

Press Review 10/2011 - Vietnam, Water and Environmental Technology,

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No	Title	Date	Source	Region	Catalogue	Description
1	Netherlands helps Mekong with climate change	1/10/2011	MONRE	Vietnam	Environment	PM Nguyen Tan Dung met Prof. Cees Veerman, advisor to the Vietnamese PM on climate change, flood control and water resource management.
2	PM Nguyen Tan Dung to visit Netherlands, Uzbekistan, Ukraine	3/10/2011	VN Plus	Vietnam	Other	PM Nguyen Tan Dung heads for the Netherlands, Uzbekistan and Ukraine on Sept. 27 on official visits aimed at further strengthening friendly relations and multi-faceted cooperation between Vietnam and these countries.
3	PM Nguyen Tan Dung's activities in Netherlands	3/10/2011	VN Plus	Vietnam	Other	VN and the Netherlands have agreed to lift bilateral relations to a new height, especially in the fields of climate change adaptation, water management, seaports, oil and gas, agriculture and logistics.
4	Climate: Act now to diversify crops at risk, say scientists	3/10/2011	AFP	World	Climate Change	Farm chiefs have a narrowing chance to diversify vital crops at rising threat from drought, flood and pests brought by climate change.
5	Region improves dioxin awareness	5/10/2011	VN News	Vietnam	Pollution	A vast majority of households located near the former Bien Hoa and Da Nang airbases no longer consume foods that are suspected of being contaminated with dioxin after implementation of two information campaigns.
6	Seafood processors pollute port town	5/10/2011	VN News	Kien Giang	Pollution	Seafood processing companies are creating serious water pollution problems in Kien Giang Province.



MOST-BMBF Office for
Water+Environmental Technology

Vietnamese – German Office for Water and Environmental Technology

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7	Death toll reaches 13 in floods	5/10/2011	VN News	Mekong Delta	Environment	Two more people were killed yesterday in the wake of ongoing storms and flooding, raising the recent death toll due to weather to 13, the National Steering Committee for Flood and Storm Prevention and Control announced.
8	Households evacuated ahead of floods	5/10/2011	VN News	An Giang	Environment	Nearly 30,000 households from the Cuu Long (Mekong) Delta's An Giang Province have been evacuated to flood-proof residential clusters.
9	Delta farmers to get flood compensation	6/10/2011	VN News	Mekong Delta	Environment	MARD has told provinces in Mekong Delta to submit to the Government estimates on the damages caused by flooding so that financial support can be assessed.
10	Moves to crack down on pollution stymied by weak environment laws	8/10/2011	VN News	Vietnam	Pollution	Environmental protection laws are repeatedly violated.
11	Climate change threatens Wetland	12/10/2011	VN News	Nam Dinh	Climate Change	Representatives of Xuan Thuy National Park and scientists from Ha Noi-based national university's centre for natural resources and environment studies have been struggling with a pilot project aimed at growing taller, stronger mangroves in the park.
12	Merkel says visit will help cement strategic partnership	12/10/2011	VN News	Vietnam	Other	PM Dung told German Chancellor Angela Merkel that her visit to Viet Nam was a good opportunity to elevate the relationships to a strategic partnership.



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13	German investors like good laws	13/10/2011	VN News	Vietnam	Other	Visiting German Chancellor Angela Merkel said yesterday that a reliable legal framework was one of the essential conditions for German businesses to invest in Viet Nam.
14	Waste treatment badly needed in Southeast Asia	13/10/2011	VN News	Vietnam	Waste treatment	Southeast Asian countries must develop solutions to deal with the increasing volumes of daily sewage and industrial waste water.
15	Mekong Delta floods push death toll to 43	14/10/2011	VN News	Mekong Delta	Environment	Ongoing flooding in the Mekong Delta region has killed at least 43 people, reported the National Steering Committee for Flood and Storm Prevention and Control on Oct. 13.
16	Flash floods cause huge damage	17/10/2011	VN News	Vietnam	Environment	Flash floods caused by torrential rain in the central region has inundated thousands of houses and killed six people in the central VN. One people remain missing.
17	Drainage to help reduce pollution in HCM City canals	18/10/2011	VN News	HCM	Pollution	Installation of a pipeline system under the Sai Gon River will dramatically curb pollution in HCM City's canals, city authorities said last Friday.
18	Pesticides, livestock pollute village wells	19/10/2011	VN News	Lao Cai	Pollution	More than 3,000 households in Bao Ha Commune, Bao Yen District, in the northern province of Lao Cai rely on polluted wells for their daily water.
19	Denmark to give \$135 million ODA for green growth	20/10/2011	VN News	Vietnam	ODA	Denmark Government will provide US\$135 million in official development assistance (ODA) to Viet Nam during the 2011-12 period, with the funds earmarked for projects that foster green growth.



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20	Polluting SMEs pose huge environmental threat	24/10/2011	VN News	Hanoi	Pollution	Uncontrolled waste treatment by small and medium enterprises (SMEs) has led experts to worry about growing environmental pollution.
21	Private sector lifts game in disaster mitigation	24/10/2011	VN News	Vietnam	Environment	The private sector in Viet Nam has pledged to improve its participation in disaster mitigation work.
22	Dam threatens National Park	27/10/2011	VN News	Dong Nai	Environment	Authorities in southern Dong Nai Province will submit scientific papers to the Government that back up its request to halt the construction of two hydro power plants that would eliminate 327ha of forest in Cat Tien National Park.
23	Desalination technology to solve water issues	28/10/2011	VN News	HCM	Water	A new seawater desalination technology demonstrated by German firm Taprogge GmbH in Can Gio Dist – HCM City can solve drinking water issues in the country's remote areas.
23	Record river tides flood districts in HCM City	29/10/2011	VN News	HCM	Environment	Flood tides in HCM City's rivers and canals reached 50-year highs this week, flooding several districts in the country's biggest city.
24	Thai floods inch closer to city centre	29/10/2011	AFP	Thailand	Environment	Floods have sparked an exodus from Thai capital crept closer to the city centre on Friday, but hopes grew that emergency barriers would prevent a major overflow from Bangkok's main river.
25	Confab on climate change adaptation	29/10/2011	VN News	Hanoi	Climate Change	The 6th international conference on community-based adaptation to climate change will be hosted by MARD on 16-21 April next year.



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Netherlands helps Mekong with climate change

PM Nguyen Tan Dung met Prof. Cees Veerman, advisor to the Vietnamese Prime Minister on climate change, flood control and water resource management, in The Hague on September 29 during his official visit to the Netherlands.

Vietnam considers climate change resilience as the country's vital issue and mobilizes all resources from the whole society to take necessary solutions, said PM Dung, adding that Vietnam is very interested in the way the Netherlands has managed water resources and flood control.

He thanked Prof. Cees Veerman and his associates in helping Vietnam build the Mekong Delta Master Plan and asked the professor to continue coordinating and checking data and to formulate solutions in the context of water resource security issues facing Vietnam as a series of hydropower projects are being planned on the Mekong River.

The PM also asked the professor and his associates to propose the Government of the Netherlands support part of the spending on building the plan in Vietnam.

Prof. Cees Veerman said that the Dutch had sent experts to Vietnam to coordinate research on coping with climate change in the Mekong Delta and a meeting will be convened in Vietnam in November to gather reports to submit to the Prime Minister later this year.

With soil similarity between the Mekong Delta and the Netherlands, the European country wants to share experience and transfer advanced technology and solutions on water resource management to Vietnam, he said.

He affirmed determination to cooperate with relevant Vietnamese agencies to build a vision for the sustainable development of the Mekong Delta during the next 100 years.

