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Feature Column

Taiwan's Toxic Chemical Substances Management System Follows International Practices

Taiwan's toxic chemical substances management system allows the EPA to keep close tabs on the entire process from cradle to grave. Taiwan keeps in line with international practices by drawing on standards of advanced nations and firmly establishing a complete risk management system. Benefits for the nation include assured national safety through the establishment of a comprehensive toxic accident system and enhanced toxic accident emergency response functions.

The Toxic Chemical Substances Control Act (毒性化學物質管理法) sees to the management of manufacture, import, export, sale, use, storage, transport, and disposal of toxic chemicals. The Act ensures toxic chemicals are only handled by authorized operators, and appropriately handled, transported and disposed of. Supervision over the entire process from cradle to grave prevents misuse and abuse of toxic chemicals.

List of Regulated Chemicals Draws on US, EU, and Japan Toxic Management Laws

In order to prevent environmental pollution and protect human health, the three methods of categorization, grading and positive list management are adopted in risk management, drawing on control methods used by other nations including the US Toxic Substances Control Act, the European List of Notified Chemical Substances (ELINCS), and Japan's Laws Regarding the Evaluation of Chemical Substances and Regulation of their Manufacture. A list of candidate substances was developed with reference to other countries' lists of regulated substances and toxicity categorization methods were recommended. Experts were then convened to review this list and select the current list of 259 toxic chemical substances, which were put into four classes.

Among the 259 toxic chemicals currently listed by the EPA, 79 are Class I, 89 are Class II, 64 are Class III, and 77 are Class IV. A total of 45 of these substances

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are banned and 137 are restricted to use with a permit. As for chemicals not yet listed as regulated substances, the EPA continually collects, analyzes and assesses data according to the Principles for Screening and Identifying Toxic Chemical Substances (篩選認定毒性化學物質作業原則). International trends are also referred to and each year more substances are reviewed and added to the list of regulated chemical substances. Control measures are accordingly developed to ensure safe use of toxic chemicals nationwide. Among the measures adopted include source bans, restrictions and permit management, labeling of packaging and handling facilities, transport management, accident prevention, emergency reporting, liability insurance, handling records, and discharge volume reports.

Reducing Toxic Chemicals through Gradual Bans and Restrictions

In recent years, Taiwan has made the following concrete achievements in the area of toxic chemical substances control:

1. The Toxic Chemical Substances Control Act implements bans and restrictions to promote reductions of toxic chemical substances and ensure safe consumption. For example, in 2001 the EPA banned PCBs (polychlorinated biphenyl), announced a ban on use of CCA (copper chrome arsenate) for treating wood products that may directly contact skin, banned manufacture of mercury thermometers, announced a ban on the use of tributyltin oxide in antifouling boat paints, and announced the phase-out of asbestos. From 1 January 2010, the manufacture of asbestos was prohibited except for the purposes of research, experimentation, education, and certain applications in asbestos tiles, extruded cement composite hollow panels, sealants and brake pads. Dioctyl phthalate was banned in the manufacture of toys for children under age three. Nonylphenol and nonylphenol ethoxylate were likewise banned in the manufacture of household detergents.

2. Permits have been issued for the manufacture of 151 toxic chemicals, the import of 412 toxic chemicals and the sale of 117 toxic chemicals. In all, the EPA has registered 1,632 related documents and issued 21,296 individual permits.

3. To understand the environmental status of toxic chemicals, since 1999 the EPA has been carrying out investigation projects on the flow of toxic chemicals in the environment for ten consecutive years. This has resulted in the collection of 15,865 sets of data up to the year 2009.

4. The EPA has promoted the development of data on toxic chemical management as well as Internet information systems to fully understand the status of toxic chemicals nationwide. The multifunctional Toxic Chemical Substances Permit Management System information platform was established for permit management, statistics searching, inspection clampdowns, local performance evaluation, emergency contacts, education and guidance, registration, and reporting.

5. The EPA has strengthened the management of endocrine disruptors and toxic chemical safety, by holding a forum on endocrine disruptors and persistent organic pollutants, a conference on review of results of studies on environmental flow of toxic chemicals and future perspectives, and a forum on endocrine disruptor control. The EPA has convened the Department of Health, Council of Agriculture, and Ministry of Economic Affairs to organize a task force to jointly develop and implement an “endocrine disruptor management plan.”

Strengthening Response Capacity and Building a Toxic Accident Prevention System

Measures adopted to prevent accidents involving toxic chemical substances include:

1. The establishment of a comprehensive toxic accident prevention system and maintenance of operations of a Toxic Disaster Emergency Response Information Center, and seven regional Environmental Toxic Accident Response Units in northern (Taipei, Yilan, Hsinchu), central (Taichung, Yunlin), and southern (Tainan, Kaohsiung) Taiwan. Toxic accident response equipment was purchased and active measures were taken to strengthen accident response capacity. Continual efforts are also being made to develop expert and toxicology databases, toxic accident prevention manuals and emergency response cards. These materials are provided to fire stations and local environmental protection bureaus for use during response efforts.

