sustainable development as the ultimate objective and highest guiding principle for environmental protection. To ensure the attainment of this goal, the act instructed the Executive Yuan to establish a national sustainable development committee to serve as a decision-making and supervisory mechanism in carrying out related work. In fact, the Executive Yuan had already perceived the importance of sustainable development for the nation and had already approved the establishment of the National Council for Sustainable Development (NCSA) in 1997. When this council was reorganized in June 2002, Premier Yu took it upon himself to serve as its chairman. Now that the *Fundamental Environment Act* has become the source of legislation for the NCSA, Taiwan is equipped with an even more powerful mechanism for carrying out sustainable development.

In the process of promoting sustainable development, the *Fundamental Environment Act* instructs the central government to establish objective indicators to be applied toward assessing the sustainability of national development. The "Sustainable Vision Working Group" under the NCSA and led by the Council for Economic Development and Planning, is currently actively involved in formulating sustainable development indicators. This group plans to regularly announce the results of reviews of sustainable development indicators, which will serve as an important basis in reviewing government policy.

The use of nuclear power is a highly debated issue in Taiwan and around the world. As for fundamental policy regarding nuclear power, the *Fundamental Environment Act* stipulates that the government should devise a plan to gradually and completely phase out the production of nuclear energy. In the meantime, measures should be taken to increase nuclear safety and control, radiation protection, management of radioactive materials and monitoring of environmental radiation so that the public is safeguarded from harmful radiation.

Drafting of Related Regulations and Plans Expedited

With the promulgation of the *Fundamental Environment Act* on December 11, 2002, the EPA and related government departments immediately began carrying out work in accordance with the requirements set forth in this new act. One of the most important tasks was to promptly draft new regulations and plans. To ensure that national environmental protection work is carried out effectively from the outset, the *Fundamental Environment Act* directs the central government to devise the National Environmental Protection Plan. The act also

instructs local governments to compile autonomous regulations and environmental plans according to environmental protection regulations and the National Environmental Protection Plan, taking each locality's individual requirements into account. Actually, ever since Agenda 21 was passed at the 1992 Rio Earth Summit, Taiwan had already come to a consensus regarding the formulation of the National Environmental Protection Plan. After a long period of deliberation, the Executive Yuan finally ratified the EPA's National Environmental Protection Plan on July 2, 1998. With this plan already put into effect, the primary task after the promulgation of the *Fundamental Environment Act* was for each individual local government to come up with its own local environmental protection plan according to the national plan.

In order to integrate and expedite the task of formulating local government plans, the EPA drafted the *Guidelines for Compiling and Reviewing Local Environmental Protection Plans* (地方環境保護計畫編審作業要點) (see EPM Vol. VI, Issue 4). After these guidelines become implemented, they will serve as the groundwork for local governments in preparing their own environmental protection plans. In addition, the EPA will entrust a consulting organization to provide practical guidance to county and city governments in completing the formulation of statutory plans according to the format prescribed by the EPA. The consulting organization will also help to evaluate the performance of each local government, as well as review local plans and revisions of environmental indicators in the National Environmental Protection Plan. Recommendations will serve as future reference aids for the EPA when revising plans.

Aiming to encourage citizens to

better understand and show concern for environmental quality, many articles within the *Fundamental Environment Act* list standards for making environmental information publicly available. For instance, the act stipulates that each level of government should investigate and evaluate current information on the status of the environment within their respective district. Similarly, all government levels are to establish environmental information systems, which shall be made available to the public on a regular basis. The effectiveness of the local government's environmental protection plans should also be publicized on a regular basis. To meet this requirement, the EPA is in the midst of drafting *Environmental Protection Administration Guidelines for Collecting and Managing Environmental Information Sources* (環境資訊資源蒐集管理要點) to help seek out and manage information sources pertaining to environmental protection, and to augment the content of environmental databanks. These guidelines encourage the sharing and management of environmental information as well as help make it available to the public.

As *Article 33 of the Fundamental Environment Act* requires the central government to establish a system of environmental related liability compensation, reparation and relief, the EPA referred to relevant domestic and foreign systems and proposed a preliminary draft *Environmental Liability Reparation and Compensation Act* (環境損害賠償與補償法) in April 2003. This groundwork for legislation on environmental damage compensation and reparation serves to reinforce laws regarding insurance and special compensation funds. Shared risk liability insurance is adopted to prevent a situation in which victims are un-

able to appeal for compensation, and a special compensation fund is used to manage damage caused by unaccounted-for pollution cases. As there is still some confusion among other parties regarding how Taiwan's environmental compensation and reparation system will work in the future, the EPA is currently still in the preliminary stages of fine-tuning this legislation.

