



# Environmental Policy Monthly

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

## Feature Article

### New Environmental Measures to Mark the Nation's Centennial

The year 2011 will mark the one-hundredth anniversary of the founding of the Republic of China, and the EPA has accordingly been planning events designed to increase public participation in the work of environmental protection, and implementing a host of environmental protection measures that came into effect on January 1. These include: 1) adjusting the time period within which new motorcycles have to undergo their first exhaust emissions test from three years to five years, 2) differential recycling fee rates for green design motor vehicles, 3) phased controls on sewer effluent discharge from industrial parks, 4) adding bisphenol A to the list of Class 4 toxic chemicals covered by the Toxic Chemical Substances Control Act, and 5) promoting the Green Action Plan.

Table 1: New Measures Introduced on January 1, 2011

Measure	Description	Governing Authority and Contact Details
Green Action Plan - encourages tourists and business travelers not to use disposal products supplied by hotels. Will be in effect during 2011.	The Green Coin Action Plan encourages the public to use their own toiletries when staying in hotels. The plan has already been enthusiastically received by Aspire Park and 51 other hotels and B&Bs around Taiwan. Whenever a consumer stays in one of the 52 participating hotels between 1 January and 31 December 2011 and avoids using the disposable toiletries provided (such as toothbrushes and toothpaste, shampoo, shower gel, soap, shower caps, combs, razors, slippers, etc), or stays for more than one night and does not ask for sheets and towels to be changed, the hotel operator will give the guest a green coin. The guest can then deposit the coin in one of the collection boxes of NGOs that have local or national environmental protection plans. Local environmental protection bureau	Department of Supervision Evaluation and Dispute Resolution 02-23117722 ext. 2900

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	<p>will collect and count the coins at fixed intervals throughout the year and, together with the hotels, will donate a proportional amount in cash to the NGOs. Statistics detailing the amounts donated will be published on the EPA's EcoLife Web site.</p> <p>The benefits of mobilizing the general public to take part in environmental protection activities are numerous: less waste of natural resources, energy conservation and carbon reduction, and the satisfaction derived from doing good.</p>	
Regulating the use of bisphenol A. Reducing the risk of exposure to endocrine disruptors.	<p>Bisphenol A has already been proven to interfere with hormonal mechanisms in animal cells. It is a good example of a chemical substance that has the characteristics of an endocrine disruptor. In order to reduce the risk of exposure to endocrine disruptors, the EPA has tightened restrictions on the use of Bisphenol A and classified it as a Class 4 toxic substance in accordance with the Toxic Chemical Substances Control Act. From 1 January 2010, bisphenol A operators have to submit toxic substance management information before using it, as well as record the operation and discharge volume. Starting from 1 January 2011, operators will also have to regularly submit data on volumes of bisphenol A being used and discharged, and details of accidental spillages and discharges.</p>	<p>Department of Environmental Sanitation and Toxic Substance Management</p> <p>02-23117722 ext 2850</p>
Enhancing the control standards for industrial park effluent.	<p>Industrial parks are home to complex and varied industrial operations. This means that the current system of single standards based on maximum values for each sample of discharged effluent cannot adequately cover the operations of joint treatment centers or reflect long-term effluent quality.</p> <p>The EPA's revised Effluent Standards have added restrictions on average values of mixed wastewater samples for industrial park wastewater sewers. The revisions will be implemented in two stages. The first stage will be implemented on 1 January 2011 with the addition of controls on 7-day average values for effluent from industrial parks. The second stage of control standards will begin in 2016 and will modify the maximum values and 7-day average values for effluent discharged from newly-built industrial parks and those that have already been permitted to discharge over 10,000 m<sup>3</sup> of effluent daily. Implementing these revisions will allow the integration of wastewater pre-treatment controls into management mechanisms. It will also improve the modification capabilities and daily operating procedures of treatment plants, which will lead to improved effluent quality.</p>	<p>Department of Water Quality Protection</p> <p>02-2311772 ext 2800</p>
New motorcycles need to undergo their first emissions inspection after 5 years, not 3.	<p>In order to enhance the effectiveness of motorcycle emissions testing, the EPA recently revised the Motorcycle Emissions Air Pollutants Testing Station Establishment and Management Regulations, and the Regulations Governing the Types of Motorcycles, Districts, Frequency and Time Limit of Exhaust Emission Tests.</p> <p>The 5th stage emissions standards for motorcycles went into effect on 1 July 2007. However, the new generation of fuel-injected models has a lower environmental impact, which led the EPA to review the emissions inspection regime. Thus from 1 January 2011 onward, new motorcycles will need to undergo the first emissions testing after five years rather than the current requirement of three years, and annually thereafter. The EPA is also promoting a policy of encouraging owners to carry out any necessary maintenance on their motorcycles before submitting them for inspection. It is expected that this policy will also help reduce emissions.</p>	<p>Department of Air Quality Protection and Noise Control</p> <p>02-23712121 ext 6000</p>