2. Providing support for accident response. In 2009,

a total of 216 accidents were reported, and 69 of these cases required onsite response support (three toxic chemical accidents and 66 non-toxic chemical accidents). Prevention and preparation work is carried out through regular toxic accident drills and unannounced tests. A large-scale toxic accident drill and 26 local drills are conducted each year. Unannounced tests are conducted on regulated toxic chemical handlers to increase their capacity to handle toxic accidents on their own.

3. The EPA has advised toxic chemical handlers in establishing toxic accident joint response organizations. These organizations cooperate with local governments to set up regional "Toxic Accident Joint Prevention Teams." There are now 56 such teams with 719 companies participating. Joint prevention organizations have been formed

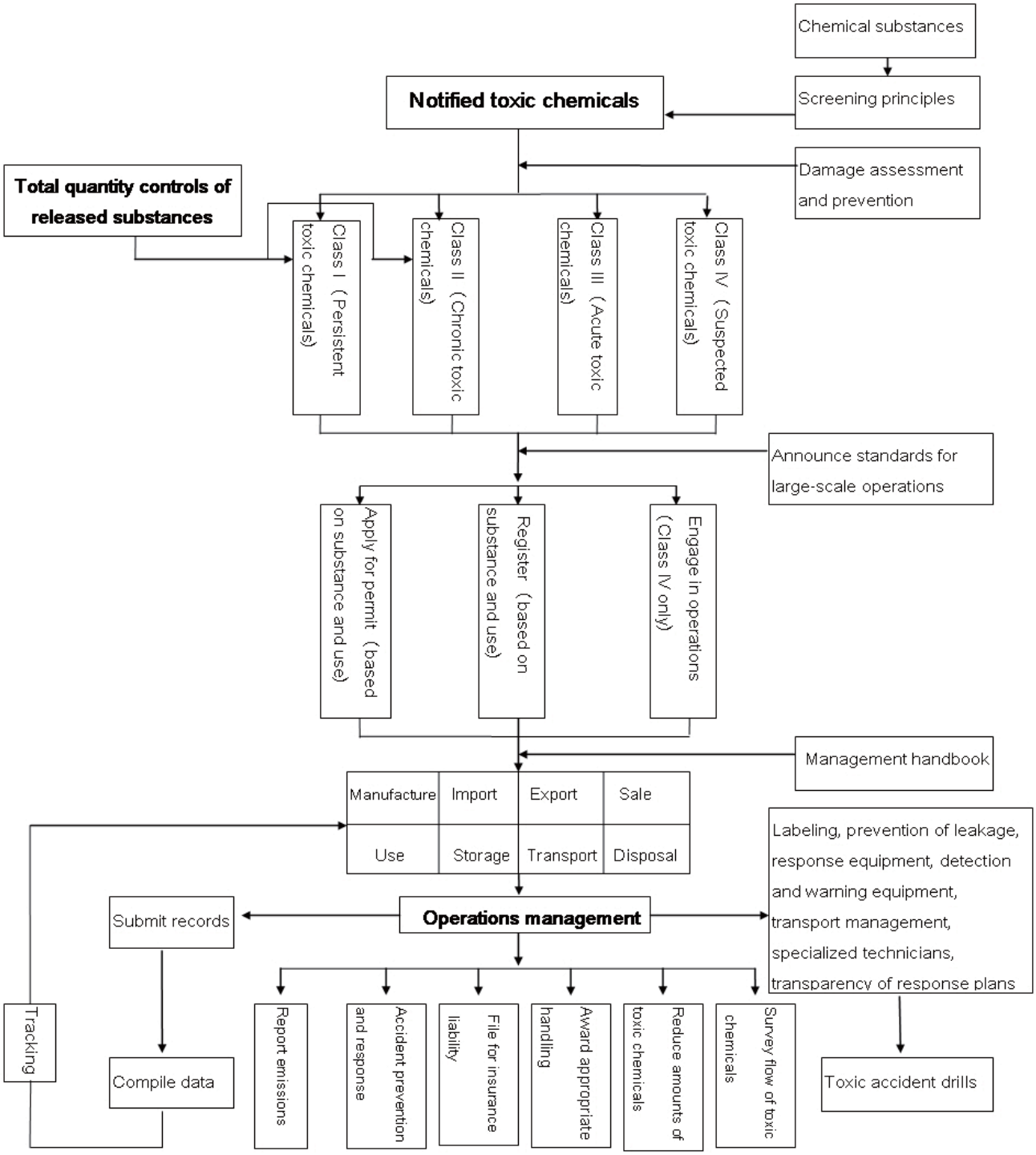

Chart: Toxic Chemical Substances Control Act classification and management framework

nationwide for like industries to address toxic accident prevention for specific gases, petrochemicals, storage facilities, transport, and high tech manufacturers.

