

Press Review 09/2011 - Vietnam, Water and Environmental Technology,

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No	Title	Date	Source	Region	Catalogue	Description
1	ICA to help purifying water	01/09/2011	MONRE	Binh Duong	Water Management	The provincial Binh Duong People's Committee on August 31 signed off on the second phase of a cooperative project with JICA to improve the quality of water in the province.
2	Nation to overhaul marine sector	01/09/2011	VN news	HCM	Port	Vinamarine will develop a seven-pronged plan to create a marine-service system that meets international standards.
3	HCMC to spend US\$240 million in water system	05/09/2011	MONRE	HCM	Water Management	From now until 2015, HCMC city plans to deploy seven projects worth a total US\$240 million to upgrade and expand its water supply network.
4	HCM City water supply plants entreating help of local authorities	06/09/2011	MONRE	HCM	Water Management	The destroying of watershed forests plus the uncontrollable waste water discharge, has made the clean water supply sources for millions of dwellers seriously polluted.
5	Mining environment levies to be increased	06/09/2011	VN news	Vietnam	Environment	Exploitation of crude oil, natural gas, coal gas, metal and non-metal minerals would be subject to higher environmental protection charges.
6	Clean-up for polluted canal	07/09/2011	VN news	HCM	Pollution	The nine-year-long cleanup of the polluted Nhieu Loc-Thi Nghe Canal in HCM City is set to be completed in the next four months.
7	Climate change script reflects harsh realities	08/09/2011	VN news	Vietnam	Climate Change	The upward trend of some major climate change indicators over the last two years has prompted Vietnamese climatologists to adjust the initial climate change and sea level rise scenario for VN.



MOST-BMBF Office for
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8	Liquor maker donates fresh-water systems	09/09/2011	VN news	Ninh Thuan	Water Management	Around 12,000 students in 24 schools in the central province of Ninh Thuan will be given access to clean water thanks to water supply systems that were installed yesterday.
9	Call to scrap environmentally damaging hydropower projects	10/09/2011	VN news	Middle Vietnam	Environment	The Government should review zoning plans for hydropower projects in the central region and scrap those having an adverse impact on the environment.
10	Work starts on Hai Duong Power Plant	10/09/2011	VN news	Hai Duong	Power plant	A massive ceremony to break ground for infrastructure works of the biggest foreign direct investment (FDI) in a thermal power project, the Hai Duong 1,200MW Thermal Power Plant.
11	Project enhances VN biodiversity	10/09/2011	VN news	Vietnam	Environment	MONRE yesterday launched a project aimed at enhancing the management of biodiversity conservation in protected areas throughout the country.
12	Floods claim 4 lives in south	12/9/2011	VN news	Vietnam	Environment	Over the past few days, prolonged downpours have caused flooding in several central and southern provinces, affecting local people's lives and near-harvested farm produce.
13	City's rural districts to get clean water	14/09/2011	VN news	HCM	Water Management	HCM City has set a goal of providing clean water to all households in its rural districts by 2015.
14	HCMC hosts Lower Mekong Initiative Disaster Management workshop	14/09/2011	VN newws	HCM	Environment	A workshop to develop disaster management capacity for the four Lower Mekong countries of Cambodia, Laos, Thailand and VN by encouraging collaborative efforts through dialogue.



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15	Netherlands shares water management experience	15/09/2011	MONRE	Hanoi	Water Management	Environmental officials of Vietnam and the Netherlands met in Hanoi on Sept. 13 to seek ways to step up cooperation in applying remote sensing technology in water management.
16	Crackdown on pollution in industrial parks	16/09/2011	VN news	HCM	Pollution	HCM City People's Committee has asked relevant agencies to strictly punish polluting factories in Le Minh Xuan Industrial Park and surrounding areas in Binh Chanh District.
17	1,500 volunteers join climate change campaign in Vietnam	16/09/2011	SGGP	Vietnam	Climate Change	Over 1,500 volunteers from thirteen cities and provinces across the country agreed to participate in a global campaign on climate change titled "350.org".
18	Phase out of climate gases on target	17/09/2011	VN news	Vietnam	Climate Change	Viet Nam may complete the phase-out of hydro chlorofluorocarbons (HCFCs) - ozone-depleting substances and powerful greenhouse gases.
19	All Vietnamese urged to counteract climate change: Ministry	18/09/2011	SGGP	Vietnam	Climate Change	At Saturday's launch of 'Clean the World 2011' campaign, MONRE asked all citizens, organizations and businesses in Vietnam to work together to counteract climate change.
20	Climate change effort urged	19/09/2011	VN news	HCM	Environment	Individuals and organisations should act to protect the environment for mitigating climate change as well as the sustainable development of the country.
21	Green architecture to save energy	19/09/2011	VN news	Vietnam	Environment	Energy shortages have become a serious concern, directly affecting people's daily lives, but green architecture could provide a solution to the problem.



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22	Ministry inspects gravel-pit, sand-dredging operations	22/09/2011	VN news	Binh Duong	Environment	Inspectors from MONRE team on Monday began inspecting operations to mine sand, stones, and other building materials in the south-eastern province of Binh Duong.
23	Hanoi awaits new flood drainage plan	23/09/2011	VN news	Hanoi	Environment	Authorities in Hanoi are drafting a water drainage plan with a vision through to 2030 in order to deal with the severe flooding the capital regularly faces.
24	HCM leads way in domestic water recycling	23/09/2011	VN news	HCM	Water Management	Water recycling was being considered more seriously by experts and enterprises as a solution for natural resources management.
25	Director calls for prompt climate-change action	23/09/2011	VN news	HCM	Climate Change	Prompt measures should be taken to adapt to climate change at a time when it is increasingly affecting the city.
26	Waste-treatment tech on show at capital seminar	23/09/2011	VN news	Vietnam	Waste Treatment	NASTI and Korea's Tae-Rim Construction Co held a seminar in Ha Noi yesterday on advanced technologies for treating wastewater and garbage.
27	Airport to be cleared of dioxin by 2015	24/09/2011	VN news	Vietnam	Environment	Dioxin contamination at Da Nang Airport would be remediated by 2015, co-chair of the Joint Advisory Committee on Agent Orange.
28	Flood-proof homes behind schedule	24/09/2011	VN news	Middle VN	Environment	Resettlement areas for thousands of households in flood-prone areas in the central region have yet to be completed, leaving many residents vulnerable to flooding.
29	Animal waste growing threat	24/09/2011	VN news	Vietnam	Environment	Large volumes of untreated animal waste are being dumped directly into the environment.



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30	Mekong Delta braces for massive floods	25/09/2011	VN news	Mekong Delta	Environment	The floodwaters in the Cuu Long (Mekong) Delta's upstream provinces have risen to the highest levels since 2003.
31	\$4.8m to tackle pollution caused by paper makers	26/09/2011	VN news	Bac Ninh	Pollution	Authorities in the northern province of Bac Ninh have approved a project to deal with pollution caused by the Phong Khe paper craft village.
32	Floods inundate thousands of hectares of rice in Mekong Delta	28/09/2011	VN news	Mekong Delta	Environment	Rising floodwaters in the Cuu Long (Mekong) Delta have broken several dykes in provinces along the upper reaches of the river.
33	Project to help manage waste from garment, leather industry	28/09/2011	VN news	Vietnam	Environment	The Philippines-based non-profit organisation Assist Asia has launched the Conversation Project on Environmental Resources in Viet Nam.
34	Nation braces for latest typhoon	30/09/2011	VN news	Vietnam	Environment	All people living in areas vulnerable to Typhoon Nesat should be evacuated before the storm hits land in the northern region today.



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ICA to help purify water in Binh Duong

The provincial Binh Duong People's Committee on August 31 signed off on the second phase of a cooperative project with Japan International Cooperation Agency (JICA) to improve the quality of water in the province.

The project aims to improve the living environment for the community in Thuan An town, including the polluted Ba Bo Canal.

The Ba Bo Canal, running through Thu Duc district in Ho Chi Minh City and districts of Di An, Thuan An in Binh Duong province, was contaminated by large amounts of wastewater discharged by surrounding industrial parks and nearly 10,000 households.

According to JICA, the project is feasible, making great contributions to protecting the environment and improving living conditions for the peoples living in the area.

JICA said that it is committed to urge the Japanese government to provide ODA loans for the province.

In the first phase of the project, JICA granted more than 1.5 trillion VND in ODA loans to the province to build a wastewater treatment plant with a daily capacity of 17,650 cum in Thu Dau Mot town.

The project, expected to be completed and put into operation by 2013, will collect domestic wastewater from more than 50,000 people in Thu Dau Mot town.

Nation to overhaul marine sector

The Viet Nam Marine Administration (Vinamarine) will develop a seven-pronged plan to create a marine-service system that meets international standards.

According to Vinamarine Director Nguyen Ngoc Hue, the administration plans to perfect current marine laws and implement uniform policies for the entire marine-service sector. It will also improve the implementation of laws, regulations and policies related to the marine sector as well as enhance international cooperation and integration.

Investments will focus on development of marine infrastructure and improvement of the quality of information technology. Organizational restructuring, human-resource development and administrative reforms are also important parts of the plan.