Strengthening Environmental Education and Integrating with Existing Systems

The *Fundamental Environment Act* calls for the establishment of certain new systems that abide by environmental protection concepts. In addition to these new systems, a majority of the articles within this act are directed toward setting principles and comprehensive standards for Taiwan's existing environmental protection systems. These existing systems include:

1. Environmental protection professional personnel system
2. Environmental impact assessment system
3. System to establish environmental quality and control standards
4. Periodic report system and system for industries to obtain permit prior to installation of facilities
5. Environmental dispute management system
6. Polluters pay systems and systems targeting those responsible for environmental damage
7. Systems to install funds for different environmental protection goals

The standards set by the *Funda-*

mental Environment Act not only work to reinstate the gravity of these environmental protection systems, but also work to provide a comprehensive and common set of guiding principles for the wide range of environmental regulations to be drawn up in the future.

In general it is much easier to get people to act once they are aware of the problems. Therefore the *Fundamental Environment Act* works to raise public awareness and knowledge of environmental protection by laying down principles and systems for management, with a special focus on promoting environmental education. The *Fundamental Environment Act* asks governments to make education available to all regarding the prioritization of environmental protection and sustainable development. This will help to raise environmental awareness and put environmental protection concepts into daily practice. Moreover, the *Fundamental Environment Act* has established June 5 as World Environment Day in coordination with the UN, aiming to further instill environmental concepts into both industry and the public.

The EPA points out that the advancement of national environmental education is primarily divided into three channels of advocacy, via schools, society and through direct media. This multifaceted approach will be continued in future efforts to promote environmental education.

All in all, while the *Fundamental Environment Act* exists only to advocate and outline guiding principles, since it has been officially put into practice, government departments have already begun to adhere to these principles and gradually incorporate them into policies, regulations, organization, and other tasks. In effect, the implementation of the *Fundamen-*

tal Environment Act will be a significant milestone as far as de-

velopment of the entire nation is concerned.

Water Quality

Control/Remediation Site Assessment Regulations Announced

The EPA has promulgated the *Regulations for the Preliminary Assessment of Soil and Groundwater Pollution Control Sites* and the *Regulations for Assessing Pollution Boundaries, Environmental Impact, and Treatment Priorities of Polluted Sites* to serve as the basis for control and follow-up remediation work at control sites and remediation sites. The promulgation of these two regulations has brought about the complete establishment of bylaws to the *Soil and Groundwater Pollution Remediation Act*.

Article 11~2 of the *Soil and Groundwater Pollution Remediation Act* (SGPRA) (土壤及地下水污染整治法) stipulates that control sites must first undergo preliminary assessment. For cases in which citizens' health and living environments are in jeopardy, the local competent authority must obtain approval from the EPA before it can list a control site as a remediation site, or must otherwise handle the situation according to Article 10 of SGPRA implementation rules.

Clarifying this procedure further, the EPA drew up seven articles in the *Regulations for the Preliminary Assessment of Soil and Groundwater Pollution Control Sites* (土壤及地下水污染控制場址初步評估辦法), and 15 articles in the *Regulations for Assessing Pollution Boundaries, Environmental Impact, and Treatment Priorities of Polluted Sites* (整治場址污染範圍調查影響環境評估及處理等級評定辦法). Both of these new regulations were promulgated and went into effect on May 7 this year, thereby becoming the basis of control and follow-up remediation work at control sites and

remediation sites.

Regulations for the Preliminary Assessment of Soil and Groundwater Pollution Control Sites stipulates that in the future, after control sites have undergone preliminary assessment, reports of control sites that fall under one of the following categories should be submitted to the EPA for review and approval before they can be announced as remediation sites:

1. Control sites located within a specified distance from announced source water quality protected areas for drinking water, or drinking water outlets.
2. Control sites on farmland with Cadmium or Mercury levels in excess of Soil Pollution Control Standards.
3. Control sites with single pollutant concentrations over 20 times that of soil or groundwater pollution control standards.
4. Those sites where the sum of soil pollution score (Ts) and groundwater pollution score (Tgw) exceed a total P value of over 20. Soil and groundwater pollution scores are based on the ratio between individual pollution concentration values and the standard value.