Urgent Need to Establish List of Chemicals in Response to Expanded Management

Efforts to promote policy regarding toxic chemical management have come up against two main bottlenecks in recent years. The first is the large variety and number of ingredients in chemical substances. There are already over ten million chemical substances filed on record worldwide, with about 60,000 in regular circulation and about 20,000 in common use. Technological developments introduce over 100 new toxic chemicals each year and toxicity has been confirmed for around 6,000 of the known chemicals. The Toxic Chemical Substances Control Act regulates 259 toxic chemicals. Many fields of industry are hoping that the Act opens up a broader field of management, especially the high tech industries that are continually generating new kinds of pollutants. However, as Taiwan has still not established a comprehensive inventory of chemical substances, it is impossible to immediately control the import of new chemicals.

The EPA is already following the “Plan to Strengthen Toxic Chemical Safety Management and Accident Response” ratified by the Executive Yuan. This involves commissioning the establishment of information and monitoring centers and seven response units. These facilities provide 24-hour service and have at least 25 people on duty at all times. The main tools used by these facilities are environmental quality testing equipment. The second bottleneck, however, is that there is no stable source of manpower and funding, and there is no system in place to guarantee continuity. Moreover, the toxic accident response capacity of each county and municipal environmental agency is inadequate in terms of budget, response personnel, professional training, equipment, mobilization capacity and database systems.

Active Participation in International Convention Activities Helps Establish Control Guidelines

In 2001 the UN passed the Stockholm Convention on Persistent Organic Pollutants, which went into effect on 14 May 2004. Taking action to control POPs, the EPA has collaborated with the Department of Health, Council of Agriculture and Ministry of Economic Affairs to complete the National Implementation Plan for the Stockholm Convention. This was ratified by the Executive Yuan on 3 July 2008 and now serves as an important guideline for domestic control of POPs.

At the Fourth Conference of the Parties to the Stockholm Convention in 2009, Taiwan sent a delegation to participate as a non-governmental organization, as it had in 2005, 2006 and 2007. The convention currently lists 21 types of chemicals under regulation. For POPs that are still not regulated in Taiwan, the EPA is actively evaluating whether or not to include them in the Toxic Chemical Substances Control Act and other related environmental controls.

Implementing Source Controls and Comprehensive Risk Management

The EPA has set two goals for future promotion of toxic chemical substance management:

1. Comprehensive nationwide implementation of controls over the sources of harmful substances by establishing comprehensive safety information on chemical substances and effective risk control and management. The EPA will complete revisions to the Toxic Chemical Substances Control Act by registering all chemical products, establishing a chemical product manual, and requiring that new chemicals undergo risk assessment to reduce potential environmental and health risks.

2. Coordinate with central and local governments to jointly promote all aspects of toxic chemical accident prevention work. This includes implementing toxic accident regulations, supervising industry on damage prevention and contingency plans to make sure they are submitting reports and implementing plans according to regulations. The EPA will also ensure that response equipment and detection and warning equipment installation plans are followed and that maintenance and repairs are regularly recorded. Work will also be carried out to strengthen toxic chemical transport vehicles supervision and make sure tracking systems are in place to ensure all preparations are in order.

Feature Column

Legislature Approves Draft Environmental Education Act

On 28 April 2010, the Legislative Yuan approved of the draft Environmental Education Act during its first reading of the bill. In the face of global warming and climate change, the approval of this bill is an important milestone in the development of environmental protection.

The main content of the draft Environmental Education Act involves the establishment of an environmental education fund supported by the existing environmental protection fund, income from sales of waste items by implementing organizations under the Waste Disposal Act, and penalty fees collected for environmental violations. A certain percentage of these funding sources will be allocated towards environmental education.

The EPA will certify environmental education personnel, environmental education organizations, and environmental education facilities and sites to raise the quality and strengthen management. All types of organizations, publicly operated business organizations, K-12 schools, and government sponsored organizations will be required to schedule at least four hours of environmental education classes for all staff, teachers and students each year.

Businesses that violate environmental protection regulations, for example by causing serious pollution or incurring multiple violations, may be ordered to suspend or terminate operations and pay a fine of at least NT$5,000. Not only are they required to pay the fine, but they also must attend eight hours of lecture on the subject of environmental protection. This ensures that they fully understand environmental problems and get a sense of environmental ethics and responsibility to reduce the occurrence of environmental protection violations in the future.