Prof. Cees Veerman, former agriculture minister of the Netherlands, is interested in assisting Vietnam to deal with issues impacted by climate change. He accepted the invitation to become head of the advisory group on climate change for the Prime Minister.

Prime Minister Nguyen Tan Dung to visit Netherlands, Uzbekistan, Ukraine

Prime Minister Nguyen Tan Dung heads for the Netherlands , Uzbekistan and Ukraine on Sept. 27 on official visits aimed at further strengthening friendly relations and multi-faceted cooperation between Vietnam and these countries.

Dung embarks on his trip at the invitation of Dutch PM Mark Rutte, Uzbekistan PM Shavkat Mirziyev and Ukrainian PM Mykola Azarov.

* Vietnam, Netherlands: implementing strategic partnership in coping with climate change
Vietnam and the Netherlands established diplomatic relations in April, 1973 and bilateral ties have seen strong developments since the 1990s.

Two-way trade has been increasing at an annual average of 15 percent, reaching 1.96 billion USD in 2010 and 900 million USD in the first half of this year, with Vietnam enjoying a trade surplus. The Netherlands is currently Vietnam's fourth largest export market in Europe, after Germany, the UK and France, buying mainly footwear, garments, cashew nuts, pepper, coffee, seafood, vegetables and wood products. It exports to Vietnam milk, medicine, steel, plastics and chemicals.

The Netherlands also emerged as the biggest European investor in Vietnam in 2010 with 153 valid investment projects capitalised at 5.6 billion USD, ranking 11 th among 92 countries and territories investing in the Southeast Asian country. Prominent among Dutch projects in Vietnam are the 2.1 billion USD Mong Duong power plant, the 410 million USD Phu My 3 power plant and the 180 million USD Pepsico Vietnam . Vietnam has one investment project in the Netherlands worth 5.6 million USD in goods distribution.

The Netherlands has provided non-refundable aid to Vietnam immediately after the establishment of diplomatic relations, focusing on humanitarian activities, education-training and health care, and later expanding to preservation of forestry, the ecology and the environment. The Netherlands pays special attention to cooperation with Vietnam in the fields of coping with climate change and managing water resources.

During PM Dung's up-coming visit, the two sides expect to discuss measures to increase bilateral cooperation in priority areas and promote the implementation of their strategic partnership in coping with climate change and water resource management.

They also plan to sign several documents in environment, agriculture-animal husbandry and oil and gas.

* Vietnam, Uzbekistan: promoting cooperation in spearhead industries
Vietnam recognised Uzbekistan's independence in 1991 and the two countries set up diplomatic relations in January, 1992. The Vietnam-Uzbekistan Joint Governmental Committee on Economic, Trade, Scientific and Technical Cooperation was established in 1996.

However, bilateral economic cooperation remains modest compared to potential and both sides' aspiration. Two-way trade stood at 18.6 million USD in 2010 and 15.5 million USD in the first half of 2011, with Vietnam posting an import surplus.

PM Dung will discuss with the Uzbekistan side measures to boost the friendly ties and economic, commercial and investment cooperation, in particular in spearhead industries of oil and gas and agriculture.

*Vietnam, Ukraine: creating new driving force for comprehensive cooperation and partnership
Vietnam and Ukraine established diplomatic ties in January, 1992 and have signed more than 20 agreements on cooperation in trade, maritime shipping, aviation and culture-education.

Bilateral trade stood at 256 million USD in 2010 but dropped to 95 million USD in the first six months of 2011, a year-on-year decrease of 30 percent.

Energy is an important aspect in bilateral cooperation with several major power projects such as the Hoa Binh, Thac Mo, Yaly hydro-power plants and the 500kV transmission line. Ukraine currently has four investment projects in Vietnam worth a total 24 million USD, focusing on ship building and railway.

Vietnamese businesses have invested 27 million USD in four projects in Ukraine, involving instant noodle production, packaging and restaurants.

PM Dung's visit is expected to create a new driving force for the implementation of the agreement on developing comprehensive cooperation and partnership between the two countries, and look into specific measures to promote economic ties and cooperation in education-training.

Prime Minister Nguyen Tan Dung's activities in Netherlands

Vietnam and the Netherlands have agreed to lift bilateral relations to a new height, especially in the fields of climate change adaptation, water management, seaports, oil and gas, agriculture and logistics.

Prime Minister Nguyen Tan Dung made the affirmation at a meeting with representatives of the Dutch business community, jointly organised by the Dutch Council for Trade Promotion and Foreign Ministry on September 30.

Prime Minister Dung said that with the presence and effective operations of well-known companies like Unilever, Royal Dutch Shell, Philips, Foremost, Heineken and small and medium-sized enterprises in many fields, Dutch businesses are playing an important role in Vietnam's economy.

The leader said he believed that with strong support of the Vietnamese government, Dutch businesses would uphold their strengths to successfully invest in Vietnam, especially in the fields of clean and renewable energies, biodiversity, food safety, environment, urban planning and water management.

Dutch Foreign Minister Uri Rosenthal called on domestic businesses to increase investment in Vietnam to effectively exploit advantages of the emerging economy.

The same day, PM Dung met with Prince Willem Alexander and Dutch strategic advisors. He also visited sea dikes and seaports in Rotterdam city.

Climate: Act now to diversify crops at risk, say scientists

Farm chiefs have a narrowing chance to diversify vital crops at rising threat from drought, flood and pests brought by climate change, food researchers warned on Monday.

The world's nearly 7 billion people are massively dependent on a dozen or so crops that, thanks to modern agriculture, are intensively cultivated in a tiny number of strains, they said.

When climate change gets into higher gear, many of these strains could be crippled by hotter and drier – or conversely wetter – weather and exposed to insects and microbial pests that advance into new habitats.

"Farmers have always adapted, but the pace of change under climate change is going to be much greater than in the past. There's going to be a real need to move fast," said Bruce Campbell, head of a research programme called Climate Change, Agriculture and Food Security (CCAFS).

In a series of studies, the experts highlighted the risk for staples such as wheat, corn, bananas and cassava.

They described the example of the potato, whose starch is a vital nutrient to hundreds of millions of people.

Although it is a hardy tuber, the potato is vulnerable to heat stress, which curbs growth and starch formation.

Warming will make potato-growing more hazardous in southern Africa and tropical highlands, and encourage the spread of an insect pest, the potato tuber moth, into more northerly latitudes. On the other hand, "late blight" – the fungus that unleashed the Irish potato famine of the mid-19th century – will be less of a threat.

At least US\$7 billion per year in extra funding will be needed for irrigation investments, agricultural research and rural infrastructure, according to the estimates.

To diversify crops, seed banks and genome libraries will play a key role.

Drawing on knowledge of DNA traits in wild plants will help breeders splice in genes to help cope with harsher conditions.

Genetic engineering, contested by many green groups, is also an option but using it "is a question that is left to society to answer", said Campbell cautiously.

The UN's Intergovernmental Panel for Climate Change (IPCC) estimates Earth's surface will probably warm by between 1.8 and 4.0 degrees Celsius over the 21st century.

Campbell said many scientists suspect that climate change is already well on the march, as evidenced by shifts in rainfall patterns and growing seasons in many observed locations.

He cautioned against "waiting 10 years" before the world moves to diversify plant strains.

"There are two sorts of changes that are going to happen. One is a gradual temperature increase, the other is the extremes, extremes of heat and floods, and I think they are already here. In the meteorological records, there are so many extremes that are being beaten, although it's very difficult to pin them to climate change."

The adaptation strategies are being published in a compendium book, *Crop Adaptation to Climate Change*.

The CCAFS programme is partnered by two NGOs, the Consultative Group on International Agricultural Research (CGIAR) and Earth System Science Partnership (ESSP).

Separately, a paper published on Sunday by British bioscientists identifies a mechanism in plant immune defences, a finding that should help crop breeders to produce new disease-resistant varieties.