Investigations of remediation sites proceed according to the Regulations for Assessing Pollution Boundaries, Environmental Impact, and Treatment Priorities of Polluted Sites. This regulation includes three main aspects: 1) Pollution boundary investigation: investigation of distribution boundary of soil and groundwater pollution at remediation sites, including assessment of pollution paths through soil, groundwater and surface water. 2) Environmental impact evaluation: evaluation of dangers that remediation site poses to citizens' health and living environment. 3) Treatment level assessment: environmental impact assessment results are used to prioritize which sites can use the Soil and Groundwater Remediation Fund for remediation work.

After the pollution boundary investigation and the environmental impact assessment are carried out, the soil pollution pathway score (SL), groundwater pollution pathway score (GW) and the surface water pollution pathways score (SW) are entered into a formula (formula is specified in the regulations) to calculate a total score (TOL), which defines the level of treatment required.

The level of management required is therefore determined by the total score (TOL). If total scores of different sites are equivalent, prioritization of treatment is ascertained by comparing SL, GW and SW scores.

In addition, Article 13 of the regulation gives the EPA the authority to consider the practical requirements of each site on an individual case basis, and can also take into consideration the social and economic losses of each remediation site, as well as damages to the natural environment, cultural impacts and beneficial aspects after remediation is completed. These considerations will be reviewed by

the Soil and Groundwater Remediation Fund Management Board, and once reports are approved, certain sites may be prioritized for use of the Soil and Groundwater Remediation Fund. The EPA indicated the reason why it has left room for flexibility is out of consideration for unforeseen obstacles this new regulation may encounter in the future. Moreover, every two years the EPA can review the methods used to inspect pollution boundaries, as well as the methods to determine environmental impact assessment and the level of management required. These measures have

been installed to bring the anticipated benefits of this regulation into full play.

The EPA conveyed that since the promulgation of the *Regulations for the Preliminary Assessment of Soil and Groundwater Pollution Control Sites* and the *Regulations for Assessing Pollution Boundaries, Environmental Impact, and Treatment Priorities of Polluted Sites*, the related laws in the *Soil and Groundwater Pollution Remediation Act* have already reached an initial stage of establishment and national soil and groundwater pollution related tasks have already entered a new phase.

Air Quality

Tightened Air Pollution Controls for Construction Industry in July 2004

Construction-based particulate matter pollution is estimated to account for nearly 60% of all particulate matter emissions. In light of this, the EPA has drafted the *Management Regulations for Air Pollution Control Facilities at Construction Sites*, with a total of 18 articles designed to enforce air pollution controls at construction sites. The new regulations will go into effect on July 1, 2004.

Particulate matter emitted from construction sites makes up 57% of the nation's total particulate matter emissions (figure includes dust stirred up by construction vehicles), and is therefore regarded as a focal area for air pol-

lution controls. Statistics on reduction rates of construction-based particulate matter in cities and counties throughout Taiwan show that the 1997 average particulate matter reduction rate of 12~15% (before the government started



During the construction period, construction site should be covered up with dustcovers.

collecting air pollution control fees) has improved to the current average of 28~32%. Recent years, however, have only seen limited results toward further reductions and it appears that the reduction rate has reached a plateau.

Particulate matter emitted from construction sites makes up 57% of the nation's total particulate matter emissions.

In-depth studies carried out by the EPA indicate that in the past, the main air pollution controls toward construction sites consisted of setting stationary pollution source emission standards and regulations against misconduct, as well as collecting construction site air pollution control fees.

Currently, local government environmental agencies can only passively reduce pollution by investigating cases and taking disciplinary action after pollution has already been generated. Moreover, the economic incentives for local environmental protection agencies have been insufficient. To tackle this shortcoming, the EPA announced the *Management Regulations for Air Pollution Control Facilities at Construction Sites* (營建工程空氣污染防治設施管理辦法) on May 28, to lay down specific pollution control regulations that address details of all construction operations.

The newly issued regulations require those in charge of construction projects to build fences around construction sites that are flush with the ground and to prevent runoff water from escaping. First class construction sites should have fences at least 2.4

meters high, and second class construction sites should have fences at least 1.8 meters high. For areas of construction site fences within 10 meters of roadway corners, the fence may be half the regular height.

During the construction period, any materials such as gravel, soil, or waste material and other piled up materials within the construction site should be covered up with dustcovers or dust control netting and should be regularly sprayed with chemical stabilizers to keep dust down.

Additionally, throughout the construction period, those in charge of construction projects should make sure that dust control measures be taken on exposed areas of ground and roadways within the construction site. Such measures include use of dustcovers, dust control netting, planting vegetation, and regular spraying with chemical stabilizers and water.