The act has an important role in the sustainable development of the nation. The review of the draft bill received the support of all parties in the Legislative Yuan and lead to the successful integration of the Executive Yuan version and the Legislative Yuan version of the bill to create a forward-looking act. The passing of the bill makes Taiwan one of the few nations in the world to legislate an environmental education act.

Toxic Substance Management

Cross-Ministerial Management of Endocrine Disruptors

Domestic management of endocrine disruptors is currently carried out by a cross-ministerial taskforce convened by the EPA. The taskforce has completed the “Endocrine Disruptor Management Plan,” which specifies short-, medium-, and long-term plans, and clearly defines the authorized agencies managing endocrine disruptors in Taiwan. Authorized agencies will manage industries under their own jurisdiction to strengthen regulations, conduct random test of products on the market, and monitor and control accuracy of data. This work is expected to safeguard the health of residents and eliminate fears.

Endocrine disruptors are foreign substances that disrupt the endocrine system (which regulates physiological balance, reproductivity, and fertility) and affect the composition, secretion, transmission, integration, function and elimination of hormones. Increasing importance is placed on endocrine disruptors in the international arena, as their distribution and media are so extensive that no single law or organization can control them. Thus there is a need for cross-agency cooperation to jointly promote endocrine disruptor management plans.

The EPA already has a sound system for dividing the management of endocrine disruptors among authorized agencies. For example the Department of Health is the responsible authority for food products, food containers, and medical materials; the Council of Agriculture is responsible for pesticides, animal feed, and agricultural products; the Ministry of Economic Affairs is responsible for commercial products and toys; the EPA is responsible for environmental agents, drinking water, and indoor air quality; the Ministry of the Interior is responsible for green buildings and green building materials; and the Ministry of Finance

is responsible for good sanitary standards for alcohol production. As for existing domestic controls, the newly established cross-ministerial taskforce will help accelerate testing, monitoring and education on bisphenol A, phthalate esters, heavy metals including lead and mercury, dioxin, and PCBs.

The EPA stated objectives for 2010 include: 1) review and revise regulations concerning products and environments, including revisions to the Principles for Screening and Identifying Toxic Chemical Substances (篩選認定毒性化學物質作業原則), review of the Sanitary Standards for Food Containers (食品容器衛生標準), and revision to the Vegetable Heavy Metal Standards (蔬菜類重金屬限量標準); and 2) conduct random tests, monitoring and education for products on the market, including random tests for detergents, paints, toys, lanterns, incense, ghost money and erasers, as well as evaluate the feasibility of conducting random tests on air purifiers for PBDE (polybrominated diphenyl ether) content. Once implemented, these plans will effectively and rapidly lead to stronger endocrine disruptor regulations, reduce their presence in food and drink, and ensure healthier living environments. In the future the EPA will continue to strengthen control and monitoring, and stay in line with international practices and trends.

Eco Community

Low-Carbon Homeland to Begin with Low-Carbon Communities

To implement concrete measures and achieve the goal of a low-carbon homeland over the next ten years, on Earth Day, 22 April 2010, Premier Wu presided over an initiative formally launched by the EPA to help build low-carbon communities.

In order to accelerate the move toward a low carbon society, the 2009 National Energy Meeting proposed a vision for Taiwan to create a low-carbon homeland within ten years. A concrete plan was proposed to develop two low-carbon communities (at the level of borough or higher) within every county and municipality by the year 2011. This would result in the creation of 50 low-carbon communities nationwide. In the next few years, the plan would result in the creation of six low-carbon cities by 2014, and four low-carbon living spheres in northern, central, southern and eastern Taiwan by 2020. The EPA was put in charge of implementing this plan.

Set with the task of building low-carbon communities, the EPA has drawn up the following seven categories of practical low-carbon measures. Communities can choose single or comprehensive low-carbon measures that fit local characteristics.

1. Renewable energies: solar and wind to replace fossil fuels

2. Energy conservation: residential electricity use, energy-saving lamps, and smart electricity meter systems

3. Green transportation: encourage use of public transportation, use low-polluting vehicles, create friendly walkways and bikeways, formulate comprehensive green transportation measures

4. Resource cycling: promote source reductions of waste, waste resource recycling and reuse, rainwater harvesting and storage systems, encourage greywater recycling for flushing toilets, washing cars and irrigation

5. Low-carbon buildings: use green building concepts to promote energy saving, waste reduction, and healthy buildings

6. Greening of the environment: promote tree-planting, green fences, gardens and beautification in communities.

7. Low-carbon lifestyles: develop energy conservation and carbon reduction behaviors in the main areas of food, clothing, shelter, transport, education, and entertainment. More people will be willing to follow when there are more examples of putting “no-regrets” carbon reduction measures into practice and incorporating low-carbon concepts into all fields, including economic and social development,

production and daily life. These measures can effectively reduce energy consumption and carbon dioxide emissions.