The main tactic amongst plants to fight off a bacterium or fungus is to kill off cells surrounding the point of invasion, thus depriving the pathogen of food.

The work unveils the role of an enzyme called NADPH oxidase in unleashing the molecular defences. It appears in the journal Nature.

In September 2009, the UN's Food and Agricultural Organisation (FAO) warned that food production would have to rise by 70 per cent to feed the world's population, then around 6.8 billion, when it reaches an expected 9.1 billion in 2050.

Region improves dioxin awareness

A vast majority of households located near the former Bien Hoa and Da Nang airbases no longer consume foods that are suspected of being contaminated with dioxin after implementation of two information campaigns.

The airbases in southern Dong Nai Province and central Da Nang City served as bulk storage and supply facilities for Agent Orange and other herbicides during the American War's Operation Ranch Hand from 1961-1971.

Nearly 80 per cent of the local residents had been made aware of the presence of dioxin in the vicinity of their homes thanks to the information campaigns, according to Tran Thi Tuyet Hanh of the Viet Nam Public Health Association.

Only seven of 800 households included in the campaign continue to consume food that is potentially harmful due to dioxin contamination.

In a pre-campaign knowledge-attitude-practice survey administered by the Viet Nam Public Health Association, only one in 400 local residents said they were aware that dioxin could be present in soil, water, air, and foods. Only 1.3 per cent of respondents were aware that dioxin could penetrate skin and the respiratory system as well as contaminate foods.

The association conducted the Bien Hoa Airbase information campaign from 2007-09 and its Da Nang Airbase phase from 2009-11, Hanh said.

After the campaign, residents, especially house-wives, knew what kinds of foods they should eat and how to cook food in order to minimise the affects of dioxin on their health, she said.

High-risk foods in Agent Orange hot spots have been identified as freshwater fish, aquatic products, animal fat, animal viscera, eggs, diary products and pumpkins, Hanh said.

There were now 28 dioxin hot spots in Viet Nam including the former airbases of Bien Hoa, Da Nang, Phu Cat, Nha Trang, Pleiku, Can Tho and Tan Son Nhat, reported the association.

Professor Vo Quy, a member of the US-Viet Nam Dialogue Group on Agent Orange/Dioxin said: "It's completely appropriate to pay more attention to the health of residents in hot spots areas."

Policies to disseminate information to residents, especially ethnic people, needed to be implemented more effectively because they had few opportunities to access knowledge about dioxin, Quy said.

Permanent Vice Chairman of the association Le Vu Anh said: "Local people support the programme because they were the first programmes launched in Viet Nam aimed at helping people in hot spot areas prevent dioxin exposure through foods."

The association would launch the programme in other areas in the coming time, Anh said.

Seafood processors pollute port town

Seafood processing companies are creating serious water pollution problems in Kien Giang Province. They are known to be discharging untreated waste into the environment, but so far no one has been punished.

The discharge comes from seafood processing establishments located around Tac Cau fishing port. It is said to be seriously affecting the livelihood of thousands of people in Chau Thanh District.

The violations were discovered during a recent inspection by a National Assembly delegation, Kien Giang People's Committee and the provincial Department of Natural Resources and Environment.

They met to review the enforcement of policies and regulations on environmental protection in the Cuu Long (Mekong) Delta province. The provincial environmental department said most of the inspected companies violated environmental rules. Either they had no waste-water treatment systems or the toxicity of their effluent was above the permitted standard.

At a national level, the fast development of industrial parks has put pressure on the environment. About 70 per cent of more than 1 million cubic metres of waste-water a day is discharged directly from the parks into the environment without being treated. The Seafood Processing industrial park in Tac Cau is said to be one of these.

Only nine of the 33 seafood processing factories in the port are said to have a proper waste-water treatment system, according Le Hong Khanh, director of the port's management board.

However, he said even these centres only seemed to operate when they knew authorities were coming to make an inspection.

The Ha Long Investment and Development Company's affiliate in Kien Giang had a treatment system, but the toxic discharges were much higher than allowed, reported Thoi Nay (Today).

Huy Nam Seafoods Company is said to operate in a similar fashion.

Tac Cau became operational in 2004 and is now the biggest fishing port in Viet Nam. It covers 32ha.

But its infrastructure was built to cope with only five factories covering 9ha. To attract more investment, the port has since encouraged 27 more factories to the area.

The central waste-water treatment system has a capacity of 400cu.m a day compared to the demand for more than 5,000cu.m a day. According to Nguyen Thi Kim Be, deputy head of the National Assembly delegation in charge of Kien Giang, water pollution is getting worse and no effective steps have been taken to counter the problem.

Be blamed poor management for the situation. He said official Government bodies had not been doing their job properly and that they lacked co-ordination and synchronisation.

A factory owner told Nhan Dan that the enterprises in the fishing port had to pay the State authorised management body to make a single environmental impact report, but were fined by the inspectors for not giving separate reports.

Khanh said the Department of Agriculture and Rural Development planned to build a central waste-water treatment system for the whole fishing port in 2007, but announced last year that each enterprise had to build its own treatment system.

Death toll reaches 13 in floods

Two more people were killed yesterday in the wake of ongoing storms and flooding, raising the recent death toll due to weather to 13, the National Steering Committee for Flood and Storm Prevention and Control announced.

The victims were swept away in flood waters caused by Typhoon Nesat in central Quang Binh Province. Five others were injured, while 14 schools and 2,830 houses were submerged in the province.

Storm Nalgae, the sixth storm of the year and the second in a week, is forecast to weaken into a low pressure system before making landfall in the central region today. Winds are expected to reach 74kph from Nghe An to Quang Tri provinces while central provinces from Thanh Hoa to Quang Nam will experience heavy rainfalls, according to the Central Centre for Hydro-Meteorological Forecasting.

About 36,000 vessels have been informed of the storm's progress. None have been reported to be operating in the storm-hit areas around Hoang Sa Islands and the northern East Sea.

Deputy Prime Minister Hoang Trung Hai yesterday visited Dong Thap Province in the Cuu Long (Mekong) Delta, where five deaths and six injuries were recorded during the ongoing floods.

An initial report from local authorities showed that the total losses had reached more than VND496 billion. Damage to traffic infrastructure made up VND178 billion (\$8.5 million) of that figure while the loss of rice crops accounted for VND57.5 billion (\$2.7 million).

The Deputy PM said that local authorities and residents should continue to strengthen the dyke systems to protect the province's remaining 5,000ha of rice and to quickly harvest as much of the crop as possible to minimise losses. About 2,000ha of rice were destroyed by previous flooding.

Hai said the Cuu Long (Mekong) Delta localities needed to redesign their infrastructure to protect lives and production in the coming years, especially rice production.

In An Giang Province, residents are striving to protect more than 140,000ha of crops from being submerged. The crop would bring in 750,000 tonnes of rice, equivalent to VND7.6 trillion (\$364 million).

In Tien Giang Province, local authorities have spent VND177 billion (\$8.4 million) to consolidate its dyke protection systems in flood-prone areas in Cai Be, Tan Phuoc, Chau Thanh and Cai Lay district.

Rising flooding waters and heavy downpours in Ca Mau Province during the last two days swept away dozens of aquaculture ponds, costing local farmers hundreds of millions of dong in damage.

Floodwaters in the Cuu Long (Mekong) Delta region were expected to continue to rise to alarming levels, said experts.



Heavy rains and high tides broke a dyke in Cu Lao Dung District in the southern province of Soc Trang, flooding plantations. Local authorities have reinforced the affected dyke. Ongoing floods also caused losses of life and property in the central region.