Those in charge of construction projects should install vehicle-washing facilities at the entrance and exit of the construction site so that all vehicles carrying dust-generating materials such as gravel, soil and discarded materials are properly washed. For sites without enough space to install vehicle-washing facilities, high-pressure spray wash equipment should be used and wash water should be appropriately dealt with.

Article 13 of the regulations states that dust control measures such as using air-tight compartments or dustcovers should be adopted on transport vehicles entering and exiting the construction site to prevent dust from transported materials such as gravel, soil and waste materials.

Article 15 of the new regulations stipulates that construction sites should install scrubbers and bag filters or other effective dust collection equipment at exhaust vents

or outlets where particle matter may escape.

According to the EPA, Article 56 of the *Air Pollution Control Act* stipulates that construction sites in violation of these regulations will be subject to fines ranging from NT\$20,000 to NT\$200,000 depending on the seriousness of the violation. Factories that violate these same regulations are subject to fines ranging from NT\$100,000 to NT\$1,000,000.

This new set of regulations has been slated to go into effect on July 1 next year (2004) in order to give construction business owners ample time to make improvements.

Waste Management

Fast Food Chains Begin Trial Run to Sort Recyclables on July 1

From July 1 this year, fast food chain restaurants will be added to the current list of nine large industries required to recycle resources as they begin a trial run to install recycling bins and help educate consumers to recycle their waste properly. Fast food chains will be responsible for properly sorting, storing, clearing and disposing of recyclable waste as well as entrusting recycling enterprises or local sanitation crews to handle recyclable waste. From January 2004, businesses that violate this new rule will be subject to a fine of NT\$60,000 or more as stipulated in the *Waste Disposal Act*.

Fast food chains have become a significant channel of food intake for the populace, and the generation of waste due to the consumption of such products has become a topic of focal concern. In October 2002,

the EPA had already planned to mandate businesses to install resource recycling facilities.

However, after this policy was discussed with industry members, it was decided that fast food chains would not be included under this policy until a first trial run starting on July 1, 2003 in order to give industry ample preparation time.

On April 18, the EPA announced revisions to standards and rules that fast food chain restaurants must follow when installing resource recycling facilities. This set of rules defines those fast food chains required to install recycling facilities to include all stores that provide convenience foods through chain store retail operations where stationary seating is provided to customers. Those fast food chains exempt from this trial run include restaurants that operate inside of department stores, shopping centers, or direct discount outlets and do not independently provide seating where customers can sit down and eat after ordering food.

This regulation stipulates that designated fast food restaurants in the future will have to set up recycling facilities and signs to direct customers to recycling points, and must keep such facilities fully functional at all times. Wording on signs must be clearly visible and signs directing customers to recycling points should be posted in conspicuous locations near the entrance of the restaurant during business hours. Recycling bins should be regularly emptied during business hours so that there is always room in bins for customers to discard recyclables.

As fast food chain restaurants are seen to have a direct influence on their customers' behavior, the EPA has required that such businesses carry out the following recycling measures:

1. Place recycling bins alongside trash bins for general waste.

Make sure that all bins are well marked. Collect all recyclable waste discarded by customers within the shop.

2. Provide food scrap recycling bins near waste bins so that customers can easily dispose of leftover food material before discarding other waste.
3. Clearance of recyclable waste should not follow the same methods as clearance of general waste; recycling, clearance and handling of recyclables should be entrusted to a recycling enterprise, the local sanitation crew or resource recycling truck. Recycling, clearance and handling of leftover food material should be appropriately dealt with according to local government regulations.

The EPA indicated that fast food chains in violation of this new set of regulations will be fined between a minimum of NT\$60,000 and a maximum of NT\$300,000 in

Air Quality

Systematized Management of Motorcycle Inspection Stations

Due to the continual increase in the number of motorcycles in Taiwan, an inspection system has been established to control motorcycle exhaust emissions. Aiming to effectively manage nearly 1,900 motorcycle exhaust emission inspection stations and put this motorcycle inspection system into full gear, the EPA has announced the *Regulations Governing the Establishment and Management of Motorcycle Exhaust Emissions Inspection Stations*. These regulations will enforce random inspections and examinations in the future.

The number of motorcycles in Taiwan has already reached 11.96 million units and exhaust emissions from these motorcycles have a serious impact on air quality. Over the past five years Taiwan has strictly enforced the motorcycle inspection system, and inspection stations now assume an even more substantial role in controlling air quality by screening motorcycle exhaust emissions.

accordance with the *Waste Disposal Act*. During the half-year trial period (from June 1 to the end of December) before this new regulation becomes effective on January 1, 2004, the EPA will spread the word through news media and posters so that all businesses and customers are fully aware of the new regulation.