In addition to the seven-pronged plan, the administration will also ask the Ministry of Transport to allow them to carry out studies on the development of Van Phong International Transit Port and deepwater ports of Lach Huyen and Cai Mep-Thi Vai, and passage for heavyweight ships via Hau River.

A plan on seaport laws will also be realised soon so the domestic seaport system will be developed in line with Vietnamese and international rules.

According to figures from Vinaline, the national shipping line, total cargo via the company's seaport has achieved a year-on-year increase of 115 per cent this year.

Companies involved in providing of marine services have also achieved significant growth rates. They include the Viet Nam Shipping Agency Joint Stock Company, with VND260 billion (US\$12.5 million) in turnover and VND13 billion (\$625,000) in profits.

The Hai Phong Seaport had turnover of VND510 billion (\$24.8 million) with VND 14 billion (\$673,000) in profits, and the Da Nang Port has generated VND130 billion (\$6.2 million) in turnover and VND8.7 billion (\$422,300) in profits.

Shortcomings: Hue said that in 2010 total cargo via Viet Nam's seaport system climbed to 259 million tonnes, up by 29.5 per cent as compared with the Government's target of 200 million tonnes. Of that figure, 6.52 million tonnes were container commodities.

He said that the volume of cargo, particularly container commodities via the domestic marine system, had been increasing dramatically year after year. This means that domestic seaports as well as marine services should be further developed to meet the market's increased demand, and also realise the Government's national target of having a strongly developed sea economy.

However, Viet Nam currently has no international transit ports, and has a shortage of both large modern ports and a proper system of wharves for heavyweight vessels.

Worse still, connections between ports and systems of roads and inland waterways are still inadequate. The domestic marine service sector also lacks centre specializing in the distribution of cargo after it is unloaded. Hue said authorities have not paid enough attention to marine safety and environmental protection. Most water passages leading to domestic ports do not have the necessary depth, causing difficulties for heavyweight vessels to enter.

In addition, no seaports are equipped with container management software with international standards. These shortcomings have made domestic seaports less competitive compared to other seaport systems in the region and the rest of the world.

HCMC to spend US\$240 million in water system

From now until 2015, Ho Chi Minh City plans to deploy seven projects worth a total US\$240 million to upgrade and expand its water supply network, cut water loss, and treat sludge at water factories.

Saigon Water Supply Corporation, or Sawaco, is currently providing approximately 1.6 million cubic meters of water for 85 percent of the city's population every day via its water supply pipelines which stretch a total 4,500km.

However, the quantity of water loss remains high, at up to 38 percent because of outdated pipelines and water supply system which is not in sync with the source and the network.

Head of Sawaco's department for development cooperation Ha Thanh Trung said at a conference on human resources development for the water industry on Tuesday that in the next five years, Sawaco would seek to reduce water loss by one to two percentage points each year.

Besides, Sawaco would also team up with the consortium Manila – Ree – Mitsubishi to survey and carry out the method for reducing water loss for four major areas encompassing 14 districts of the city.

Sawaco is also doing research on optimal solutions to exploit water resources from Dau Tieng and Tri An lakes in order to modify as well as replace current water supply sources from the Saigon and Dong Nai rivers which are being threatened by pollution.

Sawaco sets the target to raise its water supply capacity to 3.4 million cubic meters a day in 2025 to bring tap water to all residents in the city.

HCM City water supply plants entreating help of local authorities

The destroying of watershed forests plus the uncontrollable waste water discharge, has made the clean water supply sources for millions of dwellers seriously polluted.

The latest surveys conducted by the Saigon Water Supply Company (Sawaco) show that the indexes for COD, ammonia, bacteria content, suspended solids of raw water sources from the Saigon and Dong Nai rivers all have increased dramatically and shown abnormal signs. The problem is that Saigon and Dong Nai rivers are the main sources of water supply for millions of people.

The pollution alarmingly serious

It is now the middle of the rainy season; therefore, the temporary saltwater infiltration does not exist at this moment. However, the serious pollution of raw water sources has put water plants on the tenterhooks. Sawaco has pointed out that all the indexes for COD, ammonia, bacteria content, suspended solids of the Saigon River, which provides hundreds of thousands of cubic meters of raw water to the Tan Hiep water plant in the last two years have increased.

The allowed COD index is no higher than 10 mg/l, but the COD concentration has always been nearly the alarming level since 2008, while it exceeds the allowed level at many different moments during a year. Regarding the suspended solids which can be defined based on the muddiness of river water; the index is changeable regularly and sometimes exceeds the allowed level of 20 mg/l.

The biggest worry is that the ammonia index tends to increase recently with the current concentration higher by 5-10 times than the allowed level (0.1 mg/l). The index sometimes reaches 1 mg/l, or 10 times higher than the allowed level.

Similarly, the raw water from the Dong Nai river which provides one million cubic meters of water to Thu Duc, BOO Thu Duc and BOT Binh An water plants, has also been alarmingly polluted. The content of microorganism has exceeded the standard level by 2-4 times, while the ammonia has been increasing rapidly, and has exceeded the allowed level by 4-16 times.

The content of organic matter has also increased very rapidly, and though the index remains within the safety line, it always nearly hits the ceiling level. The increasing organic matter content in water will badly affect the process of reducing iron and manganese in water. And if the ammonia content in water is overly high, this will create the dangerous compounds if the treatment process has problems.

Polluted water needs more chemicals for treatment

Representatives from water supply plants said that since the beginning of 2011, the raw water sometimes got seriously polluted, which forced water plants to stop supplying water for several hours, during which the raw water was mixed with the stored water in the tanks to ease the pollution.

The only solution to treat the seriously polluted water now, besides the above said solution of dissolving water from different sources, is to treat water with more chemicals.

Vo Quang Triet, Director of the Tan Hiep Water Plant, said that the volume of chemicals needed for water treatment has increased. For example, the content of lime to neutralize water has increased by 3.49 g/m³, while the levels of alum used to treat turbidity has increased by 0.18 g/m³, PAC levels up to 0.95 g/m³ and sediment content chlorine used to treat pollution has increased by 0.93 g/m³.

As a water plant has to treat 300,000 m³ of water a day, the additional volume of chemicals it needs would be very big. The Tan Hiep water plant has sent a document to Sawaco, asking for the adjustment of the allowed expenses, because it has to pay 1.8 billion dong additionally to treat water.

Meanwhile, SAWACO has sent a report to the HCM City authorities, informing that the pollution on the Saigon and Dong Nai River has become serious, which has exceeded the capability of the water treatment technologies utilized at the water plants.

The company has asked the city authorities to instruct relevant branches to carry out the action plans to ease the pollution on the rivers.

Mining environment levies to be increased

Exploitation of crude oil, natural gas, coal gas, metal and non-metal minerals would be subject to higher environmental protection charges, according to a decision made last week through Government Decree 74/2011, which will replace its 2008 and 2009 predecessors.

Under the new regulation, which would take effect next year, charges could be raised as much as 80 per cent. For example, the current single rate for most minerals will become the new minimum, while a higher ceiling rate will be added.

Of all metal minerals, gold, lead, zinc and tin ore are subject to the highest maximum rate of VND270,000 (US\$13) per tonne, a VND30,000 (\$1.4) per tonne increase from the former level.

As for non-metal mineral exploitation, flooring stones, block stones and ores of gems will top the list with rates ranging from VND50,000 (\$2.4) to VND90,000 (\$4.4) per tonne.

Environmental protection charges will be made uniform for all types of coal with the maximum rate of VND10,000 (\$0.4) per tonne, nearly doubling the current amount.

Artisanal exploitation of minerals will be subject to 60 per cent of the new charges.

This flexible range will be the benchmark for local authorities to determine the specific charge for the mineral exploiters in each site as they find appropriate.

The only rates to remain constant would be crude oil and natural gas, standing at VND100,000 (\$4.5) per tonne and VND50 (\$0.002) per cubic metre respectively. The new rates were found reasonable by many mineral exploiting companies.

Nguyen The Tang, director of Truong Tho Co Ltd, a company currently active in the northern mountainous province of Cao Bang, said:

"Environmental protection charges account for a very small percentage of the total expenditure for our operation.

Even raised to the maximum level, they should not strongly affect our revenues."

What was more important was the widespread exploitation of environmental law, which needed strict supervision by the Government, he said.

In the case of crude oil and natural gas, all environmental protection charges will be managed by central administrators and will be dedicated to the correction and prevention of negative environmental impact on site.

Charges collected from exploitation of other minerals will contribute to the local budget for the same purposes.

Viet Nam holds rich and diversified mineral reserves of approximately 60 types explored at more than 5,000 deposits.

Minerals currently under large scale exploitation include coal, crude petroleum, apatite, rare earths and carbonate rocks, with mine points mainly located in the northern and central parts of the country.

Despite being an important contributor to the country's economy, the mining industry has caused serious damage to the environment in areas such as Uong Bi, Cam Pha in Quang Ninh, Lai Chau and Binh Thuan provinces.

Clean-up for polluted canal

The nine-year-long cleanup of the polluted Nhieu Loc-Thi Nghe Canal in HCM City is set to be completed in the next four months, with wastewater no longer flowing into it and its banks turning green.