Households evacuated ahead of floods

Nearly 30,000 households from the Cuu Long (Mekong) Delta's An Giang Province have been evacuated to flood-proof residential clusters.

The province recently finished the construction of 203 flood-proof residential clusters covering over 830ha.

The clusters take the form of miniature urban areas, and include markets, schools and medical centres.

As scheduled, delta provinces will finish evacuating around 200,000 households from low-lying areas along Dong Thap Muoi and Tu Giac Long Xuyen to flood-proof residential clusters.

More than 1,000 flood-proof residential clusters were built in the delta as part of a national programme from 2001-07.

Dao Thi Luyen, a resident from a flood-hit area in the delta's Long An Province, said: "Thanks to this timely intervention, my family and my 200 chickens are safe from the floods."

Localities in the delta have also continued to strengthen dykes to protect rice and crops.

Meanwhile, Storm Nalgae, the sixth of this year, weakened to a tropical depression before making landfall, but still brought with it widespread rain.

National Hydro-meteorological Forecasting Centre Deputy Director Le Thanh Hai said: "There are no more storms forecast, at least until the end of this week."

Delta farmers to get flood compensation

The Ministry of Agriculture and Rural Development has told provinces in the Cuu Long (Mekong) Delta to submit to the Government estimates on the damages caused by flooding so that financial support can be assessed.

The ministry would report the statistics to the Prime Minister for considering financial support to the Delta provinces, Bui Ba Bong, Deputy Minister of Agriculture and Rural Development, said on Wednesday.

The ministry has proposed support of VND5 million (US\$230) per hectare of rice, which is equal to 30 per cent of the amount that farmers lose when one hectare of rice is destroyed by flooding.

This year, flooding caused by water rising in the Mekong River has reached a record high, collapsing several dykes and destroying thousands of hectares of autumn-winter rice crop in the Delta, especially in An Giang and Dong Thap provinces.

In An Giang, floods have destroyed more than 4,000 ha of rice and are threatening about 66,000 ha of rice. More than 17,670 houses have been flooded, according to the province's initial statistics.

Floods have also killed 11 people as of Wednesday, said the provincial Steering Committee for Flood and Storm Prevention and Control.

An Giang now has nearly 2,000 households who are in need of food support, mostly in An Phu and Cho Moi districts.

In Dong Thap Province, a 20-metre section of Khang Chien Canal's dyke in Thanh Binh District's Phu Loi Commune was broken on Wednesday, destroying 140 ha of 60-70 day-old rice as the water level difference between the inside and outside of the dyke was more than three metres.

Since the beginning of this year's flood season, floods have broken five dykes in Dong Thap, destroying more than 2,000 ha of rice with a total estimated damage of about VND450 billion (US\$21 million), according to the provincial Agriculture and Rural Development.

Nearly 19,800 ha of rice in Dong Thap are also being threatened by floods because of weak dykes.

Dong Thap has relocated more than 1,453 of 10,392 flooded houses to safety.

Moves to crack down on pollution stymied by weak environment laws

Environmental protection laws are repeatedly violated. Luong Minh Thao, deputy head of the Environmental Crime Prevention Department, told Dau Tu (Investment) newspaper the law needed to be beefed up.

Do firms break environmental protection laws with impunity?

Firms used to discharge harmful and poisonous substances into the environment because they were not being supervised closely enough. However, that is not the case now. State management offices, such as the natural resources and environment agency and the environmental police, have recently stepped up inspections. As a result, more environmental pollution cases have been uncovered.

It is undeniable that many companies intentionally damage the environment by discharging untreated waste to maximise profits. In general, however, awareness about the need to protect the environment has improved. Many companies have built waste treatment facilities on their own.

Why have there been so few prosecutions?

In the last five years, the environmental police have uncovered about 20,000 violations. Up to 5,000-6,000 violation cases are typically uncovered each year. However, few of these firms have been prosecuted. Action has only been taken when wildlife has been killed and forests destroyed.

There is a chapter in the Criminal Law regulating environmental crimes and specific punishment for each crime. Is that not the case?

That is true. The law has specific regulations covering environmental crime, ranging from water pollution to solid waste dumping and the spread of potentially dangerous diseases to animals and plants. The law stipulates a maximum prison term of 10 years.

But the law is ambiguous in terms of what pollution actually is.

And it is impossible to determine the extent of the pollution of say a river.

Are firms compelled to make environmental impact reports?

Decree 117/2009/ND-CP regulates that a company which does not make an environmental assessment report will be fined by between VND200 million (US\$9,500) and VND300 million (\$14,300). In reality, the law is hard to implement because there is no regulation forcing these firms to hand their reports to environmental inspectors.

Climate change threatens Wetlands Park

Representatives of Xuan Thuy National Park and scientists from Ha Noi-based national university's centre for natural resources and environment studies (Cres) have been struggling with a pilot project aimed at growing taller, stronger mangroves in the park.

The park's current mangrove forest (*Sonneratia caseolaris*) has been devastated by rising sea levels along the northern coastal province of Nam Dinh in recent years.

Experts estimate that 30ha out of 1,000ha of mangroves, as well as 10ha of casuarina trees, have withered away due to a 40cm increase in the water level over the past two years. "The number of bird species – which formerly stood at 215 and included black-faced spoonbills, western white pelicans, black-headed gulls and redheaded egrets – has dwindled," said the park director, Nguyen Viet Cach.

"Despite our efforts, the problem has been getting worse over the last two years, and we need to start a new project that will result in larger mangroves," he said.

Scientists from Cres in co-operation with the park administration have been developing a bigger and taller mangrove species, *sonneratia apetala*, in the park's sapling garden since 2004.

The first plants have shown rapid growth even in the saltier water and colder weather that now characterises the park's environment.

"I grew the first seeds of *sonneratia apetala* at the sapling nursery in the park and it reached a height of 8m with big dense roots after just two years," said associate professor Phan Nguyen Hong.

"My colleagues and I have also tested exotic plants for seven years and results prove that the *sonneratia apetala* mangrove can protect the park from devastation caused by rising sea levels," Hong, who is former deputy director of Cres, explained.

The 79-year-old scientist, who has extensively studied wetland ecological systems, said the *sonneratia apetala* mangrove had grown in the southern province of Ca Mau in the past, but it died out as a consequence of Agent Orange during the American War in the early 1960s.

Researchers at the park's nursery also plant various mangrove species such as *kandelia obovata*, *rhizophora stylosa*, *bruguiera gymnorrhiza* and *acanthus ilicifolius*, *aegiceras*, which have helped protect sea dike systems in the park from storms and floods since 2005.

Hong said there are 78 mangrove species in Viet Nam, which could help contribute to the restoration of the mangrove forests.

The 7,100-ha forested wetlands, about 150km south of Ha Noi, are home to a wide range of migratory waterfowl and other species. The park is a Ramsar Convention site – a wetland area recognised internationally for its ecological importance.

As a result of rising sea levels, managers of the park, which is recognised by UNESCO as a Red River Biosphere Reserve, have had to raise the height of dams and roads by between 0.5m and 1m, at a cost of VND7 billion (US\$350,000) over the past two years.

The park has been seeking \$6.7 million to finance an 80ha reforestation, introducing bigger mangrove species over a three to five-year period.

Merkel says visit will help cement strategic partnership

Prime Minister Nguyen Tan Dung told German Chancellor Angela Merkel that her visit to Viet Nam was a good opportunity for the two countries to discuss orientations to elevate their relationships to a strategic partnership.

During talks in the capital city yesterday, Dung and his guest focused their attention on measures to further promote bilateral co-operation, particularly in the fields of economics, trade, investment and education and training.

In the constructive spirit of mutual confidence and understanding, the two sides informed each other of the situation in their respective countries. They also discussed and reached consensus on the content of the Joint Statement on the establishment of the strategic partnership between Viet Nam and Germany as well as orientations and specific measures to ensure the partnership serves the mutual benefits of the two nations.