Differential Recycling Fee Rates for Green Design Vehicles	Starting from 1 January 2011 owners of vehicles who have obtained "small vehicle" Green Mark certification from the EPA will be able enjoy the "green differential rate" when they pay their vehicle recycling and disposal fee (currently NT\$3,800 for ordinary vehicles but only NT\$2,700 for green vehicles).	Recycling Fund Management Board 02-23705888 ext 3000
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## Feature Article

# River Water Quality Improvement Plan Wins National Sustainable Development Award

The EPA's River Water Quality Improvement Plan won the 2010 National Sustainable Development Award in the category of "Execution of Sustainable Development Action Plan." The EPA Department of Water Quality Protection is keen to point out that the honor of winning the award must be shared with all of the central and local administrative teams and environmental volunteers whose laudable efforts have made them worthy of emulation.

The EPA took the unique characteristics of river basins into consideration when planning how to improve river environments in accordance with sustainable development targets. The river water quality cleaning plans focused on four main areas and aimed to integrate resources whenever possible. Results of the cleaning efforts are as follows:

### 1. Regenerating and cleaning urban rivers and revitalizing riverbanks

The five major rivers that the improvement plan focused on were Tianliao River in Keelung City, Zhonggang Drainage Canal in New Taipei City (formerly Taipei County), Liuchuan River in Taichung City, Fengshan River in Kaohsiung City (formerly Kaohsiung County), and Wannian River in Pingtung County. By intercepting polluted water, introducing clean water into the rivers, and simultaneously revitalizing riverbanks, a major transformation of urban rivers has been achieved. It is estimated that the quality of life for about 1.37 million urban residents has improved as a result of the cleaning of these five rivers. As of December 2010, the cleaning projects on the Fengshan and Wannian Rivers have been completed. Some phases of the Zhonggang Drainage Canal project were also completed by the end of December 2010.

### 2. Effectively integrating relevant data to implement the cleaning of polluted key rivers

Key rivers targeted for cleaning include: Tamshui River and drainage area, Nankan River, Laojie River, Zhuoshui River, Xinquwei River, Jishui River, Yanshui River, Erren River, and Love River. The focus of the cleaning efforts to achieve sustainable river environments has been on the following projects:

- Establishing a river water cleaning platform
- Streamlining industry inspections and controls
- Implementing an effective regime of penalties
- Recommending the prioritization of sewerage systems for key sections of the rivers being cleaned.
- Establishing performance targets and assessment criteria for assessing sustainability.

The effectiveness of the projects is reflected in the improvement of water quality. In 2009, the proportion of heavily-polluted sections of river for the 50 main rivers in Taiwan was merely 5.9 %, which shows a marked improvement over the highest percentage of 15.8% recorded in 2003. The figures for the proportion of unpolluted or slightly polluted river lengths also reflect improving water quality: 59.5% in 2003 compared to 67.2% in 2009. These figures clearly indicate that the overall water quality of Taiwan's rivers is gradually improving.

### 3. Constructing on-site treatment facilities to improve river water quality

The work of cleaning surface water bodies has involved the construction of natural purification facilities that can also be employed as a preventive measure before sewerage systems are completed. The environmental engineering methods employed vary according to on-site conditions but the basic operating principle remains the same: Rainless day effluent is diverted to the facility for purification without impacting the local ecology. As of September 2010, 93 on-site purification facilities have been established, covering a total area of 517 hectares for effective treatment of up to 540,000 tonnes of diverted wastewater daily. For example, the gravel contact beds at Hsiulang and Jiangcui on Hsindian River in Taipei treat 31,500 tonnes of diverted wastewater daily; the seven riverbank treatment facilities on Dahan River – such as the gravel contact beds at Sanxia, Yingge, and Fuchou and the constructed wetlands at Huajiang and Chenglin– treat 115,500 tonnes of effluent daily. Moving south, there is also an 11-hectare ribbon of wetland abutting Touchian River in Hsinchu; the Jiesshou Bridge wetland, river aerators, and excess capacity of local treatment plants treat 13,400 tonnes of wastewater daily from Puzi River in Chaiyi; the wetland by Old Railway Bridge on Kaoping River in Kaohsiung City treats 18,500 tonnes of effluent daily.