Once the work is completed in December, the wastewater and rain water in the basin would be collected at a pumping station, treated, and released into the Sai Gon River through a system of pumps.

In a later phase, the wastewater will be treated at the Nhieu Loc-Thi Nghe wastewater treatment plant in District 2.

With a culvert system of around 132,000m installed in the basin, the project is expected to reduce flooding in Districts 1, 3, 10, Phu Nhuan, Tan Binh, Binh Thanh, and Go Vap.

By September 2,649m more of culverts are expected to be built.

Truong Sa and Hoang Sa roads that run along the canal have been expanded, fencing completed, saplings planted, and wide pavements laid.

Similar works are being done on several roads running along the canal.

According to the project management board, the fencing and lighting work and tree planting will be completed by December.

Houses that had been illegally built along the canal banks in many places have been removed to make way for the pavements and trees.

The project began in 2002 and has cost US\$316 million, which has been borrowed from the World Bank. It is expected to act as a template for cleaning up other polluted canals around the city.

Climate change script reflects harsh realities

The upward trend of some major climate change indicators over the last two years has prompted Vietnamese climatologists to adjust the initial climate change and sea level rise scenario for Viet Nam.

The Ministry of Natural Resources and Environment has found itself in a race against time polishing off the second version of the scenario before its submission to the Government by the end of this month.

Director of the Viet Nam Institute of Hydro-meteorological and Environmental Sciences Tran Thuc, the compilation leader for both scenarios, said that using a higher green house gas emission scenario was essential for a relevant policy-making process and policy implementation.

Thuc added that the revised prognosis would reflect changing realities and use climatic models and calculation methods developed specifically for the Vietnamese context.

As of now, Viet Nam is using the medium-low emission B2 scenario introduced by the Intergovernmental Panel on Climate Change as its benchmark with Thuc suggesting that Viet Nam adapt both medium-low and high emission scenarios in accordance with the level of sensitivity and resilience of affected groups.

Particularly, by the end of this century, the average increase in temperature for small areas in the north central region would rise to 3.5 degrees Celsius instead of 2.8 as in the previous scenario. Dry season rainfall in several areas in the south may decrease by 30 per cent over an initial regional value of 18 per cent.

In the latest scenario, climate extremes would be subject to review, Thuc confirmed.

Mindful of the substantive impacts on the coast, scientists have divided the area into seven smaller sections, based on their similarity tendency in sea level rise, for more accurate calculation.

"As a result it would be easier for policy-makers to come up with intra-regional adaptation and mitigation solutions," he said.

The new average sea level rise for Viet Nam by 2100, according to the high emission scenario, would hit 59-95cm while the level based on the medium emission scenario, would only reach 42-74 cm. If the sea rose by 1m, 39 per cent of the Mekong Delta would be submerged in water, affecting its population of 3.3 million people.

A new component to the second version includes flooding maps, initially developed for the Mekong Delta and HCM City, for the Red River Delta in the north as well as for coastal provinces in the central region.

Viet Nam is presently known as one of the five countries most affected by climate change.

Liquor maker donates fresh-water systems

Around 12,000 students in 24 schools in the central province of Ninh Thuan will be given access to clean water thanks to water supply systems that were installed yesterday.

The systems supply water treated with ultra-violet technology to the schools in Phan Rang city and Thuan Bac, Thuan Nam, Bac Ai, Ninh Son, and Ninh Hai Districts.

Until now the schools used water from ponds and there were no drinking-water taps.

The systems cost — and this was donated by alcoholic beverage producer Diageo Viet Nam Ltd. Charity organisation East Meets West co-ordinated the programme.

Call to scrap environmentally damaging hydropower projects

The Government should review zoning plans for hydropower projects in the central region and scrap those having an adverse impact on the environment; participants told a seminar held in Da Nang on Thursday.

It should soon set up a dedicated agency for managing water resources, they said.

The central region now has 6,000 reservoirs and dams and 22 hydropower plants located mostly along the Vu Gia – Thu Bon and Ba Rivers.

But their operation is not efficient, often causing loss of property and lives in downstream areas during the rainy and flood seasons, according to the Viet Nam Union of Science and Technology Association (VUSTA).

Most hydropower reservoirs only focus on protecting themselves from floods and not on downstream areas.

Speaking at the seminar held by VUSTA, Pham Xuan Su, chairman of the Viet Nam Irrigation and Drainage Association, said natural disasters were becoming more severe in the area in recent years since hydropower plants were operated without proper zoning plans.

The responsibilities of each hydropower plant with regard to operation and flood regulation needed to be spelt out in detail, he said.

Tran Quoc Hung, deputy director of the Ha Tinh Province Department of Agriculture and Rural Development, said competent agencies should act to mitigate a situation where hydropower plants caused flooding in the rainy season and drought during the dry season.

Ha Tinh had rejected several proposals to build hydropower plants in recent years because their economic benefits were insignificant compared to the loss of forests and threats to people's safety, he said.

Dao Minh Huong, deputy director of the Quang Ngai Province Department of Agriculture and Rural Development, said flood warning systems and hydrographic measuring facilities had not been set up at hydroelectric projects.

If they were installed, they could play an active role in informing local residents about floods as well as measuring the rainfall quantity to make plans for releasing waters appropriately, he added.

Work starts on Hai Duong Power Plant

A massive ceremony to break ground for infrastructure works of the biggest foreign direct investment (FDI) in a thermal power project, the Hai Duong 1,200MW Thermal Power Plant, was held in Kim Mon District, Hai Duong Province yesterday.

The Hai Duong Thermal Power Plant will have two 600MW-steam turbines run by JAKS Hai Duong Power Company Ltd under the Malaysia-based JAKS Resources Berhad Group with a total capital investment of US\$2.25 billion.

Covering an area of more than 300ha spread over Phuc Thanh, Quang Trung and Le Ninh communes in Kim Mon District, construction for the plant is scheduled to start in June next year with the first turbine expected to be operational by the fourth quarter of 2016 and the other by the second quarter of 2017.

When it opens, the plant will use coal provided by the Viet Nam National Coal and Mineral Industries Holdings Corporation Ltd.

Managing Director of JAKS Resources Berhad Andy Ang Lam Poah said the plant would operate under the build-operate-transfer model as an independent power producer and be transferred to the Ministry of Industry and Trade after 25 years of operation.

"We strongly believe that the development of the Hai Duong Thermal Power Plant project will spur economic activity in Hai Duong and nearby provinces, creating employment and allowing small- and medium-sized enterprises to grow in the area," Poah said.

Secretary of Hai Duong Province's Party Committee Bui Thanh Quyen said in the past few years, Hai Duong had tried to improve infrastructure and administrative procedures in order to attract investment, adding that Hai Duong had become one of the leading provinces nationwide in attracting FDI with 416 projects from 23 countries and territories.

"Thanks to those soft policies, the province has attracted the biggest FDI project in the power sector - the Hai Duong Thermal Power Plant - which will boost the province's economic growth by supplying electricity to northern provinces," he said.

At the event, Deputy Prime Minister Nguyen Thien Nhan emphasised that the plant marked a milestone in enhancing co-operation between Viet Nam and Malaysia.

Nhan requested that province authorities create favourable investment conditions, including clearing the site for the project to be carried out on time.

Contracts have already been signed including BOT, Government Guarantee, Land Lease, Power Purchase and Coal Supply between JAKS with Government, MoIT, Hai Duong's Natural Resources and Environment Department, Electricity of Viet Nam and Vinacomin.

The Hai Duong BOT Thermal Power Plant was approved by the Prime Minister in September 2008 and is part of Viet Nam's Power Planning Outline VI Initiative.

Project enhances VN biodiversity

The Ministry of Natural Resources and Environment yesterday launched a project aimed at enhancing the management of biodiversity conservation in protected areas throughout the country.

The US\$3.5 million project, funded by the Global Environment Fund with support from the United Nations Development Programme (UNDP), will be implemented over three years in an effort to remove barriers hindering the effectiveness of protected areas management.

According to director of the Department of Bio-diversity Conservation Pham Anh Cuong, many barriers had been uncovered during implementation of bio-diversity conservation.

One of the barriers was inconsistency and overlap among different legal documents which caused difficulties in management implementation, Cuong said.

Legal framework - The law on biodiversity, which came into effect in 2008, still failed to cover all operations related to biodiversity preservation, he said.

"A complete and consistent legal framework is needed along with human resources training for biodiversity conservation," emphasised vice president of the Ecology Association, Mai Dinh Yen.

The financial difficulties facing protected areas was also a headache, according to director of the Bidoup – Nui Ba National Park's Management Board, Le Van Huong.

For instance, the 70,000 ha park, located in the Central Highlands' Lam Dong Province, needed VND 1.14 trillion (\$54.3 million) for conservation work but only received about \$2 million total during the past five years, he said.

A financial mechanism for the sustainable development of the country's protected areas, which the project targeted to secure from the State budget and from non – governmental organisations, might help boost conservation, he said.

Chairman of the Zoological Association Dang Huy Huynh emphasised the significant role of the community in biodiversity conservation, saying it was a decisive factor.

According to secretary of the Viet Nam National Park and Protected Area Association (VNPPA) Le Van Lanh, protected areas should work out their own biological planning for conservation.