Merkel spoke highly of Viet Nam's achievements in socio-economic development, particularly in poverty alleviation and in reaching targets in the Millennium Development Goal (MDG) ahead of time.

The two sides agreed to support and facilitate conditions for the business communities of Viet Nam and Germany to promote their co-operation while also boosting investment in each other's countries.

They agreed on the establishment of a mechanism for a strategic dialogue on economics to accelerate trade and investment between the two countries. They also agreed to exchange experiences on the economic policy at the macro level while actively implementing co-operation projects on building a metro line and the construction of a German House in HCM City.

Merkel pledged to continue to give Official Development Assistance (ODA) to Viet Nam in the years to come, with a focus on environmental protection, climate change adaptation, vocational training and healthcare.

She promised to provide more than US\$400 million in development aid and preferential credits to development co-operation projects in Viet Nam.

"Germany will continue to support Viet Nam to build the Viet Nam – German University and turn it into a leading education institution in training and scientific research in Viet Nam and the region," she said.

She said her government would continue to grant more scholarships to Vietnamese students to go to Germany to study.

"Germany will continue to support Viet Nam to expand its comprehensive relationship and co-operation with the European Union and help Viet Nam to be recognised by the EU as a market economy and also help in the negotiations for a Free Trade Agreement between the EU and Viet Nam," said Merkel.

The two sides praised the friendship role played by more than 100,000 Vietnamese people who live and work in Germany. Merkel reiterated her commitment to facilitate conditions for the Vietnamese community in Germany to integrate into the German community.

Both Dung and Merkel expressed their confidence that the strategic partnership would be implemented well in both scope and scale and in terms of stability and durability for the interest of the people of the two nations, for peace, stability and development in the region and the world.

Following the talks, the two leaders signed several documents, including the Ha Noi Joint Statement; the Viet Nam – Germany Strategic Partnership for the future; the agreement between the two governments of Viet Nam and Germany on legal matters towards the plot of land at 3-5 Le Van Huu Street, in Ha Noi; the HCM City – Agreement on the "German House" in Viet Nam; the Agreement between the Vietnamese and German governments on the financial co-operation in 2010; and the Letter of Intention between the Vietnamese Ministry of Justice and the Ministry of Justice of the German Federation among other matters.

Following the talks, the two leaders held a press conference informing reporters about the results of their talks. Later on, Dung hosted a banquet in honour of Merkel, who concludes her visit to Viet Nam today.

Meeting with top lawmaker

The Vietnamese National Assembly would always work to expand co-operation with Germany, said NA Chairman Nguyen Sinh Hung to visiting German Chancellor Angela Merkel at a separate meeting on the same day.

"The NA will try its utmost to elevate the strategic partnership between the two sides with a view to increasingly obtaining new achievements," Hung said.

He affirmed that the NA wanted and was willing to co-operate more closely with the German parliament in the interest of both peoples while creating favourable conditions for co-operation programmes between the two governments.

In reply, Chancellor Merkel said the German parliament wanted to strengthen co-operation with the Vietnamese National Assembly.

She said the German government had been interested in expanding co-operation programmes and investment in Viet Nam in every domain.

The establishment of bilateral strategic partnership relations in all aspects would create favorable conditions for co-operation between the two national assemblies, Merkel added.

The two leaders discussed the election and organizational structure of the NA, work on legislation and the organisation of NA meetings as well as the role and legal position of NA deputies in the two countries.

Joint statement

Viet Nam and Germany agreed to establish a strategic partnership and further strengthen co-operation in the time to come, particularly in key domains noted in a joint statement issued by the two sides in Ha Noi.

Under the statement, the two countries will continue to strengthen the exchange of high-ranking delegations. They will co-operate more closely to implement projects that were already agreed between the two sides while defining projects for the future.

To implement the statement, the two sides have set up a strategic management group co-chaired by a Vietnamese Deputy Foreign Minister and a State Secretary of the German Federal Foreign Office.

They agreed to strengthen co-operation in multilateral and international forums while declaring to take into consideration the start of a strategic exchange mechanism on experiences related to national defence and security policies that both of the two sides were interested in.

Germany backed the Association of Southeast Asian Nations (ASEAN) route on forming the ASEAN community.

The two countries said the "German House" project in HCM City would be an important part in the bilateral strategic partnership.

They said they would continue holding dialogues and exchange views in a constructive manner on human rights bilaterally and multilaterally. Both sides applauded the significance of holding dialogue on the rules of law-governed states as well as methods to implement these rules.

Viet Nam and Germany declared their determination to strengthen co-operation in EU recognition of Viet Nam as a market economy.

German investors like good laws

Visiting German Chancellor Angela Merkel said yesterday that a reliable legal framework was one of the essential conditions for German businesses to invest in Viet Nam.

Speaking at the Germany - Viet Nam Economic Forum in HCM City yesterday, she said German businesses also need a transparent administrative mechanism "without red tape and subsidies," and good infrastructure.

She urged Viet Nam to continue with its open-door policy as well as a privatisation process.

Since investments by German companies would be for the long term and they had advanced technologies, they were in a good position to participate in Viet Nam's modernisation process, she said, citing the example of HCM City's underground project.

Deputy Prime Minister Hoang Trung Hai highlighted the potential opportunities for bilateral co-operation.

"Viet Nam's socio-economic development strategy in 2011-20 focuses on major targets with a stress on quality, effectiveness, sustainability, human-resource development and skilled labour," he said.

Higher priority would be given to investment in projects that use high technology and are environmentally friendly.

Since adopting its renovation policy, Viet Nam had achieved average annual economic growth of 7 per cent in recent years.

The country had managed to contain its high inflation, stabilise the economy, and address businesses' difficulties.

This year actual FDI inflows in the first nine months were US\$8.2 billion, a year-on-year increase of 2 per cent.

German investment in Viet Nam remained modest at \$850 million in 167 projects, just fifth among EU economies and 24th overall.

Bilateral trade had topped \$4.1 billion last year.

"This economic forum is an important event in the German chancellor's working visit to Viet Nam and it also serves as a chance for Viet Nam to deliver its messages on trade and investment and its strategic development orientation to German investors and companies," Hai said.

Viet Nam appreciated the economic co-operation extended by Germany, he stressed.

Germany to grant \$598m for development projects

HA NOI — Germany will provide Viet Nam with financial assistance totalling US\$598 million for development of infrastructure and human resources, the German Embassy in Ha Noi has announced.

A co-operation agreement was signed on Monday, witnessed by visiting German Chancellor Angela Merkel and Vietnamese Prime Minister Nguyen Tan Dung, creating the foundation for German assistance to eight bilateral development projects in Viet Nam, a press release from the embassy said.

The assistance would be focused on environmental protection, adaptation to climate change, urban development, energy, job training and healthcare.

German Development Bank KfW will be responsible for disbursing the money to the projects, which come within the framework of the negotiations between the two governments in Bonn in October 2010.

With the assistance, Germany will retain its status as one of the major donors to Viet Nam.

Waste treatment badly needed in Southeast Asia

Southeast Asian countries must develop solutions to deal with the increasing volumes of daily sewage and industrial waste water, experts have cautioned. "Along with rapid economic growth, we face a serious demand to enhance the capacity of sewage and waste water treatment, especially in urban areas," said Toshio Nagase, senior representative at Japan International Co-operation Agency (JICA) Viet Nam office.

Experts yesterday gathered at a two-day conference held in southern Ba Ria-Vung Tau Province to discuss waste water treatment solutions.

According to the Ministry of Construction, the drainage systems in Vietnamese cities are used for multiple purposes, sewage, waste and rainwater.