### 4. Expanding public participation and promoting river patrols

The EPA encourages communities and schools to set up volunteer river patrols to help in the important work of uncovering cases of illegal effluent discharge. The EPA also calls on the public to adopt natural cleaning facilities, holds water recreation activities and public meetings to explain policy, and designs educational courses and other educational activities to raise public awareness about the importance of rivers and stimulation of grass roots environmentalism. There are currently 359 river patrol teams around Taiwan, comprising a total of 7,984 members. From January to September 2010, they reported a total of 6,385 cases of dumped refuse in rivers, on riverbanks or in reservoirs. They also discovered 17 cases of hidden or unmarked drainage pipes and held 492 river clean-up activities.

As a result of its River Water Quality Improvement Plan being selected from among numerous other departmental plans as a recipient of the National Sustainable Development Award, the EPA is keenly aware of its responsibility to fulfill the nation's hopes for cleaner river environments. To this end, the focus of future EPA efforts will be on reaching 22 targets in five main areas: water quality improvement; environmental conservation; riverbank revitalization; administrative management improvement; and public participation enhancement. By continuing to work closely with other government agencies and civil groups, the EPA will continue to improve the quality of water in Taiwan's rivers and create first-class living environments along them.



 Old Railway Bridge Wetland

## Climate Change

# Deputy Minister Chiau Leads Taiwan Delegation to UNFCCC COP 16

The two weeks following 29 November 2010 saw the convening of the United Nations Framework Convention on Climate Change (UNFCCC) COP 16 / CMP 6 in Cancun, Mexico. The meetings were attended by over 12,000 representatives of 194 nations and 687 organizations. The main topics for discussion and negotiation were post-Kyoto emissions reduction responsibilities and global warming response strategies.

The Taiwan delegation, led by EPA Deputy Minister Chiau Wen-yan, was comprised of personnel from the EPA and related ministries, as well as industry experts, academics and researchers working in related fields. Attending the conferences not only allowed Taiwan's delegates to keep track of the latest developments in international climate change negotiations, but also gave them the opportunity for exchanges with participants from other nations. Other Taiwanese organizations that sent representatives to the conferences included Kaohsiung City's Environmental Protection Bureau, the Taiwan Institute for Sustainable Energy, and the Environmental Quality Protection Foundation.

Representatives from organizations in Taiwan attended the Cancun Messe Side Event and held a press conference with EPA Deputy Minister Chiau delivering a keynote speech on "Taiwan's Efforts in the Face of Climate Change Challenges" to give other nations a better understanding of Taiwan's low carbon policies and initiatives. This marked the first time Taiwan succeeded in securing exhibit space at this event, where nearly 500 information packets were disseminated including flash memory disks, posters and brochures on Taiwan's policies and actions in response to climate change. The exhibit space was met with enthusiastic response and all materials brought for distribution were given away.

Also during the Side Event, representatives from organizations in Taiwan held three briefings on voluntary reductions targets and actions in response to climate change, the impact of proposed border taxes by Europe and the US on emerging industrialized nations, and Taiwan's challenges and opportunities in transforming to green industry. These briefings gave Taiwan a chance to share its experience and make its efforts known to the international community—steps that received the affirmation of international experts. Nine of Taiwan's ally nations present at COP 16 issued words of support for Taiwan to officially participate in the UNFCCC as an observer, and 13 ally nations sent letters to the UNFCCC Secretariat expressing support of Taiwan's substantial participation in the UNFCCC.

In order to push for full participation rights in the UNFCCC and gain the recognition and assistance that Taiwan deserves, the Taiwan delegates made their voices heard at the main conferences and also at the Side Event. The search for international support also led the delegates to hold intensive and productive meetings with their counterparts from diplomatic allies and nations friendly to Taiwan. The conferences were also a platform for Taiwan to demonstrate to the international community the specific actions it has taken and its unwavering commitment to implementing suitable greenhouse gas reduction measures.

## Environmental Education

# Announcement of the National Environmental Education Guidelines Draft

The Environmental Education Act was announced on 5 June 2010 and will go into effect a year later. A number of bylaws are also being drawn up, one of which - the National Environmental Education Guidelines - has already been completed and announced on the EPA Web site.