The nine businesses designated under the *Waste Disposal Act* to set up recycling bins so far include the following vendors of containers or dry cell batteries: direct discount outlets, supermarkets, convenience store chains, sanitary and cosmetic goods retail chains, highway depot convenience stores, gas filling stations, food and beverage stores within gas stations, wireless communication equipment retail stores, and video equipment retail stores. In the coming month, fast food chains will be added as the tenth business category required to set up recycling systems.

Initiating efforts to effectively manage nearly 1,900 motorcycle exhaust emission inspection stations, on May 21 the EPA announced the *Regulations Governing the Establishment and Management of Motorcycle Exhaust Emissions Inspection Stations*, which contains 22 articles. These regulations state that the EPA will announce the number of additional emissions

inspection stations to be set up after it reviews each district's records on numbers of motorcycles and numbers of motorcycles inspected.

According to EPA statistics, last year national records showed that there were 11,968,155 units, with the largest number recorded in Taipei County at 1,776,222 units, followed by Kaohsiung City at 997,578 units, and Taipei City coming in third at 97,169 units. However, last year's statistics recorded inspections of 6,843,555 units, indicating that merely 57.18% of all motorcycles were inspected.

The new regulations stipulate that each district shall determine whether additional inspection stations should be set up based on the number of registered motorcycles and the number of motorcycles inspected in their respective districts. Last year the number of units increased by 264,152, with Taipei County recording 53,995 and Kaohsiung County 26,563.

As stipulated in the new methods, the certification of inspection stations will be divided into two phases, permission of establishment and certification, which will both include audits on paper and on-site inspections and will adopt stricter screening criteria than in the past. Regarding inspection software and instrumentation standards, the old

method merely conducted a review of documents but no penalties were levied. However, according to the new method, software will be valid for one year and emissions analysis instruments will be valid for five years. If falsifications are discovered on certification documents, certification will be revoked.

To improve the professional standards of inspection personnel the new method stipulates that inspection personnel must receive a minimum of 16 hours on-the-job training every two years administered by environmental protection agencies. Furthermore, inspection stations must not refuse requests to be examined by either the EPA or commissioned professional testing institutions, and relocation of a station is not permitted unless administrative authorization is issued. Violations of these regulations will result in either the cancellation of examination certificate or a fine ranging from NT\$15,000 to NT\$60,000.

Tying in with the implementation of these new regulations, the EPA has adopted a series of measures that will establish a rating evaluation system for motorcycle inspection stations, and rating results will be publicly announced each quarter. Apart

from holding a public award ceremony, the EPA will also post outstanding inspection stations on the EPA website, which serves to make consumers aware of which inspection stations have exhibited excellent performance so they can make the best choice for themselves, as well as serves to encourage stations to properly carry out inspection tasks.

General Policy

Management Rules Established for Environmental Trusts

The EPA announced the *Permit and Oversight Regulations for Environmental Protection Public Interest Trusts* in accordance with the *Trust Law*, so that in the future, an application must be made to the EPA whenever a party wishes to establish an environmental public interest trust if trust assets are greater than a specified value. For trust assets less than the specified amount, parties can make their application through local governments.

Environmental protection trusts make use of citizen power to push for protection of the natural and cultural environment. This system originated in England in 1895 when citizen groups strove to protect a 300-acre forest that belonged to a royal family. The movement resulted in turning this forest into public land and thus began the first environmental protection trust.

Public awareness of environmental protection has risen in recent years and more and more citizens' environmental protection groups become established and help put environmental policies into practice. Such awareness has naturally led to the necessity of establishing environmental trust funds. With the authority



EPA will establish a rating evaluation system for motorcycle inspection stations.

assigned to the EPA in *Article 85 of the Trust Law* (信託法), the EPA drafted the *Permit and Oversight Regulations for Environmental Protection Public Interest Trusts* (環境保護公益信託許可及監督辦法) in October 2002 to provide legal procedures for the establishment and oversight of environmental public interest trusts. Promulgated on May 14 and containing 28 articles, these regulations give environmental protection agencies legal basis for managing environmental protection public interest trusts in the future.

These new EPA regulations pertain specifically to the management of public interest trusts that have been designed for the purpose of protecting the environment. Article 3 in the regulations stipulates that permit issues and oversight of public interest trusts shall be handled by the EPA. However, for trusts with total assets under a specified amount, the EPA can assign the local government that has jurisdiction over the trustee to handle permits and oversight.