Moreover, the drainage system was built in several stages and does not have adequate capacity.

Few cities in Viet Nam have centralized waste water treatment plants, and the percentage of households connected to the urban drainage system is still low, according to Nguyen Hong Tien, director of the ministry's Administration of Technical Infrastructure.

The situation has worsened under the impact of climate change.

"There has been frequent flooding in HCM City and Ha Noi during heavy rains for years. Other big cities like Can Tho and Da Nang have suffered the same amount of flooding recently," he said.

In Indonesia, under 2 per cent of urban areas have access to proper sewage systems, while 18 per cent of toilets are open to the environment and located over canals or rivers. Budy Hidayat of Indonesia's National Development Planning Agency said many households pour untreated waste directly into the drainage system and rivers take the waste away. He said sanitation seemed to be a private responsibility with little governmental engagement.

Khamthavy Thaipachach, director of the Laos Department of Housing and Urban Planning, said waste water from domestic areas, hospitals and industrial operations were discharged directly into the environment. "Flooding in many urban areas also affects hygiene," he said. Tien of Viet Nam's Administration of Technical Infrastructure said measures had been developed to deal with the situation.

Under the plan, by 2015, the country would upgrade or build new drainage systems to deal with flooding problems in cities.

By 2025, flooding in cities would cease as new systems are put into place.

Sewage and waste water would be separated from the common drainage system. The country would also invest in advanced treatment technology and develop centralised treatment models as well as involve the private sector in the task.

Several experts at the conference said they were concerned that there would not be sufficient capital for these projects.

Jelle van Gijn of Asian Development Bank's Viet Nam Water Team said the bank had a line credit of around US\$2 billion for a 10-year programme from 2014 in Viet Nam.

But he said that capital expenditures for the Viet Nam national strategy must largely come from central government grants and costs from user fees.

Nagase of JICA said that it was assisting Viet Nam to develop sewage systems and waste water treatment plants across the country, including at Ha Noi, HCM City, Hai Phong, Hue and Binh Duong.

Mekong Delta floods push death toll to 43

Ongoing flooding in the Mekong Delta region has killed at least 43 people, reported the National Steering Committee for Flood and Storm Prevention and Control on Oct. 13.

Dong Thap province has been the hardest hit claiming 15 victims, followed by An Giang, Can Tho, Long An and Kien Giang.

Floods have inundated nearly 70,000 houses, over 18,000ha of rice and nearly 3,700ha of subsidiary crops. Total loss is estimated at more than 1.1 trillion VND (52.8 million USD).

Meanwhile, floods have killed four people in the central and central Highlands region.

The National Hydro-Meteorology Forecast Centre warned that water levels in Dong Thap Muoi, the low-lying part of the Mekong Delta, and within the Long Xuyen Quadrangle, remain high despite gradually dropping during the next few days.

The Hanoi Fatherland Front Committee has decided to provide Dong Thap and An Giang provinces 2 billion VND (96,000 USD) in aid each to assist people in coping with the aftermath of the flood.

The central province of Quang Ngai has poured around 27 billion VND (1.3 million USD) into the construction of six new resettlement areas for nearly 500 households living in disaster-prone areas.

However, during the 2010-15 period, the province is expected to relocate an average of 1,500 households to safer ground at a cost of more than VND70 billion (\$3.4 million).

Cao Khoa, chairman of the Quang Ngai People's Committee, on Wednesday sent an official letter to the Government calling for additional funds of more than VND38 billion (\$1.84 million) for relocation purposes.

There are still more than 4,200 households living in areas highly vulnerable to disasters throughout the province.

Storm Banya, heading closer to the East Sea, has weakened to become a tropical low pressure, according to the National Hydro-Meteorology Forecast Centre. However, it is forecast to still cause strong winds and rough seas.

Flash floods cause huge damage

Flash floods caused by torrential rain in the central region has inundated thousands of houses and killed six people in the central provinces of Quang Binh and Quang Tri. One people remains missing.

The National Centre for Hydro-Meteorological Forecasting yesterday said rainfall in central provinces from Ha Tinh to Quang Nam measured 100mm-200mm and even 300mm-400mm in parts of Quang Tri.

The centre said rainfall had begun to ease off in Quang Tri and Quang Binh.

Until yesterday, flooding had inundated more than 40,700 houses in Quang Binh. Thousands of these houses were submerged under 1-2 metres of water.

Yesterday morning, about 1,800 households with more than 7,200 persons in the province were urgently evacuated.

On National Highway 1A running through the districts of Quang Ninh and Le Thuy, flooding caused severe congestion, stranding hundreds of trucks and passenger cars.

In Quang Tri Province, flooding also caused long tailbacks on many roads and prevented five trains carrying around 2,000 passengers from leaving their stations.

Floodwater inundated about 14,000 households and damaged 1,000 hectares of rice.

The local Flood Control and Search and Rescue have rescued 12 people who got stuck during the floods and evacuated about 5,000 households.

In Hue City, heavy rains caused flooding on most roads in the central area, with many submerged 0.5 metres under water.

The province is prepared to evacuate roughly 20,000 people in places vulnerable to flooding and landslides, and store food in case the situation continues.

In Mekong region

Floods in the Cuu Long (Mekong) Delta as of yesterday had killed 44 people, including 38 children, and caused damages worth VND1.2 trillion (US\$57 million), according to the National Steering Committee for Flood and Storm Prevention and Control.

Flooding caused by the Mekong River rise to record levels also swept away 152 houses and inundated 72,000 others, eroded 1,500km of dykes, and destroyed 7,500ha of autumn-winter rice and 2,600ha of aquatic farms since August.

The annual floods have arrived nearly a month earlier than last year.

The upper stream provinces of An Giang and Dong Thap have been the hardest hit.

Dong Thap has reported the highest number of deaths – 15 – and estimated losses of VND884 trillion (US\$42 million).

The region is reinforcing broken dykes, pumping water out of paddies, and monitoring important dyke sections around the clock.

Previously high prices encouraged farmers in An Giang and Dong Thap to plant thousands of hectares of autumn-winter rice in undyked areas and they are now losing much of their crop due to the early floods.

Farmers in downstream areas like Hau Giang and Vinh Long provinces and Can Tho city are scrambling to harvest rice and other crops to preclude losses.

In Hau Giang's Phung Hiep District, where 8,800ha of sugarcane were planted and would normally have been harvested around the end of November, farmers are harvesting 6,000ha that have been submerged for more than a week.

In Vinh Long, the Department of Agriculture and Rural Development has helped farmers reinforce dykes, harvest crops early, and pump water out of rice paddies.

It has also mobilised hundreds of harvesters to help farmers bring in hundreds of hectares of rice that are at risk due to vulnerable dykes.

The National Hydro-Meteorology Forecast Centre said yesterday the waters in the upper Mekong River, Dong Thap Muoi (Plain of Reeds), and the Long Xuyen Quadrangle would ebb slowly over the next five days, but remain at the third warning level until early November.

Drainage to help reduce pollution in HCM City canals

Installation of a pipeline system under the Sai Gon River will dramatically curb pollution in HCM City's canals, city authorities said last Friday.

The pipeline system, which is part of a drainage system running along Nhieu Loc – Thi Nghe Canal, is an important section of the city's hygiene and environmental project for the Nhieu Loc – Thi Nghe basin.

"This is a breakthrough in the country's construction of underground culverts," said Bui Pham Khanh, deputy minister of transport.

The 410-metre long under-river system, which is 3,000mm wide connecting drainage systems in District 2 and Binh Thanh District, will play a key role in collecting sewage and rainwater that will then flow to a plant for treatment before being poured into the river.

Installation of the pipeline system was completed in September.