Developing and implementing policy to build a low-carbon homeland is very challenging work. New technology and new techniques are needed to support related carbon reduction measures so as to facilitate sustainable development of low carbon communities and attract the participation of new low-carbon communities. Therefore, the EPA is also inviting the participation of the energy services companies (ESCO) and banks. By drawing on the expertise of the energy technology service industry, communities can install photovoltaic systems and small wind turbines on rooftops, receive energy conservation audits (including electricity, lighting, air conditioning) and improvement consultation. In addition, by encouraging private investment strategies (private corporations and bank financing), the development of clean energy, enhanced energy efficiency, and energy management and maintenance service can help attain the goal of providing the public, industry, and government energy conservation for the benefit of all.

Low-carbon transportation policy requires promoting the use of electric vehicles. The EPA is actively promoting this sector and with technical assistance from the Industrial Technology Research Institute (ITRI) helped create the “Electric Vehicle Strategic Alliance,” which was officially established on 22 April 2010. This alliance integrates the initiatives of the government, state-run industries and electric vehicle and battery manufacturers and promotes the use of standard batteries and battery-charging specifications. Other work involves establishing battery rental and fee systems, battery-changing stations, and the infrastructure necessary to support widespread use of electric vehicles.

A low-carbon homeland isn't attainable overnight so the EPA is working to promote it in stages. The short-term goal is to establish low-carbon communities. The mid-term goal is to create six low-carbon cities, via fair competition mechanisms to promote energy conservation strategies. The long-term goal is to foster joint participation from government, private corporations and environmental volunteers. Low-carbon consumption and cities will serve as the foundation for integrating low-carbon energy and production to create a low-carbon living environment.

Recycling

Corporate Social Responsibility Report to Spur Advances in E-Waste Treatment Industry

The EPA is working to enhance the image of recycling businesses and upgrade recycling treatment technology in order to keep domestic waste electrical appliance recycling and treatment industries on track with international environmental trends. In the future, e-waste treatment enterprises will be required to draft Corporate Social Responsibility Reports based on environmental performance and sustainable development indicators. The EPA will also continue to promote information transparency and sustainable development of the resource cycling and treatment industry.

The EPA indicated that after the EU announced the Waste Electrical and Electronic Equipment (WEEE) directive in 2003, e-waste control has become an increasingly important international issue. Currently, the world generates about 22 million tonnes of electrical and electronic waste per year, and only 15%~30% of this gets recycled. Taiwan announced mandatory recycling of e-waste in 1997 and coordinated residents, recycling businesses, local governments and the Recycling Fund Management Board to oversee the recycling process. By 2009, the annual number of products undergoing recycling and treatment reached 1.43 million, and the number of waste information products undergoing recycling and treatment reached 2.57 million, with recycling and treatment volume reaching 88,000 tonnes, for a percentage of over 50% of such waste undergoing appropriate recycling and treatment.

Recycling of e-waste in Taiwan makes use of the existing Four-in-One recycling system and integrates the efforts of community residents, recycling businesses, local governments and the recycling fund system. Many nations have noticed the remarkable

success to which Taiwan has established a recycling fund and industry cooperation models. In recent years, Germany, Japan, Mongolia, Hong Kong, Central and South America have sent delegates to Taiwan to learn about Taiwan's recycling fund operations and recycling system. Some foreign NGOs and academic groups have also visited to exchange ideas. These signs indicate a high degree of affirmation for Taiwan's resource recycling fund management model.

Global environmental awareness has increased in recent years, and it has become a trend for businesses to issue corporate sustainable development reports to ensure information transparency and enhance their image of social and environmental responsibility. The EPA is beginning to promote this trend in the e-waste treatment industry by providing response strategies and encouraging transparency of environmental information. In 2009, ISO14031 environmental performance indicator guidelines were used as an auxiliary tool to assist enterprises with self-evaluations. The third version of the Sustainability Reporting Guidelines issued by the Global Reporting Initiative (GRI) on October 2006 was also used as a reference for basing corporate sustainability reports on economic, environmental, and social guidelines.

In the future, people can refer to Corporate Social Responsibility Reports for a clearer picture of each company's products and environmental responsibility and a better understanding of environmental information and sustainable operation strategies of domestic e-waste treatment organizations. The reports will help give a better idea of the careful attitude and practices of the domestic waste recycling industry. The reports also serve as a way to convey to the international arena Taiwan's achievements and high degree of importance placed on e-waste treatment.

As for the recycling and treatment of e-waste, the EPA will continue to provide guidance on the compilation of sustainable development reports and issue statements in the international arena. The success of this system can serve as a model for waste recycling and treatment, and help Taiwan live up to its nickname as the “Green Silicon Island.”