The EPA examines the following items when reviewing environmental public interest trust applications.

1. Whether the purpose of the trust has truly been established for public interest.
2. Whether those benefiting from the trust are truly capable of achieving the trust goals.
3. Whether the client's property rights truly extend authority to take disciplinary action concerning trust assets.
4. Whether the trustee is truly capable of management or taking disciplinary action concerning trust assets.
5. Whether the trust supervisor is truly capable of overseeing the execution of trust affairs.

6. Whether the trust operational plan and budget records are handled appropriately.

To prevent environmental protection public interest trusts from straying from standard procedures, the regulations also stipulate conditions in which permits are to be annulled or penalties are to be imposed. If a public interest trust incurs any one of the following situations - "violation of establishment of permit conditions or over-

sight orders," "actions detrimental to public interest," or "illegitimate reasons for not acting for three consecutive years" - the EPA shall inform the client, the trust supervisor and the trustee to submit their viewpoints regarding the matter within 15 days. For those who do not convey their stance or submit an inappropriate reason, the EPA or the local government will annul the permit or carry out necessary penalties in accordance with *Article 77 of the Trust Law*.

General Policy

EPA Mounts Full-scale Defense Against SARS

Establishing complete defense against potential sources harboring the SARS virus, the EPA has not only stepped up treatment of home-quarantine residential waste as infectious industrial waste, but also carries out daily wastewater treatment checks at SARS-designated hospitals, public sewer systems and centralized quarantine areas, in order to avoid secondary SARS contamination.

The SARS epidemic has had a great impact on Taiwan. According to the Department of Health's statistics as of May 25, the number of people under level A and level B home quarantine with SARS reached 19,503. In order to comprehensively defend against this epidemic situation, the EPA already treats home-quarantine residential waste as infectious industrial waste with centralized disposal and treatment. The EPA has stated that just after the Hoping Hospital incident, local environmental sanitation crews took over the work of home-quarantine residential waste clearance.

Furthermore, in order to enhance efficiency in implementation, local health bureaus must currently update the list of quarantined households every day, and send these to their local Environmental Protection Bureau (EPB), so that EPB sanitation crews can collect waste from these households. The EPA has raised control standards for home-quarantine residential waste,

asking households to follow standard procedures in collection and disinfection. After sanitation crews have collected the waste, it is finally sent to a qualified infectious waste treatment facility for disposal. Currently, local EPBs have put up-to-date reports of the implementation status onto the Internet, and the EPA has mobilized personnel throughout all divisions to supervise local EPBs and make sure results are obtained.

In order to prevent wastewater from becoming a means of SARS transmission, the EPA has finalized a wastewater control plan for hospitals, public sewer systems and centralized quarantine areas. Those who fall under control of this plan must fill in a daily wastewater treatment checklist, with the local EPB also checking on a weekly basis.

The EPA has requested local environmental authorities to enhance inspection of hospitals, public sewer systems and centralized

quarantine areas. Emphasis is to be placed on checking whether sewer pipes are broken, if the pump unit is leak-proof, and whether disinfection has been undertaken, etc. The EPA also has announced the *Management Procedures for Wastewater Treatment at Hospitals Receiving or Treating SARS Cases*, and *Procedures for Community Quarantine Wastewater Treatment Facility Disinfection*, and

placed them on the following website for public viewing and inquiry. (<http://www.epa.gov.tw/epasars/index.html>) The EPA has also released a bulletin based on Article 19 of the *Waste Disposal Act*, in which fast-food chain restaurants that operate in medical institutions, after receiving permission from central authorities, may have their recyclables or food wastes combined with waste from medical institutions for disposal and treatment.

many of the new cases in 2001, due to the schedule set by the Energy Commission, MOEA, to privatize electricity plants. The same situation also appeared in 1999.

The EPA indicated that the current range of environmental impact assessment review categories include green architecture, wastewater recycling, ecological engineering, the ratio of forest cover, and pollution total quantity control, among others. Looking at last year's school, recreational and community development cases, all required green architecture and it was stipulated that forest cover rates and wastewater recycling rates would be determined on a case-by-case basis. For example, forest cover rates and wastewater recycle rates must reach over 50% for development projects in mountainous areas and residential zones, respectively. This helps to attain the goal of introducing rural aspects to the cities and bringing urban qualities to the country.