The National Environmental Education Guidelines (國家環境教育綱領) lay out the highest guiding principles for implementing the Environmental Education Act (環境教育法). A number of related

acts, frameworks, and plans were consulted during the formulation of the Guidelines. These include:

- Article 5 of the Environmental Education Act
- The Constitution of the Republic of China
- Basic Environment Act
- Current phase of the government's environmental protection policy guidelines
- Environmental education criteria
- UNESCO's United Nations Decade of Education for Sustainable Development (DESD) (2005~2014)
- The declaration of the 2009 World Conference on Education for Sustainable Development held in Bonn

The Guidelines have been divided into three main parts: governmental administrative organization of environmental education and accompanying mechanisms, the responsibilities of environmental education suppliers, and the requirements of learners at all levels of society. The Guidelines are

based on a number of principles including: "effective governance," "the provision of first-class education," "highly participative learning," "a varied and multi-disciplinary approach to learning," and "lifelong learning." Two overarching targets have also been formulated: "integrating resources to achieve full public participation" and "sustainable education as a part of lifelong learning."

The EPA will also continue to work on implementation procedures for the Environmental Education Act and certification regulations for environmental education personnel, organizations, facilities, and premises. Also in the pipeline are a number of bylaws and follow-up measures that include an online platform for handling applications related to the Environmental Education Plan and for publishing results, planning courses and lectures on environmental topics, and the Environmental Education Action Plan. The EPA will openly seek opinions and support of all sectors so that environmental education policies can be effectively implemented.

Details of the National Environmental Education Guidelines can be found on the EPA's Web site (<http://www.epa.gov.tw/>) by clicking on the "Environmental Education" link.

## Environmental Education

# New Penalties for Violators of Environmental Education Act

The Environmental Education Act will come into force on 5 June (World Environment Day) 2011. This means that future violators of environmental protection laws or local government ordinances who are fined NT\$5,000 or above or forced to stop operations will also have to attend 1~8 hours or more of environmental lectures as laid out in the Environmental Education Act. It is hoped that requiring polluters to attend such lectures will lead them to correct their behavior and thus reduce incidents of environmental pollution.

The Environmental Education Act (環境教育法) was announced on 5 June 2010. The Act is primarily concerned with the establishment of an environmental education foundation and also certification regulations for environmental education personnel, organizations, facilities, and premises. Enforcement of the Act will lead to higher quality environmental education and improved management practices. In the future, all of Taiwan's government agencies, public enterprises, schools (from elementary to senior high), and any other registered body supported by government funding must arrange

for all personnel, teachers and students to take part in at least four hours of environmental education. As for violators of environmental protection laws who will have to attend environmental lectures, it is hoped that they will gain a thorough understanding of environmental problems, theory, and responsibilities so as to prevent them from committing further violations of environmental protection laws.

The Act states that violators fined NT\$10,000 or less must attend a one-hour environmental lecture and violators fined NT\$10,000 or above must attend

2~8 hours of environmental lectures according to the proportion of their fine to the maximum fine permitted as stipulated in related regulation. Serious violators – those who must stop operations – will be forced to attend full eight hours of lectures.

The Environmental Education Act also lays out the scope of fines for government agencies, public enterprises, schools (from elementary to senior high), and any other registered entity which relies on the government for 50% or more of its funding, that violate the act by neglecting to provide four hours of environmental education for staff or students. A grace period will first be granted: If the four hours of environmental education are not offered before

the end of the grace period then a fine of NT\$5,000 will be levied. If the offending entity still refuses to provide four hours of environmental education then another NT\$5,000 will be added to the fine for each refusal until the maximum fine limit is reached. The offending entity will still have to provide four hours of environmental education even if a fine is paid.

Details of this set of discretionary standards that will go into effect on 5 June 2011 have already been published on the EPA Web page dedicated to environmental protection laws. (<http://ivy5.epa.gov.tw/epalaw/index.aspx>). Members of the public and business operators can also download relevant information from the page.

## Climate Change

# Additions to the Management Principles of the Greenhouse Gas Inspection Authority

In November 2009 the EPA announced the Management of Greenhouse Gas Inspection Authority Working Principles to increase the accuracy of data collected on greenhouse gas emissions of the nation's industries and data on the effectiveness of emissions reduction targets. Due to subsidy requirements of competent authorities and further digitalization of managing greenhouse gas inspections, the EPA announced amendments to some articles of the fore-mentioned principles on 30 December 2010. The revisions will enhance the management of greenhouse gas inspection bodies operating in Taiwan.