Difficulties caused by topographical conditions had led to concerns earlier in the year that the system might be unusable.

Le Hoang Quan, chairman of the HCM City People's Committee, said a drainage pipeline system would help speed up work on the Nhieu Loc – Thi Nghe Basin project.

It will also help prevent further pollution of the Nhieu Loc – Thi Nghe Canal.

The project, which began in 2001 with total capital of US\$199.9 million from the State budget and World Bank loans, is expected to collect sewage and rainwater over a total area of 33.2 square kilometres in seven districts around the city.

Flooding in central region kills two

Flash floods caused by torrential rain in the central region have inundated thousands of houses and killed two people in central Quang Binh Province. One person is missing.

The National Centre for Hydro-Meteorological Forecasting said rainfall in central provinces from Ha Tinh to Quang Nam measured 100mm-200mm and even 300mm-400mm in parts of Quang Tri Province.

The centre said rainfall had begun to ease off in Quang Tri and Quang Binh.

The local Steering Committee for Flood Control, Search and Rescue said floods inundated 4,000 homes in Quang Binh and caused long tailbacks in Quang Tri Province's Hai Lang District.

Floods also destroyed numerous paddy fields in the South. Floodwater also overwhelmed dykes in Chau Doc Town's Vinh Chau and Vinh Te communes in An Giang province, inundating 2,100 ha of farmland.

The province has mobilised a task force of about 1,000 civilians and military personnel to repair dykes in the region.

Pesticides, livestock pollute village wells

More than 3,000 households in Bao Ha Commune, Bao Yen District, in the northern province of Lao Cai rely on polluted wells for their daily water.

The pollution has been confirmed by the provincial Department of Natural Resources and Environment after examining water sample tests.

The department warned residents not to use the water, but they had no other source, said deputy director of the department Nguyen Thanh Sinh.

He said the pollution came from the uncontrolled use of pesticides and the pollution of the soil by livestock.

Water for cooking in the commune is brought from streams near Lien Ha 3 Village which is about 1km away. It costs VND3,000-4,000 (US\$0.14 - 0.19) per 20 litres.

Hoang Minh Chung, a Lien Ha villager, said the village supplied more than 10,000 litres of water every day.

However, in the dry season, the water from the streams decreased sharply and there was no surplus for sale.

Local authorities, in co-ordination with the Department of Natural Resources and Environment and the Department of Agriculture and Rural Development, have considered a number of clean-water projects for Bao Ha Commune, but none have been carried out.

In 2006, the Lao Cai Clean Water Business Co Ltd surveyed the water source in Lien Ha 3 Village and wanted to build a large well to supply Bao Ha Commune. However, no families wanted to give up their land for the project.

The project also lacked funds because residents had little understanding about the need for pure water and they refused to contribute money to the project.

Last year the Department of Agriculture and Rural Development intended to build a water pipe from Ngoi Khoi stream in Lien Ha 2 Village, but the source of the water was much lower than the homes of residents.

Local authorities were calling for funding from enterprises and organizations so that they could supply water, said Sinh.

Denmark to give \$135 million ODA for green growth

The Government of Denmark will provide US\$135 million in official development assistance (ODA) to Viet Nam during the 2011-12 period, with the funds earmarked for projects that foster green growth.

Work funded by the ODA will include projects on clean water, energy efficiency, and research on climate change adaptation. Funding will be provided for improving quality and access to drinking water for poor households while also reducing water loss in the country's water supply network.

John Nielsen, Danish Ambassador to Viet Nam, said climate change was an area of particular concern.

"Two years ago, Denmark was one of the first sponsors of Viet Nam in the field of climate change, as we know that the country is forecast to suffer great losses caused by climate change," said Nielsen.

The ODA funding will be combined with transferring high quality, cost-effective and environmentally-friendly technologies from Danish companies to their Vietnamese partners in the waste management, solar energy and wind power sectors.

"We hope to establish partnerships between enterprises from both countries especially in the area of wind power, as it is considered a strength of Danish industry," said Nielsen.

He added that with 125 Danish companies working in Viet Nam, he believed that it is possible for Danish companies to find suitable Vietnamese partners for the projects.

When implementing the projects benefiting from the ODA, the embassy would make annual check to ensure that the projects reach expected results, he said.

Since 1993 Denmark has been a key ODA partner for Viet Nam, providing more than \$1.2 billion in ODA, which was provided to sectors including agriculture, water and sanitation, fisheries, justice and private business development.

Polluting SMEs pose huge environmental threat

Uncontrolled waste treatment by small and medium enterprises (SMEs) has led experts to worry about growing environmental pollution.

SMEs were found violating environmental protection regulations more frequently than their large-scale counterparts, said Le Minh Duc, head of Environment and Industrial Sustainable Development Office from the Ministry of Industry and Trade.

Making up more than 90 per cent of the country's total enterprises, SMEs released a huge amount of waste into the environment, he said.

In HCM City alone, up to 7,000 tonnes of waste is released everyday, a 70 per cent increase over the 2002 average. The increase is blamed on population growth as well as the recent burst in the number of SMEs, according to the city's Department of Natural Resources and Environment.

Only 10 per cent of the waste was recycled while the rest was simply buried, it said.

The leather, textiles and electronics sectors were responsible for releasing the largest amount of hazardous wastes, Duc said. "The pollution will get worse if waste from SMEs remains unclassified and untreated," he said.

The presence of SMEs in residential and urban areas had caused waste management difficulties, and the financial limitations of SMEs had hindered their investment in suitable treatment facilities, Duc said.

SMEs were lack of their waste treatment responsibilities in part because of the loose legal system now that the 2005 Law on Environmental Protection was outdated, said Duc.

Complicated procedures to obtain permission to discharge waste, the lack of waste treatment plants and the rising cost of business made compliance difficult, said Nguyen Thi Thu Hang of the Ngoc Te Shoes Company

An amendment to the legal framework and enforcement was essential for all enterprises, said Florian Beranek from the United Nation Industrial Development Organisation (UNIDO) in an interview with Ha Noi Moi (New Ha Noi) newspaper at a recent workshop co-organised by the Viet Nam Chamber of Commerce and Industry (VCCI) and UNIDO in Ha Noi and HCM City.

Enhancement of SMEs capacity to classify and treat waste and raising their awareness of the need for environmental protection was also important, he said.

Relocating SMEs to industrial sites should also be considered as a solution to reducing pollution, said Pham Quang Vinh of VCCI.

The manufacture of eco-friendly products would be a competitive advantage for enterprises in the future, Vinh said.

Experts also agreed that recycling would be ideal for SMEs because it could help reduce costs as well as protect the environment.

A study by the HCM City National University's Institute of Environment and Natural Resources revealed that about 70-75 per cent of waste can be recycled.

There are more than 500,000 SMEs throughout the country.

Private sector lifts game in disaster mitigation

The private sector in Viet Nam has pledged to improve its participation in disaster mitigation work.

At a workshop held in the central Province of Da Nang last Friday, the Viet Nam Chamber of Commerce and Industry inked a memorandum of understanding with the Central Committee for Flood and Storm Control on improving public-private partnership (PPP) in disaster risk management. The MoU mentions in particular a heightened role for the private sector disaster risk prevention and mitigation.

The main goal of public-private co-operation in disaster management is to mobilise all the resources in the community for disaster prevention and mitigation work.

Both the community and the enterprises would benefit from the collaboration which would also contribute to sustainable development, the MOU says. It also says that awareness and ability of the community and enterprises in disaster mitigation and post-disaster reconstruction will be lifted by the partnership. Improving the involvement of private sector in natural disaster mitigation would help boost the effectiveness of Viet Nam's response to climate change impacts, participants said at the workshop.

They discussed ways to encourage the participation of enterprises in disaster alleviation work.