General Policy

Ecology and Culture Highlighted in EIA Reviews

Last year the number of applications for environmental impact assessment reviews dropped by half the amount two years ago. Even with this decline, the category of "cultural property protection" has been added to the original scope of items reviewed in the EIA such as forest cover rates and wastewater recycling rates. This is indicative of a future trend for environmental impact assessment strategies to diversify and extend to incorporate more historical and cultural factors.

While reviewing the results of the national environmental impact assessment system, the EPA completed statistics and evaluation of environmental impact assessment cases in 2002. According to EPA statistics, the administration completed the review of 41 environmental impact assessment cases, 39 of which passed the review and two of which were not approved for development. There were half as many cases in all last year compared with the 86 cases in 2001. The two cases in which development was not approved denote a ratio of 4.9% of all cases, not far off from the 5.8% rate in 2001. A further look at statistics shows a significant decrease in the following categories of development: factory and industrial zones (14 fewer cases), and cultural, education and medical institutions (10 fewer cases).

From January to the end of April this year, a total of 12 cases have been reviewed, five of which belong to the category of transporta-

tion construction and three of which concern factory and industrial zones.

According to the EPA's analysis, the main reduction in EIA cases last year was due to a regulation revision by the EPA in accordance to a conclusion reached by the Council for Economic Planning and Development in October 2001. The EPA revision specifies that applications for a development project located within an area that has already passed an EIA review and does not exceed total pollution amounts for that area, would be exempt from a further environmental impact assessment. Starting from 2002, factories have begun to undergo this type of total quantity control method to apply for EIA review exemption, and as a result, the number of EIA applications has dropped considerably. Another explanation for this recent decline in case numbers is that power generation plants accounted for

For example, the EIA review for the countryside vacation resort built by Taiwan Sugar Company in Chishang, Taidong, required a 64.5% ratio of forest or vegetation cover, 16 hectares of which should be used to construct natural habitat for ring-necked pheasants. In another example concerning construction plans for the National Taiwan Teachers College Chigu campus, EIA review conclusions required two thirds of the area to be designated as a protected area for the critically endangered Black-faced Spoonbill, and the scale of development was downsized by a large margin.

One of the more recent developments is that "protection of cultural property" has been added to the list of categories to undergo review during environmental impact assessments, and archeologists have been appointed to serve

on the EPA's environmental impact assessment committee. Development plans that include areas of archeological value are required to draw up monitoring and control plans and adhere to regulations concerning the construction period as stipulated in the *Cultural Resources Preservation Act* (文化資產保存法).

With regards to the EIA review period - an issue of great concern among industry - the Envi-

ronmental Impact Assessment Act stipulates the EIA report period as 50 days, and a 50-day extension can be taken in special cases. The EPA indicated that last review standards, assessment technology standards, establishment of a geographic information system (GIS), and EPA evaluation of EIA technical advisory groups. In other words, 75% of all case reviews were completed within 40 days. The remaining 25% cases were completed within the legal time limit.

General Policy

Remote Sensing Allows More Efficient Appraisal of Environmental Complaints

Advanced technology will be utilized to appraise and investigate local environmental disputes, providing the capability to instantaneously gather evidence, and also expedite the pace at which data can be continuously added and updated to the searchable database of environmentally sensitive and specially designated areas. In addition to the current use of advanced remote sensing technology on remote control helicopters and satellites, new devices such as remote control boats and remote control balloons will be used this year to aid in the appraisal and inspection of special environmental dispute cases involving locations where it is difficult to collect evidence.

In compliance with regulations in Article 33 of the *Fundamental Environmental Protection Act* (環境基本法), the central government is required to establish a system for processing environmental disputes. Moreover, education, training, research and development should be strengthened in the area of appraisal technology and methods of gathering evidence, so as to establish an effective mechanism for handling disputes. In recent years, the EPA has devoted intensive efforts toward researching and developing technology that can assist in the tasks of collecting evidence, appraising, and examining serious cases of environmental pollution disputes.

The EPA Department of Supervision, Evaluation and Dis-

pute Resolution stated that the use of advanced remote sensing technology in remote control helicopters and satellites, will enable instant search and access of environmental data following the event of any major or unexpected environmental pollution incident.

Research has proven that remote sensing technology does indeed offer immediate effectiveness in detecting and providing evidence for environmental disputes. During the planning and trial stages, researchers successfully put the system into action by utilizing remote sensing to detect, gather evidence, and examine environmental pollution cases in both Taoyuan County (桃園縣) and Yunlin County (雲林縣). Researchers also coordinated efforts in detection, collecting evidence, and inspecting a pollution incident

involving illegal dumping at a river in Ershui Village, Jhanghua County (彰化縣二水鄉).