The main reason for the latest amendments is to fulfill the requirements of central industry competent authorities when dealing with subsidized inspection cases. The revised principles now give greenhouse gas inspection organizations more flexibility in applying for EPA verification on a case-by-case basis. This will speed up the promotion of voluntary reductions of greenhouse gas emissions. The validity of verification however, will be limited to each individual case and the inspection organization will still need to abide by the normal application procedures to perform the same type of inspection for other cases. Some of the other main points of the revision as a result of secondary inspection management systems connected to the National Greenhouse Gas Inventory Platform include:

- Inspection authorities are henceforth required to publish verified inspection data on the platform
- New regulations to cover cases of enterprises altering registered information

- Clarification of the details of documents that must accompany applications

It is expected that the new scheme will lead to a strengthening of Taiwan's greenhouse gas inspection and verification management mechanisms.

The EPA points out that the revised Principles will add the finishing touches to Taiwan's greenhouse gas inspection management system and will raise the efficiency of the current inspection system. The digitalization of the system will also facilitate data analysis and management planning for future government policies, as well as the task of implementing such policies. Details of the revision have already been published on the EPA Web site: (<http://ivy5.epa.gov.tw/epalaw/index.aspx>).

## Toxic Substance Management

# Twelve More Persistent Organic Pollutants Added to List of Controlled Substances

In order to reduce the risk of public exposure to Persistent Organic Pollutants (POPs), the EPA announced on 24 December 2010 the addition of 12 toxic chemicals – including Mirex – to the List of Controlled Substances. The action was taken on the basis of clear evidence of the toxicity and widespread environmental distribution of these chemicals and was in line with the provisions of the Toxic Chemical Substances Control Act.

Adding these 12 chemicals to the list brings Taiwan in line with the Stockholm Convention on POPs, a class of toxic substances that have low degradability, high bioaccumulativity, acute environmental toxicity, and carcinogenic potential. This topic pertinent to the safety and rights of consumers has drawn considerable international attention. A draft amendment was prepared and pre-announced, and public hearings and advisory conferences were held. The main points of the announcement are as follows:

1. 2,2',4,4'-tetraBDE; 2,2',4,4',5,5'-hexaBDE; 2,2',4,4',5,6'-hexaBDE; 2,2',3,3',4,5',6-heptaBDE; 2,2',3,4,4',5',6-heptaBDE are added to the list of controlled substances, due to their low degradability and high bioaccumulativity. Together with hexabromobiphenyl all of these are categorized as Class 1 toxic substances, due to their high potential for bioaccumulation.

2. Due to their high bioaccumulativity and chronic toxicity, perfluorooctane sulfonic acid and lithium

perfluorooctane sulfonate are classified as Class 1 and Class 2 toxic substances, respectively.

3. Due to their high bioaccumulativity, acute toxicity, and carcinogenic potential, Mirex, chlordecone, and pentachlorobenzene are listed as Class 1 and Class 3 toxic substances.

4. Perfluorooctanesulfonyl fluoride – which has drawn international attention due to its carcinogenic potential and its widespread distribution in the environment – is listed as a Class 4 toxic substance.

The content of the announcement has been published on the EPA Web page dedicated to environmental law: <http://ivy5.epa.gov.tw/epalaw/index.aspx>. The EPA is also keen to emphasize that it will continue to review and assess regulations concerning the use of POPs and other endocrine disruptors in order to minimize the public's risk of exposure to these hazardous materials.

## Climate Change

# Six Car Makers Sign CO<sub>2</sub> Voluntary Reduction Agreement

Six car importers and manufacturers—BMW, Ford, Honda Taiwan, CMC Motor, Hyundai and Mercedes-Benz—jointly signed a CO<sub>2</sub> voluntary reduction agreement with the EPA, pledging to introduce and manufacture low carbon cars for domestic consumers. The signees will also adopt an adjusted marketing scheme that aims to cut 10~15% of CO<sub>2</sub> emissions by 2015.