He pointed out that Cuc Phuong National Park in the northern province of Ninh Binh – the oldest and largest national park in Viet Nam – which was established about 60 years ago, still did not have any biological planning.

The project to deal with the barriers would contribute to a greener Viet Nam which would help reduce the threat of losing natural ecosystems or seeing them degrade, said UNDP representative Do Thi Huyen. Viet Nam is one of the world's most biologically diverse countries. It is home to about 10 per cent of the world's species while covering less than 1 per cent of the global land area.

As of 2006, 128 protected forest areas had been established in Viet Nam. Five marine protected areas had also been set up, including Nha Trang, Cu Lao Cham, Phu Quoc, Con Co and Nui Chua. A plan for inland water protected areas by 2020 has also been approved by the Prime Minister.

Floods claim 4 lives in south

Over the past few days, prolonged downpours have caused flooding in several central and southern provinces, affecting local people's lives and near-harvested farm produce.

Flood-waters from upstream An Phu District in the Cuu Long (Mekong) Delta province of An Giang has claimed at least four lives, damaged some residential property and over 117ha of rice and subsidiary crops, according to the provincial storm and flood control department.

A district emergency meeting was held yesterday to draw up measures to mitigate further loss.

Binh Thuan Province, in the southern central region, reported that heavy rain had inundated 175 houses, nearly 1,200ha of rice and nearly 500ha of crops such as dragon fruit, rubber and cashew trees as of yesterday afternoon.

Some riverside areas in Ham Thuan Nam and Ham Tan districts, were still submerged.

Rainfall, gauged at up to 500mm in central Thanh Hoa Province, caused the flooding of over 5,000ha of rice crops, with Tinh Gia District being the hardest hit.

Chief Officer of the provincial storm and flood control department Nguyen Trong Hai said that water levels at some reservoirs had risen alarmingly high, necessitating discharge.

In northern Lao Cai Province, due to heavy rains, four farmers from Duong Quy Commune, Van Ban District, though struck by lightning while sleeping in a cardamom field on Saturday morning, narrowly escaped death despite injuries.

According to the National Centre for Hydro-Meteorological Forecasting, rainfall in central provinces was measured at 100-250mm on average, requiring precautions against flash and heavy flooding.

The water levels of rivers in Thanh Hoa and Ha Tinh were forecast to rise today.

In another development, authorities in central Quang Ngai Province yesterday rejected a rumour saying that a tsunami had hit the Ly Son Island District on Saturday night, causing local residents to seek shelter on the mountain.

The district administration had to use local radio to call people back home.

City's rural districts to get clean water

HCM City has set a goal of providing clean water to all households in its rural districts by 2015.

The city has nearly 100,000 kilometres of rivers and canals, but most of them are polluted and affected by saline water, according to Nguyen Thanh Nam, head of the city's Clean Water and Environmental Hygiene Centre's Technology Division.

The city's two major rivers, Dong Nai and Sai Gon, which supply water for the city, do not run through all outlying areas.

The only way to have clean water in outlying areas is to drill bore wells at a depth of 230-350 metres and then treat the water before supplying it to residents, Nam said.

The centre is planning to build new water supply stations in Binh Chanh District and upgrade existing ones in Binh Chanh, Nha Be and Hoc Mon districts between now and the end of 2012.

The centre has 121 water supply stations, providing clean water for about 62,000 households in the outlying districts of Cu Chi, Hoc Mon, Binh Chanh, Nha Be and Can Gio.

The Sai Gon Water Supply Corporation (Sawaco) has also improved major projects for building water pipes to solve water shortages in areas at the end of water pipes.

A project to transport clean water from District 7 and Nha Be District to Can Gio District has been built. Can Gio cannot drill bore wells because of its geological structure. In April, the project's first phase was completed and provides 6,000cu.m of water a day for Long Hoa and Binh Khanh communes and Can Thanh Town.

The project's second phase with a capacity of 39,000 cu.m a day will operate next month.

Hygienic toilets

The city has also targeted that all people in rural areas use hygienic toilets by 2015.

Up to 80 per cent of livestock breeding households would also have biogas cellars by then.

Le Hong Hoanh, deputy director of the city Department of Agriculture and Rural Development, said the city had offered financial support for residents in outlying areas to build or renovate 27,000 toilets that meet hygiene standards.

The city has also helped 2,100 livestock breeding households build biogas cellars for treating animal waste.

The Ha Noi Department of Agriculture and Rural Development has proposed that the municipal authorities support construction of water treatment projects to provide safe water for around 40,000 households in the suburbs of the city during the 2011-15 period.

The plan targets poor households and those living in polluted areas.

HCM City hosts Lower Mekong Initiative Disaster Management workshop

A workshop to develop disaster management capacity for the four Lower Mekong countries of Cambodia, Laos, Thailand and Viet Nam by encouraging collaborative efforts through dialogue and information exchange opened yesterday in HCM City.

The five-day Lower Mekong Initiative (LMI) Disaster Management workshop, hosted by the Ministry of Agriculture and Rural Development with support from the Viet Nam Ministry of National Defence and the US Pacific Command provides a forum for dialogue and collaboration between the participating nations.

During the workshop, participants from the four Lower Mekong countries and the US will share practical knowledge and experience on issues such as flood management, disaster preparedness and response, food and water shortage, public health concerns, and pandemic control.

They will also identify national priorities and challenges, develop common approaches to address specific challenges and strengthen existing relationships while setting the foundation for future engagement.

Three days of active discussion sessions will be combined with two days of field trips to the Cuu Long (Mekong) Delta during the event.

The workshop is part of the Lower Mekong Initiative, launched in 2009 by US Secretary of State Hillary Rodham Clinton and the foreign ministers of Cambodia, Laos, Thailand and Viet Nam to strengthen regional co-operation to better respond to common challenges and opportunities in the areas of education, environment, health and infrastructure.

Addressing the opening session on Monday, US Consul General An Le said: "This past July in Bali, we committed to an LMI Plan of Action including sharing best practices and building capacity. This workshop on disaster risk reduction and management is an opportunity for all of you to share knowledge and experience to meet common challenges.

"This workshop not only facilitates dialogue among the LMI partner countries, but, crucially, it also connects civilian and military officials within and among our countries. Effective civilian-military partnership is essential to disaster and pandemic preparedness and response."

Netherlands shares water management experience

Environmental officials of Vietnam and the Netherlands met in Hanoi on Sept. 13 to seek ways to step up cooperation in applying remote sensing technology in water management.

At the meeting, representatives from the Vietnamese Ministry of Natural Resources and Environment and the Dutch Ministry of Infrastructure and Environment discussed cooperation in managing water sources and coping with climate change and sea level rise.

They also touched upon measures to protect the ecological system while developing agriculture, industry, urban areas and infrastructure in Vietnam.

Cooperation in carrying out a programme to control floods in Ho Chi Minh City, the Rotterdam-Ho Chi Minh City partnership and the construction of the Vung Tau - Go Cong sea dyke were also tabled for discussion.

Deputy Minister of Natural Resources and Environment Nguyen Thai Lai said remote sensing technology can provide important information about total water volume, water quality, volume of mud and sand, and allocation of water sources, and monitor impacts of hydroelectric dams in upstream regions.

Vietnam needs advanced models to forecast the future situation of its water resources and wants to cooperate with the Dutch Government, research institutes and businesses in the field, he said.

Representatives from the Dutch Ministry of Infrastructure and Environment said programmes on improving the capacity of urban and rural planning and development, flood control, waste supply, wastewater treatment and building relevant financial management institutions will be carried out in the coming time.

Crackdown on pollution in industrial parks

HCM City People's Committee has asked relevant agencies to strictly punish polluting factories in Le Minh Xuan Industrial Park and surrounding areas in Binh Chanh District.

The deputy chairman of the city People's Committee Nguyen Huu Tin told the agencies to conduct immediate inspections of the industrial park and its surrounding area.

Last week, officials of the city People's Council's Economic and Budget Division met with industrial park authorities and residents in the area to discuss problems related to water and air pollution.

Residents in Tan Nhut, Binh Loi and Le Minh Xuan communes said the pollution was caused by wastewater, dust, fume and noise from factories and workshops in the park and other industrial shops near the park.

Residents said that many shops escaped fines because they ceased their pollution-causing activities shortly before inspections, making it difficult for the authorities to discover violations.

The 100-ha industrial park has 159 production establishments, while the 17-ha area surrounding the park has 127.

The industrial park and surrounding areas are considered the most polluted places in the city.

Huynh Thi Kim Xuyen, deputy head of the Binh Chanh Natural Resources and Environment Office, said the district was authorised to manage industrial clusters, while the Le Minh Xuan Industrial Park was managed by the city Industrial Parks and Export Processing Zones Authority (HEPZA).

Xuyen noted that wastewater from production establishments in Hoc Mon and Cu Chi districts are released into the upper stream of canals that run into Binh Chanh District.

Nguyen Van Truong, deputy chairman of the Binh Chanh District People's Committee, said the district had 18 lightly polluted canals and seven severely polluted canals because of wastewater released from the canals' upper areas and from Le Minh Xuan Industrial Park.

However, he said district agencies did not have the authority to carry out random inspections inside the park.