Appraisal of environmental disputes in the future will require on-site remote sensing data to be compared against GIS data. Thus, the EPA continues working towards finalizing the details for establishing GIS databanks of sensitive areas particularly susceptible to environmental disputes near Toufen Industrial Park (頭份工業區), Chungli Industrial Park (中壢工業區), and Taoyuan Youshih Industrial Park (桃園幼獅工業區). Advancements have been made in research and development of on-site digitalized systems that instantaneously gather and transmit evidence, as well as integration of PDAs, digitalized cameras, GPS, electronic navigation, and mobile phone devices. Such combinations of cutting-edge technology can create a digitalized detection and evidence work platform to permit an instantaneous flow of information. The capability of sensor technology has also been upgraded to enable calculation of site coordinates of photographic images.

To overcome the difficulty of gathering evidence in rivers and basins, EPA research indicates that tools such as the GPS can be designed for remote control sampling boats that can collect water samples and instantaneously obtain data on water quality, such as pH level and temperature. Balloons can also be set afloat equipped with digital video cameras and microwave transmission imaging to continuously monitor sites over prolonged periods of time and provide long-distance video monitoring of pollution sources.

The EPA explains that research and development will continue in the future so that advancements can be made on appraisal examination technology and application of advanced remote sensing

technology. These efforts will also coordinate training of the inspection team and environmental pro-

fessionals so that they are able to effectively apply the new technology in their efforts to gather and

examine evidence.

News Briefs

Administrator Hau Clamps Down on Corruption

Inspectors of the Bureau of Environmental Inspection have recently related a case of corruption. Administrator Hau Lung-bin has ordered a thorough investigation of this case in order to ensure genuine character and work practices of all EPA staff members. All inspectors will undergo strict evaluation, and those personnel whose integrity has been called into question will be transferred from the front line of duty. The EPA will also take the initiative to survey industries to gain a better understanding of the pros and cons of EPA policies as well as to better understand the political status of environmental protection employees.

Soil and Groundwater Remediation Fee Collection Regulations Revised

Major revisions of the EPA's *Regulations Governing the Collection of Soil and Groundwater Remediation Fees* (土壤及地下水污染整治費收費辦法) have already been announced. These regulations, containing a total of 15 articles, list in detail how to calculate fee exemption rates. Moreover, refunds have been significantly raised from 70% to 95% for those exporting chemical substances who have already paid fees

based on actual export volumes. The refund application period has been changed to February 1 through March 31. Those industries with fees less than NT\$100 are exempt from payments.

Methyl Bromide Management Regulations Implemented

Taiwan officially implemented Regulations Governing the Management of Methyl Bromide (溴化甲烷管理辦法) on May 21, sparing no effort in bearing responsibility to protect the ozone layer and implement control standards called for in the Montreal Protocol. In the coming years, applications of methyl bromide in Taiwan will be restricted to quarantine and shipping pretreatment use. Moreover,

methyl bromide importers and users will be required to report import volumes and status of usage every half-year. (Please see EPM Vol. VI, Issue 2)

2003 Listing of Environmental Cars Released

The EPA has released the 2003 low-polluting automobile listing, in compliance with the most recent "3 Lows" standards (low emissions, low noise pollution, and low fuel consumption) for environmental automobiles. The locally manufactured Kuozui Motor Co. NV1EPE (CAMRY 2.0) made number six on the list while the SAAB 9-3 AREO 2.0 was on top.

	Manufacturer	Model
1	Sweden/Germany	SAAB 9-3 AREO 2.0 TS A4 2D Convertible
2	Canada	HONDA ACCORD EX-L 2.4 A5 4D
3	Germany	VW PASSAT 1.8 TURBO A5 4D
4	Canada	ACURA RSX 2.0 A5 3D
5	Sweden/Germany	SAAB 9-5 AREO 2.3 TS A5 5D
6	Taiwan	NV1EPE(CAMRY 2.0G 2.0L A4 4D)
7	Germany	AUDI A3 1.6 A4 4D HATCHBACK
8	Germany	AUDI A6 2.4 CVT 4D
9	Korea	HYUNDAI COUPE GLS 2.0 A4 3D
10	UK	MINI COOPER 1.6 CVT 3D
11	Korea	HYUNDAI MATRIX GLS 1.8 A4 5D

2003 low-polluting automobile listing

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