The EPA stated the chief purpose of the agreement, signed on 28 December 2010, is to prompt CO<sub>2</sub> reductions by domestic carmakers and introduce more low carbon imported models to the market. The EPA initiated negotiations with carmakers resulting in six companies signing the CO<sub>2</sub> voluntary reduction agreement, which aims to cut 10~15% of CO<sub>2</sub> emissions by 2015, using a baseline of each company's

respective small car average CO<sub>2</sub> emissions in 2009. During this period, the EPA will assist improvements to infrastructure for low carbon and clean diesel cars, establish a user-friendlier system, and publicize information on related regulations, controls, and promotion schemes, as well as reward companies for outstanding reduction performance. The signees will need to plan concrete countermeasures for

curbing emissions and strategies for introducing and marketing low carbon cars, as well as submit regular reports to the EPA in accordance with their proposed CO<sub>2</sub> reduction timeline. The EPA indicated that apart from these six companies, many other carmakers are interested in signing this agreement and negotiations are underway. The EPA encourages other domestic carmakers to sign on and join CO<sub>2</sub> reduction efforts.

The EPA stated that greenhouse gas control measures in the transportation sector of the world's major nations are mostly focused on raising automobile fuel efficiency, using low carbon fuel, slowing down expansion of transportation systems, switching to low

pollution transportation models, and improving traffic and transportation planning. Among these measures, higher priority is given to raising fuel efficiency, with strategies including voluntary reduction agreements, setting automobile CO<sub>2</sub> emission control standards, establishing car labeling systems and engine system R&D, and developing cleaner technology. Apart from encouraging carmakers to sign voluntary reduction agreements, the EPA is also initiating car CO<sub>2</sub> emission standards to further reduce greenhouse gas emissions of the domestic transportation sector in tandem with other efforts to reduce global warming.

## Air Quality

# Gas Station Vapor Recovery Facility Management Helps Improve Air Quality

Over 2,667 gasoline stations in Taiwan have completed installation of gasoline vapor recovery equipment to date, and vapor problems have already been effectively reduced to improve air quality.

Revisions to the Gasoline Station Vapor Recovery Equipment Management Regulations (加油站油氣回收設施管理辦法) announced by the EPA in September 2005, required the installation of gasoline vapor recovery fixtures and the conducting of regular inspections for all gasoline nozzles and storage tanks at gasoline stations throughout Taiwan by 1 January 2006, and specified standards to be maintained to control emissions of volatile organic pollutants.

The EPA stated under regulations stipulated in the Gasoline Station Vapor Recovery Equipment Management Regulations, over 2,667 gasoline stations in Taiwan have all installed gasoline vapor recovery equipment. It is estimated that compliance with the regulations can reduce annual emissions of volatile organic pollutants by approximately 21,500 tonnes, and of carcinogen benzene by approximately 87 tonnes. Approximately 20,000 personnel employed at gasoline stations, 1.2 million residents living in their proximity and 19 million motor vehicle users benefit from this measure. However, further cooperation is needed from gasoline vendors and the public in order to protect the environment, safeguard public health, improve air quality and raise the quality of life.

The following proper practices need to be instilled at gasoline stations:

1. Oil pumps should be stopped when tanks are full.
2. The pump switch should be turned on and off by hand, not with the nozzle.
3. The nozzle should be protected from impacts, such as being dropped or used with force.
4. After filling, any gasoline remaining in the nozzle should be allowed to trickle into the customer's tank.
5. Excessive hand pressure should not be applied to the nozzle body, and the nozzle should be frequently cleaned and regularly maintained.

**Eco-labeling**

## All Residents Invited as Ambassadors to Help Promote Carbon Footprint Labeling

On 14 December 2010, the EPA held the "2010 Product Carbon Footprint Pilot Project Result Sharing Meeting" convening ten companies and five industry unions participating in this project in 2010 to share their experiences in implementing carbon footprint labels. Carbon footprints of eleven products were displayed. Guests were invited to sign a pledge to become Carbon Reduction Ambassadors by saving energy and cutting carbon emissions in daily life, and spreading the concept of product carbon labels among friends and family. All members of the public are welcome to become Carbon Reduction Ambassadors.

**W**ith global warming and climate change as forefront issues in the international arena, all nations are taking steps to analyze product lifecycles and carbon footprints. To encourage domestic manufacturers to calculate carbon footprints of their products and services, the EPA held the "Product Carbon Footprint Pilot Project Result Sharing Meeting." Ten companies and five industry unions were selected to implement carbon footprint pilot projects in which they analyze and understand greenhouse gas emissions in each stage of product lifecycles with the hope of reviewing greenhouse gas reduction countermeasures to effectively achieve carbon reductions.