1,500 volunteers join climate change campaign in Vietnam

Over 1,500 volunteers from thirteen cities and provinces across the country agreed to participate in a global campaign on climate change titled “350.org”, to raise awareness throughout Vietnam, according to the coordination department of the global campaign on climate change.

Besides the major cities of Hanoi, Ho Chi Minh City and Da Nang, the central cities of Vinh, Hue, the highland cities of Buon Ma Thuot, Da Lat, Do Son city in the northern province of Hai Phong, the northern province of Thai Binh, the central provinces of Quang Nam, Quang Tri, Phu Yen, and the Mekong delta provinces of Vinh Long and Ben Tre have committed their participation to the ‘350.org’ campaign.

After its official launch in August 2011, the global campaign on climate change has involved in various activities, such as ‘no straw campaign’ and action month for ‘greening of schools’ in Hanoi and HCMC.

Many activities such as hip-hop dancing and a climate change competition ‘Impression 350’, a photo contest ‘join hands to prevent climate change’, will take place in the near future.

More than 500 members of the Youth Communist Union from the southern province of Ba Ria-Vung Tau and employees of Coca-Cola company in Vietnam collected waste strewn along the seashore of Thuy Van in Vung Tau city.

This is the seventh time the company has conducted a campaign to collect waste from beaches, in a bid to raise awareness among people of the dangers of non-biodegradable products that are damaging the environment.

The campaign will be organized in the city Do Son in the northern province of Hai Phong on September 17.

Phase out of climate gases on target

Viet Nam may complete the phase-out of hydro chlorofluorocarbons (HCFCs) - ozone-depleting substances and powerful greenhouse gases - by 2025, five years earlier than the deadline, if it receives sufficient financial and technological support from international partners.

The statement was made by Deputy Director of the Ministry of Natural Resources and Environment's Department of Hydro-Meteorological and Climate Change, Nguyen Khac Hieu at a ceremony to celebrate the International Ozone Day yesterday.

The Montreal Protocol on the preservation of the ozone layer, of which Viet Nam has been a party since 1994, requires every country to meet the HCFC phase-out obligations by 2030.

The implementation of the Montreal Protocol over the last 24 years has brought the complete phase-out of global manufacturing and use of a set of substances recognised as the most pernicious for ozone layer, including halons, chlorofluorocarbons (CFCs), carbon tetrachloride (CTCs) and now HCFCs are next to go on the list of some 100 ozone-depleting substances.

In Viet Nam, HCFCs are widely used in air conditioning, insulating foams and industrial refrigeration plant applications. Last year, Viet Nam used up about 3,700 tonnes of HCFCs, which is equivalent to 235 tonnes of the compound that has the maximum potential degradation to the ozone layer?

Hieu announced that the proposal of "National HCFC Phase-Out Management Plan" for Viet Nam has been approved by the Multilateral Fund for the Implementation of the Montreal Protocol for the period 2012-16. During this time phase, Viet Nam would receive a financial aid of US\$10 million.

The main component of the project in the first phase would be to eradicate 500 tonnes of HCFC-141b and nearly 2,000 tones of polyol containing HCFC-141b in 12 enterprises that produce insulating foams. The use of HCFC-141b in the production line would be supplanted with cyclopentane, a compound which is neither a threat to the ozone layer nor a global warming gas.

"The financial aid will cover 80 per cent of the expenditures, the enterprises have to contribute the remaining," Hieu said.

Another component would be to reduce the consumption of HCFC-22, a refrigerant widely used in the seafood processing industry as well as the new installment of HCFC-22-based refrigerators.

The Department of Hydro-Meteorological and Climate Change with the World Bank will compile the new plan for the next phase and start fund-raising activities from 2015. It is estimated that Viet Nam will need an additional amount of \$20 to \$25 million to achieve complete HCFCs phase-out.

Hieu said the development of alternatives for HCFCs was still under way and had already reaped some results. More time, nonetheless, was needed to optimise these alternatives to prepare for a wider scale of adoption. Luong Duc Khoa, the department's ozone programme co-ordinator, said: "We have to be very clear that there is no perfect alternative and there will never be."

"For example, one approach, which is already in practice, is to replace HCFCs with HFCs, compounds which are proved to pose no major threat to the ozone layer. Ironically, they are nearly one thousand times more potent than carbon dioxide in causing global warming," he elaborated. "The real question here is whether the trade-offs are worth making," Khoa concluded.

Without the Montreal Protocol, the world would have had to see an addition of 20 million cases of skin cancer and 130 million more cases of eye cataracts relative to 1980.

All Vietnamese urged to counteract climate change: Ministry

At Saturday's launch of 'Clean the World 2011' campaign, the Ministry of Natural Resources and Environment asked all citizens, organizations and businesses in Vietnam to work together to counteract climate change.

The campaign, organized by the Ministry, Ho Chi Minh City People's Committee and the HCMC Communist Youth Union in Phu Nhuan District in HCMC, had over 5,000 citizens taking part in the kick off event.

Bui Cach Tuyen, Deputy Minister of the Ministry of Natural Resources and Environment, emphasized at the launch ceremony that every person can help towards the campaign by adopting simple and practical habits such as saving on electricity consumption, consuming fewer unnecessary material commodities, recycling waste and usable products, discontinuing use of plastic bags, encouraging people to protect the environment and raising awareness of the need to protect our surroundings.

The theme of the campaign 'Our Place-Our Planet-Our Responsibility', highlights action taken at the micro level in communities has a global impact.

In response to the campaign, many practical activities were held in the city such as an exhibition on the achievements in environment protection in the Lam Son Square in district 1, a seminar to raise awareness of the dangers of plastic bags, the importance of dredging canals, planting trees and keeping residential areas in districts clean and pollution free.

Since the first campaign was launched in 1993, 'Clean the World' has motivated an estimated 35 million volunteers in 130 countries and territories each year to act against climate change and environmental pollution.

Vietnam joined the campaign in 1994, and since then has actively supported all its activities.

Climate change effort urged

Individuals and organisations should act to protect the environment for mitigating climate change as well as the sustainable development of the country, Deputy Minister of Natural Resources and Environment Bui Cach Tuyen has said.

Speaking at the launching ceremony of the annual Clean Up the World environmental campaign in HCM City last Saturday, he said: "It is necessary to prevent pollution. The business community should overcome the mindset of prioritising economic benefits while ignoring the environment."

Hundreds of young people were present at the ceremony and later began to clean up neighbourhoods and universities, plant trees, and exhort people to take part in environmental protection activities.

Graeme Swift, Australian consul general in HCM City, saying many people joining hands for environmental protection would usher in big changes and encourage greater participation in the campaign.

This year's campaign is titled "Our place... Our planet... Our responsibility."

Clean Up the World was initiated by Australian Ian Kiernan and has become an annual feature in many countries for the last 19 years.

Last year it attracted 35 million volunteers in 130 countries.

Viet Nam has been a participant for 17 years.

Green architecture to save energy

Energy shortages have become a serious concern, directly affecting people's daily lives, but green architecture could provide a solution to the problem.

According to experts, green architecture would lower electricity bills even as power tariffs are on the rise. Costs for healthcare and treatment will also begin to fall if the environment is filled with less dust and fewer toxins.

Former deputy minister of Natural Resources and Environment Dang Hung Vo explained that green architecture meant environmentally responsible building for sustainable development in residential areas.

The architecture focuses on improving the effective use of energy, water and materials to reduce the negative impact of construction on people's health and the environment.

"Green architecture is up and coming in Viet Nam and should be a major industry in the future," said chairman of the Viet Nam Association of Architecture Nguyen Tan Van.

Van noted that trends in architecture all over the world were beginning to connect structural design with modern technology and energy saving.

"Huge urban areas with populations of over 10 million people have popped up not only in America but also in Asian countries, especially in India, Japan, China and Viet Nam, raising concerns about crowding and pollution," he added.

He said these cities could conceivably lead to a reduction in living standards and climate change.

Figures released by the World Bank show that Viet Nam has the highest rate of urbanisation in Southeast Asia, which can be seen in big cities like Ha Noi, HCM City, Da Nang and Hai Phong.

In 1986, the number of Vietnamese people living in urban areas was 18 million but last year that figure reached 26.3 million.

Deputy Prime Minister Hoang Trung Hai told the 16th Conference on Architecture in Asia, held in Da Nang, that urban areas in Viet Nam had faced global challenges including rapid population growth, failing infrastructure, lack of healthcare services, poor education, and traffic congestion.

Le Thi Bich Thuan, deputy director of the Construction Ministry's Institute of Urban Architecture, Planning and Rural Areas, said energy in the country's buildings (especially in households and public high-rises) had accounted for 24 per cent of the total consumption since 1994.

"The rate has rapidly risen in the past few years due to development in urban areas and the increase in foreign direct investment," Thuan said.

She said investors had not paid enough attention to energy saving solutions, ignoring their socio-economic benefits, while public constructions had used old-fashioned technologies.

Surveys from the Ministry of Science and Technology showed that shortcomings in design had resulted in a 20 to 30 per cent loss of energy consumption in buildings.

"We have not established an environmental friendly materials market, which discourages use of and investment in the technology," she said, adding that high prices and low capacity had made it difficult to change this trend.