Environmental Inspection

Regional Simulation Drills on Waste Treatment Plant Disaster Prevention

In preparation for natural disasters during the flooding season this year, the EPA and the Taichung County Environmental Protection Bureau have followed emergency response procedures to establish the "Waste Treatment Facilities Disaster Emergency Reporting System" and conduct simulation drills to gain rapid understanding over the damage wrought by disasters and the effects on waste treatment operations for waste treatment facilities. These measures will help prevent disasters from getting out of control and facilitate the rapid recovery of normal operations at landfills.

The EPA reported that this drill simulated a typhoon that caused serious damage to the Shengang Township Landfill in Taichung County on the morning of April 21. The damage was such that there was no way to appropriately dispose of garbage, and emergency measures had to be taken onsite including the piling of sandbags to prevent excess water from getting into leachate and polluting the environment. As there was no way for the facility to appropriately treat waste, the EPA had to be notified to provide emergency aid. The EPA immediately coordinated cross-county treatment to summon waste treatment machinery, including garbage trucks, cranes, street cleaning trucks, sanitation trucks, excavators and shovel loaders from the four neighboring jurisdictions of Miaoli County, Taichung City, Changhua County and Nantou County. Twelve machines came to the rescue and helped restore normal clearance operations for garbage temporary stored within the facility. During the drill, the EPA invited all county and municipal environmental protection bureaus to observe the session, exchange ideas, and use the drill as a reference for undertaking disaster prevention and emergency preparations.

The EPA has drawn up the "Municipal Landfills and Recycling Plant Disaster Prevention and Emergency Measures" to provide prevention guidelines and

emergency response measures for waste treatment during disasters. The response procedures call for the establishment of a Waste Treatment Facility Disaster Emergency Report System in each county and municipality. Damage status can be entered into the EPA's Environmental Disaster Management Information System to gain rapid understanding over the status of damage incurred by waste treatment facilities as well as the status of treatment operations. This system is an important step toward preventing secondary pollution and facilitates the quick recovery of treatment operations.

Waste treatment cranes assist in cleaning up bulk waste

Environmental Sanitation

Three-tier Mobilization and Inspection Launched for Dengue Fever Prevention

This year's first case of dengue fever occurred in Kaohsiung City on 20 March 2010. EPA Minister Stephen Shu-hung Shen and Deputy Minister Shan-chwen Chang (張上淳) of the Department of Health presided over the first coordination meeting for handling dengue fever outbreaks on 13 April 2010 at the Southern Taiwan Joint Services Center, Executive Yuan. The public is called on to be vigilant and immediately notify each local environmental protection bureau plans to launch three-tier mobilization and inspection work. The plan allows early response to a dengue fever outbreak predicted by local epidemiology.

In order to rapidly and effectively stop the spread of dengue fever and eliminate breeding areas for dengue fever vector mosquitoes, the entire populace is called on to get rid of breeding spots in and near their homes. The EPA emphasizes that any containers with water, both inside and outside of residences, including vases, water trays, discarded tyres, water containers, polystyrene, bottles, plates, bowls, and basements are potential breeding spots for mosquitoes that are vectors for dengue fever. The EPA calls on residents to follow the "Dengue Fever Vector Mosquito Breeding Spot Elimination Self-Check Chart" and thoroughly inspect and eliminate breeding areas. Containers that collect water should be regularly checked, dumped, scrubbed and rinsed in order to ensure that there are no surviving vectors. In the event of an outbreak, people are asked to cooperate with health agencies to clean up indoor and outdoor environments when necessary.

The EPA indicates that it will require each county and municipal environmental protection bureau (EPB) to launch a three-tier mobilization and inspection plan from mid-May to mid-July each year. This three-tier mobilization and inspection plan is jointly implemented by all the nation's environmental agencies, health

agencies, townships and bureaus. The first tier starts with promotions at the village or borough level to get people to clean their residential environment and check their homes at least once per day. After eliminating dengue fever breeding areas, the township is asked to check up on the results of village and borough cleanups. On the same day, the county or municipal environmental and health agencies conduct a random inspection of each borough and village. At least 10% of all villages and boroughs will be subject to this inspection. One hour after scheduling the inspection, an inspection will be made along a predetermined inspection route following an inspection chart. EPBs are then responsible for compiling a list of villages and boroughs in their jurisdiction that have passed inspection. This list is submitted to the EPA for carrying out a final follow-up audit. On the same day, the EPA and the Department of Health jointly dispatch personnel to each county and municipality to conduct a random inspection of at least ten villages and boroughs, five of which were re-inspected by the first tier (townships) and five of which were re-inspected by the second tier (EPBs).