The EPA checked that each product carbon footprint project adhered to the approved carbon footprint product category guidelines and that all carbon footprint inventories were calculated and verified by a third party. At the "2010 Product Carbon Footprint Pilot Project Result Sharing Meeting," companies and industry unions with product pilot projects were invited to share their experiences in implementing carbon footprint labeling and present their achievements. A wide assortment of products was shown on display with carbon footprints ranging from 160 grams to 9.5 kilograms. Among the products included Paper Star printing paper from Chung Hwa Pulp Corporation, environmentally friendly hand wipes from Cheng Loong Corporation, Fashion Magazine and Defence International Magazine from

Red & Blue Color Printing Co., T5 fluorescent lamps from Wellypower, MR16 LED lamps from YouLight Technology, Inc., butterfly orchids from Taiwan Orchid Professionals Co. Ltd., 600 ml and 2000 ml Coca-Cola and 500 ml Minute Maid from Coca-Cola Taiwan, professional hair care kit from Hair O'right International Corp., needle-punched nonwoven PET textiles from Hsinnjy Ltd. Co., and super-absorbent cloth from Taiwan Spunlace Company Ltd.

The participating companies were the first to use the EPA's product category guidelines to carry out carbon footprint inventories that will serve as models for other products in those categories. The meeting allowed companies in similar fields to share experiences in implementing carbon footprint inventories. Mutual support among industry associations and unions is seen as a key factor in determining the success of promoting carbon footprint labeling system. Thus, the EPA calls on these organizations to use their strengths to propel the future promotion of this sustainable development policy.

All are welcome to browse the Taiwan Product Carbon Footprint Information Network (<http://cfp.epa.gov.tw/>) and find out more about the carbon footprint labeling system. This Web site also allows people to sign up as a Carbon Reduction Ambassador, who will pledge energy conservation and carbon reduction in their daily lives as well as inform family and friends about product carbon footprint labeling.

**Sustainable Development**

## Premier Wu Confers Sustainable Development Awards to 12 Organizations

The National Council for Sustainable Development (NCSDD) held the 2010 National Sustainable Development Awards ceremony on 6 December 2010 at the Executive Yuan. Premier Wu Den-yih personally handed out the awards to commend organizations recognized for their outstanding performance in promoting sustainable development.

The 1992 UN Earth Summit advocated the motto, "think globally, act locally," encouraging all people to participate in sustainable development. At the 2002 UN World Summit on Sustainable Development (WSSD), the WSSD Plan of Implementation was developed to encourage each nation to take actions toward the sustainable development of humankind. The NCSD has responded to global sustainable development trends by encouraging actions in sustainable development by all circles in Taiwan. In 2004, the NCSD initiated the National Sustainable Development Awards to select organizations with the most outstanding performance in promoting sustainable development. The experiences of award recipients are then shared to help spread sustainable development throughout all strata of society.

The National Sustainable Development Awards is held each year to encourage action and participation by all people. Learning and sharing experiences help ingrain the essence of sustainable development in society and get people to adopt sustainable actions in their everyday lives. The 2010 National Sustainable Development Awards entailed a three-stage selection process—preliminary written review, onsite review and final selection—resulting in the selection of 12 award recipients under the four categories of education, enterprises, organizations, and government sustainable development action plan implementation agencies. Details on the performance of each award recipient can be found on the NCSD Web site (<http://sta.epa.gov.tw/NSDN/index.asp>).

## Water Quality

### Effluent Standards Revised, Grace Period Ends in January 2012

In order to strengthen controls over high-tech industrial wastewater, on 15 December 2010 the EPA promulgated revisions to the Effluent Standards, adding categories and restrictions on gallium, indium, molybdenum, Total Toxic Organics (TTO) and Acute Toxic Unit (TUa) for materials and components of optoelectronics manufacturers and science parks. A grace period was put into effect until 1 January 2012. Details can be found on the EPA Web site under the section on the latest environmental protection regulations (<http://ivy5.epa.gov.tw/epalaw/>).