She said that Viet Nam lacked specific regulations for building licences to ensure energy saving.

Vice chairman of the Viet Nam Association of Urban Development Vu Thi Vinh said urban areas worldwide had considered putting compulsory regulations in place with regard to using environmental friendly materials. Many cities also had strict punishments for environmental pollution and energy waste.

"We do not have the mechanisms to encourage green building," Vinh said.

She said the implementation of green architecture in Viet Nam had been ineffective due to issues of building materials, legal mechanism and awareness on green architecture.

Chairman of the Viet Nam Architecture Association Van said building eco-cities would support sustainable development at the local level. But he noted that there should be careful planning and preparation before implementing energy saving measures.

Ministry inspects gravel-pit, sand-dredging operations

Inspectors from the Ministry of Natural Resources and Environment team on Monday began inspecting operations to mine sand, stones, and other building materials in the south-eastern province of Binh Duong.

Dao Thanh Binh, deputy head of the ministry's Mineral Management Department and head of the inspection team, said several aspects would be inspected, including safety and measures to mitigate environmental impact.

The team would also look into procedures for issuing mining licences by the province, he said.

Forty one mining licences have been issued to 25 companies to exploit building materials, including clay and kaolin.

They mine about 14 million cubic metres of materials a year on a total area of 500ha, according to the province's Department of Natural Resources and Environment.

It admitted oversight of mining at the grassroots level remained lax, leading to rampant illegal exploitation.

This caused adverse impacts on farming and the lives of people in many areas, it added.

For instance, in Tan Uyen District's Thuong Tan Commune, which has dozens of stone mines, people living along roads on which the stones are transported suffer from respiratory diseases caused by stone dust?

Each household here had an average of two persons suffering from sinusitis or sore throat, local authorities said.

Rice fields belonging to more than 100 families were also affected by the stone dust and did not flower.

Hanoi awaits new flood drainage plan

Authorities in Hanoi are drafting a water drainage plan with a vision through to 2030 in order to deal with the severe flooding the capital regularly faces.

The plan is expected to be completed in the fourth quarter of 2011 before being submitted to the Government for approval.

Under the new plan, Hanoi will focus on water drainage in the city centre, satellite urban areas and suburbs.

Currently, most of the city's water drainage systems are heavily dependant on irrigation systems. At present, waste water from the inner city is discharged into the Red River via the Yen Son pumping station, but more rivers, including Tich-Thanh Ha, Ca Lo, Nhue, and Day, will be connected to the drainage system under the new plan.

The city is forecast to discharge over one million cubic metres of waste water per day by 2020, and nearly 1.4 million cubic metres of waste water per day by 2030. It targets to collect and treat 90% of the waste water by 2020 and all waste water by 2030.

HCM City leads way in domestic water recycling

Water recycling was being considered more seriously by experts and enterprises as a solution for natural resources management, said Dr Nguyen Phuoc Dan, head of Environment Department at the HCM City University of Technology.

Sai Gon Pearl (SSG) residential area used recycled water for irrigating small plots of land, an initiative that had saved its inhabitants more than VND40 million (US\$1,923) a month.

The company decided to take advantage of its buildings' waste water to save about 3,000cu.m of clean water which would otherwise have cost a minimum unit rate of VND12,000 (\$58).

A daily 600cu.m of waste water was treated and purified to meet the requirements for irrigating water which was to be odourless and to contain no pathogenic micro-organism.

Recycled water used by the SSG had also been certified by the Institute of Labour Protection and Environmental Technology to be of better quality than that of the Sai Gon River.

Dan said the use of reclaimed water could benefit Viet Nam in many ways.

First, it could ease the problem of fresh water shortages on islands and in coastal areas as well as in populated urban areas.

In particular, big city water consumption had great potential for water recycling schemes.

The initiative would also help prevent the over-exploitation of water resources and its consequences including landslides and the salinisation of ground water.

Water recycling also allows less toxic substances to be discharged, contributing to the preservation of the aqua-ecosystem.

Many developed countries had used reclaimed water for different purposes: non-drinkable water for irrigation and cleaning in the agriculture and industrial sectors and, with treatment, for use in daily life.

However, water recycling was not yet a common option in Viet Nam, Dan said, because the supply of freshwater and ground water remained plentiful, which had led to low prices and the lack of strict regulation on water exploitation.

In addition, the common perception was that recycled water was not sufficiently clean.

Dan proposed a more active role of the Government to improve the situation.

"The State could raise water prices to a reasonable level to encourage water saving while keeping a closer eye on the exploitation of water resources." Meanwhile, subsidies could be granted to investors in water recycling projects."

A precise framework of requirements and guides would also be essential to facilitate the promotion of water reuse, Dan said.

Director calls for prompt climate-change action

Prompt measures should be taken to adapt to climate change at a time when it is increasingly affecting the city, a HCM City official has said.

Speaking at a three-day conference in HCM City, Dao Anh Kiet, director of the city Department of Natural Resources and Environment, said the city was enduring severe impacts from climate change.

The sectors affected include water resources, urban flooding, agriculture, forestry and urban land use.

"The main sources of water for daily use as well as for industry and agriculture are taken from the Dong Nai River basin, but there has been a shortage of water because of a drop in rainfall and increasing salination in districts 7,8 and Nha Be," he said.

Urban flooding has occurred at 155 out of 322 wards around the city. During its peak, flooding occupied 110,000ha of urban land, affecting about one million residents.

Kiet forecast that the frequency of floods would increase sharply by 2050.

"If the city does not take proper measures, the number of flooded wards would be 265," he said.

Furthermore, salination and temperature rise would negatively affect 1,520ha of rice paddy, 2,970ha of sugarcane fields and 34,000ha of forest.

The flooding could destroy forest biodiversity in Cu Chi District and Can Gio mangrove forest and several species could face extinction, Kiet said.

In addition, urban land management would be more difficult for city authorities when 61 per cent of residential land and 67 per cent of industrial land in the city is flooded.

Authorities have set up a city-level steering board for climate-change adaptation and have established an action plan for the 2011-2015 period, based on advice from experts from the Netherlands.

The city has also funded VND4 trillion (US\$192 million) for 30 proposed projects for climate-change adaptation.

Kiet recommended that the city enhance the operation of the steering board and speed up projects for quick results on climate change adaptation.

The conference involves participation of experts from countries including Japan, Kenya, Ghana, Thailand, Malaysia and Bangladesh.

The conference was held on Wednesday by the UN Centre for Regional Development and Viet Nam National University in HCM City.

Following the sessions of the conference, participating experts will conduct field trip to the Cuu Long (Mekong) Delta on Saturday and Sunday.

Waste-treatment tech on show at capital seminar

The National Agency for Science and Technology Information and Korea's Tae-Rim Construction Co held a seminar in Ha Noi yesterday on advanced technologies for treating wastewater and garbage.

The teleconference, which included delegates from Da Nang and HCM City, showcased the controlled air incinerator and plasma melting system made by South Korea-based Young Engineering Co.

The technology could treat all combustible wastes including municipal solid wastes, industrial wastes, hazardous wastes and bio-medical wastes, Hong Young Ki, director of Young Engineering, said.

Though the installation cost for the technology was around 20 per cent higher than a stoker incinerator, it minimised secondary pollutants like dioxin, could treat sludge and food waste and waste of heating value as low as 1,500-9,000kcal/kg, and offered lower operating costs.

S.Korea-based BCO Co introduced its anaerobic baffled-reactor process and non-point pollution sources (or swirl screen) for sewage and wastewater treatment.

"Wastewater and garbage are not new problems but urgent matters for developing Viet Nam," Ta Ba Hung, general director of NASATI, said.

NASATI has organised several events to help companies, research institutes, and universities get access to waste-treatment technologies from Israel, Sweden, and Switzerland.

Airport to be cleared of dioxin by 2015

Dioxin contamination at Da Nang Airport would be remediated by 2015, co-chair of the Joint Advisory Committee on Agent Orange Le Ke Son said at yesterday's press conference as the committee concluded its sixth meeting.

Dr. Son said the two-day meeting attracted representatives from the US and Vietnamese governments, but also from the international community here in Ha Noi, emphasising that the agent orange/dioxin issue has become an "international matter."

In 2006, the US and Vietnamese governments created a joint advisory committee to identify technical issues and assist policy-makers.

Kevin Teichman, the US government co-chair, said this year's meeting discussed the recent progress being made to permanently clean up the contaminated soil and lake sediment at Da Nang Airport.

In April, the US Congress allocated an additional \$US18.5 million to continue AO activities in Viet Nam, of which \$15.5 million went to the decontamination at Da Nang Airport.

Teichman said the committee also discussed environmental efforts to remediate the Bien Hoa Airport in Dong Nai Province and Phu Cat Airport in Binh Dinh Province.

However, Dr. Son said the decontamination work at Phu Cat Airport would likely be done next year while comprehensive technical assessment of the decontamination work at Bien Hoa Airport had not been completed.

Son noted that the US government had continued increasing its financial commitments to deal with dioxin/AO consequences

Last year, the US-Vietnam Dialogue Group on Agent Orange/Dioxin released a report calling for the US government and other donors to provide \$300 million to expand services to people with disabilities linked to dioxin exposure, clean dioxin-contaminated soils and restore damaged ecosystems in about two dozen dioxin "hot spots" in Viet Nam.