The EPA indicates that in 2009 it carried out the "Plan to Mobilize Citizens to Clean Up Residential Environments and Eliminate Dengue Fever." This plan mobilized citizens in all 25 counties and municipalities, 368 townships and cities, and 7,832 villages and boroughs. From June 29 to July 10, a three-tier multiple mobilization mechanism was enforced, including cross-inspection of villages and boroughs, re-inspection of local health and environmental bureaus, and follow-up inspection of central health and environmental agents.Through cooperation between central government agencies, counties and municipalities, townships, cities, villages and boroughs, a total of 32,158 containers or other items that collect water were discovered near residences, and 9,682 were found in indoor areas. By the opening day of the World Games on 26 July 2009, no new cases of dengue fever had been discovered. Serious flooding from Typhoon Morakot in August 2009 resulted in an increase in dengue fever cases, and it was decided that five of the southernmost counties and municipalities should launch a "Tainan County, Tainan City, Kaohsiung County, Kaohsiung City and Pingtung County Dengue Fever Breeding Spot Mobilization Inspection and Evaluation Plan" from December 2009 to January 2010. This plan carried out inspections in 2,105 villages and boroughs throughout these five southern jurisdictions. County and municipal environmental and health agencies re-inspected 221 villages and boroughs, and the EPA conducted followed-up inspections in 160 villages and boroughs. This round of inspections resulted in the discovery of 4,979 containers and other items in outdoor areas, and 746 containers and other items in indoor areas.

The EPA indicated that the "Eliminate Dengue Fever Vector Mosquito Breeding Spot Self-Check Chart" and the "Dengue Fever Vector Mosquito Breeding Spot Inspection Chart" are available for all to download from the EPA Web site (http://www.epa.gov.tw/ch/SitePath.aspx?busin=325&path=623&list=623).

Environmental Inspection

Understanding Garbage Composition for Future Policy Making

To strengthen source reduction of garbage and develop future garbage treatment policy, the EPA has coordinated the "Simple Modular Garbage Sorting Plan" to be carried out at municipal waste incinerators in Taichung City, Taipei City and Tainan City. Each day, 15 tonnes of garbage were sorted to provide a better understanding on recyclable materials and kitchen waste in the garbage.

The plan was initiated in October 2009 and Taipei City and Taichung City have already completed three months of sorting work. EPA Minister Stephen Shu-hung Shen made personal inspections during the implementation period, and on 7 April 2010, Shanghai Mayor Han Zheng (韓正) led a delegation to visit one of Taipei City's municipal waste incinerators. Mayor Han said he gained many insights during his visit and spoke highly of Taipei City's garbage reduction and recycling operations, saying that Shanghai had much to learn from Taipei's experience.

Statistics on garbage sorting in Taichung City and Taipei City show that recyclable resources account

for 9.3% of all garbage, while kitchen waste and organic yard waste comprise 48.6%. A preliminary analysis showed that while paper makes up about 30% of garbage, most of it is bath tissue, diapers and other soiled paper that cannot be recycled at this stage. There is only a very small proportion of paper that can be recycled. Due to increase in the price of raw materials, there is a high price for recycled metal, paper and plastic, which are often sorted out by individuals or private businesses during the collection and clearance stage. There is thus only a small proportion of these kinds of materials found in garbage. These findings explain why there is now a higher proportion of organic matter mixed in with garbage.

The EPA stated that this plan has increased understanding of the composition of garbage from residences and is very helpful in terms of deliberating the policy and direction of garbage treatment in the future. The EPA calls on residents to sort their waste and try to reduce the amount of food waste thrown in with garbage. Garbage is actually just unused resources, and inappropriately treated waste can have a devastating impact on the environment. Some of the materials thrown in with garbage are as precious as gold, so residents are reminded to cherish all resources and protect the environment by complying with rules to sort out food waste and other resources. This not only reduces each household's volume of garbage but also lightens the burden on waste incinerators, ties in with international environmental trends to conserve energy and reduce carbon emissions, and builds the foundation for a society that sustainably manages its resources.

Ecolabeling

Taiwan's First Group of Hotels Certified with the Green Mark

The EPA held an annual award ceremony for organizations, government personnel and creative individuals with merits in promoting environmental protection, as well as a ceremony to present Green Mark certification to hotels. EPA Minister Stephen Shu-hung Shen personally presented the awards and trophies to organizations and individuals promoting environmental protection, as well as handed out Green Mark certification to environmentally friendly hotels.

Tying in with the 40th anniversary of Earth Day, recipients of this year's awards included 18 model communities for beautifying their local environment, 11 organizations for their outstanding performance in using local resources to engage in environmental protection work, 19 individuals who volunteered their time and effort for environmental protection, and 5 environmental stewards who came up with creative ways to protect the environment. The event also marked the first time for environmental hotels to receive Green Mark certification.