The EPA indicated that these revisions mainly focus on high-tech industrial wastewater characteristics and risk prevention. Priority is given to optoelectronics industry through independent controls with defined control standards and restrictions. Apart from control categories of biological oxygen demand, chemical oxygen demand, suspended solids and true color, other categories have been set for gallium, indium, molybdenum, total toxic organics (TTO) and acute toxic units (TUa) to strengthen wastewater controls. The TUa is a general indicator and represents the degree to which wastewater affects aquatic organisms. If TUa is verified by environmental agencies to exceed 1.43, companies will have to strengthen monitoring for 12 weeks and will be fined depending on whether or not improvements are made. During this period of strengthened monitoring, companies may choose to significantly cut down pollution, which of course will have an overall positive effect on the ecological protection of water bodies.

parks were originally defined as any industrial park besides those exclusively set aside for petrochemical operations, and that these are sites of strategic importance for clustering domestic high-tech manufacturing operations. This makes it practical to use standard control limits for gallium, indium, molybdenum, Total Toxic Organics (TTO) and Acute Toxic Unit (TUa) in these parks. Giving consideration to the fact that existing science parks need more time to evaluate and control the source of acutely toxic substances, it was deemed necessary to make reductions at the source. These parks must therefore submit "Effluent Aquatic Organism Acute Toxicity Reduction Management Plans" before 31 March 2011 and carry out the content of these plans after they have been approved. Regulations on TUa will be implemented starting on 31 December 2012 and these parks will be subject to fines from 1 January 2012 if plans have not yet been approved or plans are not being implemented as written.

The EPA points out that science and technology

## News Briefs

### Subsidy for Recycling Lubricating Oils to End by 2012

Subsidies for recycling lubricating oils are to undergo major changes. Currently, used lubricating oil is classified as a waste item to be recycled. Disposal and treatment should be handled by qualified waste product recycling and treatment operators before being processed for reuse. The EPA has publicly reiterated that used lubricating oil should be disposed of as a waste product for recycling. Effective from 1 January 2012 onward, after clearance is arranged, it is to be disposed of and treated by separation into its component ingredients before being cycled back into general or industrial waste streams for reuse.

The EPA pointed out that lubricating oils have high economic value, contain few hazardous ingredients, and have already been recycled for a considerable period of time by a free market system. After assessment it was decided that subsidies for recycling lubricating oils were no longer necessary, as proper recycling and reuse could be carried out via market mechanisms. On 12 August 2010, the EPA publicly announced that subsidies for the waste lubricating oil recycling and treatment would be discontinued as of 1 July 2011. On 27 December 2010 the EPA also publicly announced that private arrangements for clearance of used lubricating oils for recycling should be prepared for operation starting 1 January 2012.

### Taiwan and UK Cooperate to Reduce Carbon

The structure for bilateral cooperation between Taiwan and the UK on the development of energy saving and carbon reduction technology, and a product carbon labeling system, has taken another huge step forward. On 5 December 2010, EPA Minister Stephen Shu-hung Shen met with Mr. David Vincent, technology director of the independent UK company Carbon Trust, who came to Taiwan to discuss Taiwan-UK cooperation issues regarding energy saving and carbon reduction technology. Issues discussed included: a mutual recognition system for product carbon footprint labels; mutual assistance for examining carbon footprints of all phases of product life cycles; cooperative development to promote low carbon cities and energy efficiency

action plans; cooperation in research and development; technology transfer and propagation of low carbon technology and energy storage technology; advancing carbon market connections and platforms, and aligning them for the transfer of carbon emission reduction (CERs); and staff training and information exchanges.

The EPA stated that Carbon Trust has been chosen by the UK government to help advance a low carbon economy. Mr. Vincent's choice of Taiwan, South Korea and Japan as countries to visit on his 2010 Asia trip indicates that Taiwan's energy conservation and carbon reduction achievements and implementation of a carbon labeling system have attracted keen attention in the UK.

### Experience Sharing on Three Years of Biting Midge Control

Commissioned by the EPA, the Biting Midge Control Program conducted the 2010 Symposium on Control Techniques for the Biting Midge on 13 December 2010, at National Chung Hsing University (NCHU). The symposium brought environmental protection bureau (EPB) staff from all 25 counties and cities across Taiwan to participate together with various specialists and academics. In recent years, the biting midge has become a severe nuisance in every region of the country, impacting the public's quality of life and becoming a negative factor in the development of tourism policies. The EPA commissioned NCHU to establish the "Promotion Center of Biting Midge Control" in 2008, and the outcomes and lessons of the programs executed in the ensuing three years. At the symposium, experiences with biting midge control techniques were shared, research results were exchanged, and references for further control work were produced.

To promote execution of control tasks, the EPA provided all relevant central government departments and local EPBs with detailed information in the document "Introduction to the Biting Midge and Suggested Control Strategies." The public can download it from the EPA EcoLife Web site's special announcement section, and additional information is viewable at the EPA's "Promotion Center of Biting Midge Control" Web site (<http://www.bitingmidge.org.tw/index.asp>). A specialist can also be consulted by telephone at 04-22852473.

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