Flood-proof homes behind schedule

Resettlement areas for thousands of households in flood-prone areas in the central region have yet to be completed, leaving many residents vulnerable to flooding.

This is the flood and storm season for the central region, which has experienced heavy rains for nearly one month.

Floods have killed six persons in Nghe An Province, and have inundated hundreds of thousands of hectares of the summer-autumn rice crop in the region.

Nguyen Tan Hung in Nghia Hanh District's Hanh Dung Commune in Quang Ngai Province said: "Last year, my family had to go to the commune People's Committee office to avoid floods. I have waited a long time but my family has not been relocated."

Every year, central provinces spend hundreds of billions of dong to build relocated residential areas to relocate households in flood- and landslide-prone areas, but the construction process is slow.

In addition, infrastructure in relocated residential areas is inadequate, forcing many relocated households to come back to live in their previous houses.

In the Trien Dong Nui Be residential area in Nghia Hanh District's Hanh Dung Commune, which was built in 2008, for example, only 25 of 40 relocated households are still living there and the remaining households have returned to their previous places.

Le Tien, a relocated resident, said the area did not have electricity and wells dried up when there was no rain for two weeks.

Nguyen Tan Dang, head of the Quang Ngai Province Sub-department of Rural Development's Rural Resident Management Division, said there was not enough money to build some of these residential areas to shelter households in flood-prone areas.

In Binh Dinh Province, the provincial People's Committee has decided to relocate 2,478 households in this year's flood and storm season. As of the beginning of this month, local authorities had relocated more than 550 households to safe areas.

Before this year's flood and storm season, the Binh Dinh Province Department of Agriculture and Rural Development inspected 159 reservoirs in the province and found that 30 of them had deteriorated.

Of the 30, 14 are in serious need of repair and should not be used because of safety risks.

The Binh Dinh People's Committee last month petitioned the Ministry of Agriculture and Rural Development (MARD) to allow the province to upgrade these reservoirs at a cost of VND270 billion (US\$12.8 million).

Investment capital will be raised from a bank loan. Similarly, Quang Ngai Province also has 60 of 115 reservoirs that need repair.

Vo Quoc Hung, deputy head of the Quang Ngai Province's Irrigation Sub-department, said the province was seeking support of VND240 billion (\$11.4 million) from MARD to upgrade 13 reservoirs.

Animal waste growing threat

Large volumes of untreated animal waste are being dumped directly into the environment, posing a severe threat to both the environment and human health, agricultural experts have said.

Reports from the Ministry of Agriculture and Rural Development's Livestock Breeding Department showed that rapid growth in the livestock population, which reached about 300 million poultry and 37 million cattle last year, has caused serious problems with about 85 million tonnes of animal waste being discharged into the environment.

However, the management of animal waste treatment received little attention. Only 8.7 per cent of 8.5 million livestock breeding households have built biogas cellars for treating animal waste while about 37 per cent of 18,000 modern farms were not equipped with waste treatment systems.

Nguyen Quynh Hoa, a representative from the department, said that the implementation of waste treatment procedures in both modern farms and households remained limited.

Breeders still disposed of dead livestock improperly and many waste systems were sub-standard, she said.

This caused environmental pollution and affected surrounding households, she said.

Research results from the ministry in 2006 showed that more than 23 per cent of 134 water samples in wells were contaminated, located about 50m far away from domestic waste dumping sites.

The nearer the sites were, the more polluted the water was, it said.

Hoa blamed the situation on the shortage of waste treatment inspectors, as well as the poor division of responsibilities between relevant agencies.

Most of agricultural authorities at provincial levels had no group devoted entirely to agricultural impact on the environment, even though there are 12 ministries in charge of environmental issues.

Besides, most livestock breeding households were small and located in residential areas, which hindered authorised agencies from inspecting and punishing violations.

Ho Ngoc Hung, Deputy director of central Binh Dinh Province's Department of Agriculture and Rural Development, said that there were only 80 inspectors working in the province, due to a shortage of human resources, and so they had been forced to ignore slaughtering processes at over 600 private houses.

Thus, all of these abattoirs dumped untreated animal waste.

According to agricultural experts, the Government should speed up progress on planning breeding areas while strengthening management of the environment.

A supportive financial policy should be introduced to encourage breeders to build waste systems at their farms. A reduction equivalent to half of the construction cost of the system has been proposed to the Government recently, they said.

Mekong Delta braces for massive floods

The floodwaters in the Cuu Long (Mekong) Delta's upstream provinces have risen to the highest levels since 2003 and will continue to rise rapidly by the end of this month, according to the Southern Centre for Hydro-Meteorological Forecasting.

The Tien and Hau rivers, the two main tributaries of the Mekong, have been rising fast in recent days because of high tides and floods in the upper Mekong, the centre said.

In An Giang Province, the Tien rose to 4.28 metres, 0.22 meter below the third warning level, at the Tan Chau Station on Thursday.

The Hau was flowing at 3.62 metres, 0.1 metre above the second warning level, at Chau Doc Station.

Nguyen Minh Giam, deputy director of the Southern Region for Hydro-Meteorological Forecasting, said water levels had risen to the highest levels since 2003.

The delta would see massive flooding by the end of this month or early next month due to the high tides and floods in the upper Mekong, he warned.

It would become worse if there were also rains at that time, he said.

Floods are threatening weak dykes and thousands of hectares of autumn-winter rice crop in the upper-stream provinces, especially An Giang and Dong Thap.

To protect crops and people from floods, provinces are strengthening weak dykes and sluice gates and moving flood-affected households to safety.

Nguyen Hung Trang, deputy chairman of the Hong Ngu town People's Committee in Dong Thap, said more than 2,000ha of rice were threatened by floods since many dykes had been breached or leaked and the water had nearly reached the top of the dykes.

Some 200 ha in Tan Hoi Commune could be inundated because of eroded dykes, he said.

In Dong Thap, more than 14,000ha of rice in Hong Ngu, Tan Hong, Cao Lanh, Thanh Binh, Tam Nong, and Lap Vo districts are under threat.

Several key rural roads in upper-stream districts in Dong Thap have been inundated, blocking traffic.



Tan Hung District in the southern province of Long An lies under water. Floodwaters in the Mekong Delta's upstream provinces have risen to the highest levels since 2003.

Broken dyke leaves 200ha of rice engulfed

DONG THAP — The dyke in Tan Hoi Commune, Hong Ngu Town in the central province of Dong Thap broke yesterday, drowning more than 200ha of autumn-winter rice, which was 55 days old.

The loss was estimated at more than VND5 billion (US\$242,710).

Local authorities carried out effective measures to protect the remaining 3,000ha of rice.

In Tan Hong District, which borders on Hong Ngu Town, the flood level yesterday morning was 4.68m, 1.66m higher than the flood crest last year.

In Tan Hong District, rural roads which also serve as dykes for paddies, are eroded and face collapse.

Six schools in Dong Thap have temporarily shut down because floods cut off access roads, according to the province Department of Education and Training.

The province People's Committee has ordered localities to immediately move 2,690 households living in landslide-prone areas to flood-proof residential areas though their infrastructure has yet to be built.

It has set up creches at a cost of VND13 billion (US\$600,000) to take care of young children to ensure their safety.

In An Giang, floods have breached several dykes, including the eight-kilometre Tha La dyke in Chau Doc town.

The dyke, which protects more than 6,000ha of rice, has been eroded for around a kilometre in Vinh Te Commune after the Tha La and Tra Su spillways released floodwaters into the Long Xuyen Quadrilateral on September 15.

The province's Flood and Storm Prevention and Control Committee and local authorities have mobilised hundreds of residents to work on reinforcing the Tha La dyke.

Le Van Nung, deputy chairman of the An Giang People's Committee, said on Thursday that the dyke system, which protects more than 130,000ha of rice fields, was in good shape and would keep out floods.

The People's Committee had also ordered relevant agencies and local authorities to be on duty around the clock and pump water out of rice fields in upper stream districts, along the Hau River, and in the Long Xuyen Quadrilateral, he said.

In the last 20 days An Giang has seen riverbanks erode in several places, forcing local authorities to move households out of landslide-prone areas.

The province has also set up creches for young children.

\$4.8m to tackle pollution caused by paper makers

Authorities in the northern province of Bac Ninh have approved a project to deal with pollution caused by the Phong Khe paper craft village.

The project, worth VND100 billion (US\$4.8 million), was set up by the provincial Natural Resources and Environment Department.

As much as 80 per cent of the project's funds are sourced from the provincial budget, the rest has been contributed by the paper producers in the craft village, according to director of the department Tran Quang Huy.

Statistics from the department show the craft village now has 234 paper producers but only three treat waste water before discharging it into environment.

Lack of fundings for treatment facilities had been blamed for the situation, Huy said.

According to the statistics, the concentration of toxic substances in the discharged waste water is 7 to 21 times higher than permitted by safety standards.

It is estimated that paper producers discharge 5,000 cubic metres of waste water daily, which has a serious impact on the quality of both surface and underground water in the Ngu Huyen Khe River.