Hotel Color and Hotel Royal Chihpen are the first certified Green Hotels in the nation. Both hotels complied with certification standards in the seven categories of enterprise environmental management, energy conservation, water conservation, green procurement, reduction of disposable products and waste, hazardous substance management, and garbage sorting and recycling. They were presented with Green Hotel accreditation for their effort to minimize the environmental impact of their hotel operations.

Futian Community in Changhua City earned the first place award as a model environmental community. The community established a team of environmental volunteers and a river patrol team to clean up streets, parks and the beach on a regular basis. Effort was also made toward creating diverse habitat within the community for the Southern Secretary Bird, a species endemic to Bagua Mountain, as well as other birds. These spots have likened the community to a nature classroom. Other actions taken by the community include restoring an old poultry shed, installing tung oil tree posts at the community entrance, making signs for a bike path using driftwood, and holding environmental training and lectures.

The "National Environmental Steward Award in Creativity" went out to environmental protection bureaus of Taichung County, Kaohsiung County, Tainan City, Taipei County and Chiayi County for their outstanding work in the following projects, respectively: "Cross-agency cooperation in solving dust problems in river basins and harbors," "Motorbike license recognition system," "Harbor environmental

police alliance to enforce coverings on gravel trucks," "Shuanghsi MRT-bike low-carbon tours," and "Rice straw reuse platform."

The first place award for organizations with merit toward environmental protection went to Ding Garden Development Association in Chiayi County for creating a rural garden park using waste materials. The park features historical relics that have been arranged in creative ways to give them a new life and a railway tour gives visitors a chance to reminisce about the past. Effort was put into the aesthetics and greenery of the area to give residents a sense of pride in their community environment while also providing an outdoor classroom for education events, a public recreation area, and a setting that brings back the past.

News Briefs

Premier Wu Supports National Participation in UNFCCC Activities

After listening to the EPA's "Letter in Support of the UNFCCC Copenhagen Accord" read at the Executive Yuan on 8 April 2010, Premier Wu Den-yih stated that although Taiwan is not a signatory party to the UNFCCC, as a member of the global village, Taiwan is willing to proactively share responsibility for protecting the global environment. Wu said that Taiwan supports the Copenhagen Accord and is willing to participate in UNFCCC activities to promote the reduction of greenhouse gas emissions.

Premier Wu indicated that the EPA should consult with the Ministry of Foreign Affairs to send the "Letter in Support of the UNFCCC Copenhagen Accord" to the UNFCCC secretariat. Wu instructed the EPA to discuss with the Ministry of Foreign Affairs, the Government Information Office, and the Ministry of Economic Affairs to develop a brochure regarding this letter for Taiwan representative offices abroad to convey Taiwan's message in the international arena.

Health Risk Assessment Technical Standards Announced

On 9 April 2010, the EPA announced the Health Risk Assessment Technical Standards (健康風險評估技術規範), containing a total of eleven standards that specify consistent procedures for developers to follow when conducting health risk assessments. In the future when developers conduct the health risk assessment for environmental impact assessments, they should follow the standards regarding harmful chemical substances that may be in use during the operation stage, and conduct an assessment on the increased risks to the health of residents living in the sphere of influence of development activities.

The EPA indicated that the Standards are primarily based on health risk assessment standards and research reports by the US Federal Government, the State of California, Europe, Britain, the World Health Organization, and the Asian Development Bank. The EPA analyzed implementation methods and content of other health risk assessments for chemical substances that could potentially create environmental pollution, as well as the framework, procedures and strategies of other health risk assessment systems. The Standards were developed in reference to this data and localized to fit domestic needs and development activities in Taiwan.

Matsu Pilgrimage to Focus on Recycling and Caring for Earth

The annual religious event featuring a pilgrimage procession of the Dajia Matsu temple goddess from 16~25 April 2010 tied in with the 40th anniversary of Earth Day through strengthened efforts to recycle, promote carbon reduction, and reinforce environmental concepts. The EPA launched the "2010 Earth Day Matsu Pilgrimage to Keep Taiwan Clean through Recycling, Energy Conservation and Carbon Reduction" event with EPA Minister Stephen Shu-hung Shen extending a special invitation to Chenlan Temple chairman Yen Ching-piao and the directors of environmental protection bureaus in Taichung County, Changhua County, Yunlin County, and Chiayi County to jointly convene a press conference in front of the Chenlan Temple on 7 April 2010. The representatives signed a declaration of action for a green event this year with a focus on recycling waste generated during the event. Participants of the procession were asked to bring their own tableware and handkerchiefs to get in the spirit of leading simpler and greener lifestyles.

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