"The paper craft village is one of the top five villages causing serious pollution in the province," Huy said.

Almost all the paper producers had agreed with the department on the project a month ago, he said. They also committed to apply new technologies in producing paper to help limit pollution.

Huy said operations at paper producers that continued to cause serious pollution would be suspended.

Solid waste discharged from the craft village will be collected and treated at the provincial waste treatment area, where it will be buried.

The Bac Ninh City People's Committee has been assigned as an investor in work on treating water from the river as well as in ponds, lakes and canals that are polluted by the village.

The project is expected to begin early next month.

Floods inundate thousands of hectares of rice in Mekong Delta

Rising floodwaters in the Cuu Long (Mekong) Delta have broken several dykes in provinces along the upper reaches of the river, especially in An Giang and Dong Thap, inundating thousands of hectares of the autumn-winter rice crop.

In An Giang Province, rising waters broke through four dykes in Cho Moi, Tan Thanh and Chau Phu early today and late yesterday, leaving more than 2,720 ha of rice under water.

Vo Thanh Phu, chairman of the Chau Phu District People's Committee, said the district had nearly 1,300 ha of rice inundated.

In addition, more than 400km of dykes in the district were threatened by floods, he said.

Huynh The Nang, deputy chairman of the An Giang People's Committee, said 4,000 ha of rice were inundated in An Giang so far.

The Tien and Hau rivers, the two main tributaries of the Mekong, have been rising fast in recent days due to high tides and floods in the upper Mekong.

In An Giang Province, the Tien rose to 4.75 metres, 0.25 meter above the third warning level at the Tan Chau Station on Wednesday, while the Hau rose to 4.11 metres, 0.1 metre above the third warning level at Chau Doc Station.

In Dong Thap Province, a 30-meter section of the Ca Mui dyke in Tan Hong District's Tan Thanh A Commune was breached on Wednesday, flooding more than 520 ha of rice.

Tan Hong People's Committee mobilised thousands of peoples and facilities to reinforce the dyke, but surging floodwaters still overwhelmed the dyke due to its weak foundations.

Five other important dykes in Tan Hong that protect more than 3,500 ha of rice are threatened by the floods, according to the district People's Committee.

As of Wednesday, more than 1,090 hectares of rice in Kien Giang Province were inundated, with nearly 400 ha destroyed.

Kien Giang Province's Department of Agriculture and Rural Development has provided support of VND9 billion to farmers in Giong Rieng, Tan Hiep, Chau Thanh and Go Quao districts to pump water out of their rice fields.

Floods have also eroded several dykes and inundated 815 ha of fruit and other crops in Vinh Long Province's Binh Tan District.

Project to help manage waste from garment, leather industry

The Philippines-based non-profit organisation Assist Asia has launched the Conversation Project on Environmental Resources in Viet Nam (Conserv), a Public-Private Partnership (PPP) project co-financed by sport and lifestyle company Puma and Deg, a member of the KfW banking Group, and implemented by Assist Asia.

The main work of the 17-month project is to contribute to Viet Nam's sustainable development by increasing resource efficiency and waste management in textile, garment and leather factories through awareness-raising and capacity-building.

The Stakeholder Forums will initiate a public awareness campaign and present an overview of the project benefits for participating companies.

The project is expected to help factories reduce greenhouse gas emissions, secure availability of natural resources and minimise risks from waste and pollution.

Top executives from the textile-garment-leather (TGL) sector and industry experts are invited to participate in the forum.

Industries in developing countries have significant potential to reduce energy and pollution intensity as well as materials per unit of industrial output.

This brings about a reduction of the overall ecological footprint while at the same time improves productivity and competitiveness.

"Like many emerging economies, the challenges for Viet Nam in the forthcoming years will be to strike a balance between economic growth, social equity and concerns for the environment," according to a press release from Assist Asia.

"Moreover, as Viet Nam's efforts to attract foreign direct investment intensifies, the need to create links between development and environmental protection becomes an imperative."

Industrial activity in Viet Nam has grown by 14 per cent per year, with some sectors as much as 100 per cent in recent years.

Viet Nam's opportunities for economic efficiency and environmental protection in these sectors include industrial modernisation, improvement of productivity in operations, replacement of obsolete technology and improved work practices.

Major industry sectors that contribute to environmental degradation and greenhouse gas emissions in Viet Nam include the textile, garment and leather industries.

These sectors have great potential to conserve resources such as water and energy and to optimise the use of these resources through the implementation of resource-efficiency practices, benchmarking international frameworks from UNDP/UNIDO and ISO standards like ISO 50000, among others.

Through this PPP project between Deg and Puma, TGL manufacturers, including Puma's suppliers, will be supported to achieve the objectives of sustainability: production efficiency, environmental management and human development.

Assist Asia said the developmental goal of the PPP project was to improve the country's alignment with international standards and practices on environmentally sound production of TGL industries in Viet Nam.

Nation braces for latest typhoon

All people living in areas vulnerable to Typhoon Nesat should be evacuated before the storm hits land in the northern region today, Deputy Prime Minister Hoang Trung Hai has said.

Hai chaired an urgent meeting with flood and storm search and rescue officials yesterday afternoon in Ha Noi to implement measures to cope with the approaching typhoon and current flooding in the Cuu Long (Mekong) Delta.

Typhoon Nesat, the fifth major storm this year, is forecast to strike between the northern provinces of Quang Ninh and Ninh Binh today with wind speeds expected to reach 117km/h, said deputy director of the National Hydro-meteorological Forecasting Centre Le Thanh Hai.

Meanwhile, rising floodwater in the Mekong Delta - the highest level over the past decade - has broken several dykes in upper-stream provinces, killing at least three people from An Giang Province.

Thousands of hectares of the autumn-winter rice crop have been inundated and in an urgent message to authorities yesterday, Prime Minister Nguyen Tan Dung asked People's Committees in affected areas to immediately take drastic measures to cope with rising floodwater and Typhoon Nesat.

Dung has called for the evacuation of people in high-risk areas, further protection of dykes, mobilising forces to help farmers harvest crops and the preparation of rescue resources.

Northern rains

Hai said the typhoon was forecast to weaken to low pressure when it reaches the mainland on Sunday, but warned it would bring strong winds, rough seas and heavy rains in the northern and central provinces from yesterday evening.

Sea water is forecast to rise to 3-5m high and rains in the northern region, including Ha Noi, will reach 150-300mm.

Meanwhile, a cold spell was forecast to hit the northern region today with the temperature in Ha Noi dropping to 20-21 degree Celsius, Hai added.

Deputy Prime Minister Hoang Trung Hai has instructed the National Steering Committee for Flood and Storm Prevention and Control to set up three missions to monitor storm prevention efforts at Quang Ninh, Hai Phong, Thai Binh and Nam Dinh provinces and another mission to check flood control work in the Mekong Delta region.

Provinces from Quang Ninh to Nghe An are instructed to ban vessels from operating offshore and urge local authorities to prepare houses, mines, ports and construction projects ahead of the storm.

Local authorities in these provinces have actively taken measures to cope with the flood and prepared rescue forces and vehicles, and the border guard reported more than 39,700 vessels with over 179,000 people on board have been directed to anchor in safe areas.



A flood scene in Hong Ngu District, Dong Thap Province. Many areas of An Giang, Dong Thap and Long An provinces are under water as the second typhoon in days arrives in Viet Nam - and a third is about to hit at the weekend

Flooding in south

Deputy chairman of the An Giang People's Committee Huynh The Nang said the province had 4,000 ha of rice inundated so far and more than 2,000 houses flooded.

More than 100 households moved to safer places in face of rising floodwater and the predicted effects of Typhoon Nesat.

So far, the floods have broken 125m of dykes in the province and damaged 110km of roads.

Flood waters in the Tien and Hau Rivers, the two main tributaries of the Mekong, have been rising fast in recent days because of high tides and floods in the upper Mekong and are forecast to continue to rise next month.

In An Giang Province, the Tien river's water rose to 4.75m, 0.25m above the third warning level and is forecast to rise to 4.9m on Sunday.

The Hau river's water rose to 4.1m and will continue to rise to 4.3m on Sunday, 0.3m above the third warning level, reported the National Steering Committee for Flood and Storm Control.

In Dong Thap Province, a 30-metre section of the Ca Mui dyke in Tan Hong District's was broken on Wednesday, flooding more than 520ha of rice.

The Tan Hong People's Committee mobilised thousands of people and resources to reinforce the dyke, which was eventually overcome by the rising waters and five other key dykes in Tan Hong which protect more than 3,500ha of rice, are being threatened by floods.

As of Wednesday, more than 1,090 ha of rice in Kien Giang Province were inundated and nearly 400ha of which was destroyed.

The Kien Giang Province Department of Agriculture and Rural Development has given VND9 billion (\$432,000) for farmers to pump water out of rice fields.

More than a thousand soldiers, police and local armed forces have been mobilised to help localities protect dyke systems, raising the total number of people joining this force to over 14,000, who hope to strengthen more than 380km of dykes.

Local authorities have evacuated people in high-risk areas to safer places and supported local citizens to harvest crops and mobilise all available forces to protect dykes.

Pupils of pre-schools, primary schools and secondary schools remain off school due to the floods.