Every year, Viet Nam faces 12 kinds of natural disasters which include floods, typhoons, drought and forest fires. Floods and storms account for more than 80 per cent of the natural disasters hitting the country.

According to an assessment by the Asian Disaster Preparedness Centre (ADPC), Viet Nam has made major headway in disaster mitigation, especially with the launching of the programme on disaster risk management and climate change adaptation. The centre has also said that the Vietnamese government has managed to mobilize all social resources to take part in disaster mitigation work.

Thanks to increased public awareness of disaster mitigation, the damage inflicted by disasters has reduced remarkably.

Statistics compiled by the Ministry of Agriculture and Rural Development (MARD) show the reduction in casualties over the past decade. An average of more than 640 people died every year in the 1990s but the number has gone down to slightly more than 460 in the last 10 years.

Like individuals, enterprises have been also suffering from the disaster's negative impacts. A USAID study found 60 per cent of Vietnamese enterprises suffer some damage after each disaster. The study found that nearly 70 per cent of companies in Ha Noi and more than 80 per cent of companies in HCM City were willing to contribute to post-disaster reconstruction.

The workshop heard that after three years of operation, the central region's fund for natural disaster prevention has raised nearly VND100 billion (\$4.87 million) which has funded 47 public works that help communities cope better with natural disasters.

Many enterprises have spontaneously contributed their efforts, but this has meant that their charity work has not been as effective as they could have been, said deputy Minister of Agriculture and Development, Dao Xuan Hoc.

Concurring with Hoc, the deputy Director of Da Nang Agriculture and Rural Development, Huynh Van Thang, said aid relief has not been equally distributed to affected regions and areas because of a lack of co-ordination between authorities and enterprises.

Desalination technology to solve water issues

A new seawater desalination technology demonstrated by German firm Taprogge GmbH in Can Gio District, HCM City, last week can solve drinking water issues in the country's remote areas.

The new technology, named Taprogge Terrawater, has been applied successfully over the last two months in the coastal district, with about 5 cubic metres of potable water produced daily at the firm's demonstration plant.

While most desalination developments concentrate on the improvement of energy consumption in large scale desalination plants, Taprogge Terrawater focuses on small scale desalination which is useful in "decentralised desalination" applications, such as remote areas and islands where residents cannot get access to regular water supply networks.

Solution needed

"Especially in small and remote areas like the Mekong Delta it is excessively expensive for the Government to build water supply grid," said Detlef Taprogge, President of the company.

"There is a definite need for 'stand alone' systems which can produce safe drinking water from seawater, brackish water or even from wastewater."

While there is enough water in the Mekong Delta region, the technology used so far has proven either too complicated for non-engineers, too sensitive against variations in the source water quality, and the high consumption of energy and chemicals which are discharged to the environment.

Taprogge Terrawater technology uses waste or solar energy to run the system. To operate the system, waste heat not hotter than 70 oC – 100 oC is required. While waste heat is abundantly available in most industrial processes it is released today into the environment.

"Such waste heat is exactly what we need. It is free of charge and it does not really matter a lot how much of this energy is used as it has no price," said Nguyen Minh Phong from the local Esaco Group - Taprogge's partner in Viet Nam.

"In remote locations or on islands, generators have been bought to produce electricity, but only some 40 per cent of the energy input is converted into shaft power, the rest is let go into the environment and is exhausted to the chimney or destroyed in the cooling water system of the engine," said Tran Viet Dung. President of Esaco Group.

Truong Thuy Trang, Deputy Director of HCM City Department of Natural Resources and Environment, said the new technology would be useful for HCM City, especially Can Gio District.

She said the new desalination technology can also be applied in other remote areas in the country that are threatened by seawater infiltration.

Dam threatens National Park

Authorities in southern Dong Nai Province will submit scientific papers to the Government that back up its request to halt the construction of two hydro power plants that would eliminate 327ha of forest in Cat Tien National Park.

"We will give our data today to the Dong Nai Province's Party Committee. It will describe the negative impact of the 6 and 6A power plant proposals to the Government," said Vo Van Chanh, deputy chairman of the province's Department of Natural Resources and Environment.

Chanh, speaking at a conference held yesterday by the department, said the plant would affect the environment and economy of the province.

The plants were to be built on the upper part of Dong Nai River. They would reclaim about 327ha of forest in Cat Tien National Park located in the province and its buffer zones in Binh Phuoc, Dak Nong and Lam Dong provinces.

In the Prime Minister's national power strategy plan, the projects were scheduled to begin operation by 2015.

"We admit that the plants would help to ensure power security, but they will also create a negative impact, as we have outlined in our reports," Chanh said.

The plants would affect the national park, which is located mostly in Dong Nai Province as well as the RAMSAR Convention site's Bau Sau crocodile pond.

They would also limit the biodiversity of the local forest and create hindrances to forest protection.

The presence of the plants would not enable the park to receive World Heritage status from UNESCO, he said.

Tran Van Thanh, the park's director, said the park submitted its application for the second time in September to UNESCO.

"The Bau Sau crocodile pond, where a large population of Indochina crocodile lives, is a unique place. This is the only site where crocodiles live in the middle of the primary forest," he said.

Other scientists said that entrance to the plants would enable illegal loggers to cut down forest trees in the park.

Dr Vu Ngoc Long, director of the Centre for Biodiversity and Development, said the plants would destroy the habitats of a wide range of rare species, including the Indochina crocodile, the endangered *Normascus Gabriel* lace, the endangered *Orchidantha vietnamica* and a newly discovered flora named *Camellia longii*.

The plants would change the hydrological conditions and natural flow of the river, resulting in a water supply shortage, flooding during the rainy season and a draught in the dry season.

A report by Assoc Prof Nguyen Van Phuoc of the HCM City-based Environment and Natural Resources Institute said the plants would not affect the water supply for people, agriculture or industry in the province. It would also not increase salination, he added.

However, Lam Dinh Uy, a coordinator of the Viet Nam River Network, pointed out that Phuoc's report referred only to water volume and did not include hydrological changes to the river. Other scientists criticised the report's research findings.

Chanh added that the plants would ruin the livelihoods and traditional culture of local ethnic minorities.

"I'm not sure the investor of the plants would bear the social impact. The ethnic minority groups would be driven away from their homes and land," said Dr Long.

Chanh also said that the plants construction should be regulated by national laws on forest protection, water resources and biodiversity, and should be considered under the context of climate change.

Many of the scientists said that the case should be submitted to the National Assembly as Code 7 in Vietnamese Law on Bio-diversity.

This law requires approval by the assembly of any construction that reclaims more than 50ha of national parkland.

Earlier, the Ministry of Natural Resources and Environment and several scientists discovered that the investor of the plants, Duc Long Gia Lai Group, had handed in improper environmental impact assessment documents.

The documents were found to be altered copies of other environmental assessment documents.

Hoang Van Thong of the province's Environmental Protection Department said the construction of too many power plants on one river would have a severe impact.

The Ministry of Natural Resources and Environment will conduct inspections of power plants in the north late this year and in central and south regions next year.

Nineteen hydro power plants are located on the main stream of Dong Nai River and its tributaries.

Record river tides flood districts in HCM City

Flood tides in HCM City's rivers and canals reached 50-year highs this week, flooding several districts in the country's biggest city.

Residential areas in Districts 2, 8, Thu Duc, and Phu Nhuan began to be inundated late in the afternoon on Thursday when water spilled over dykes, canals, and sewage gates.

The Southern Hydrometeorology Forecast Centre said the tide reached a record high of 1.57m yesterday, the highest in 50 years.

On Thursday it measured 1.55m in the Sai Gon River, or above the third warning level, causing floods of at least half a metre in the four districts.

The first flood tide had occurred in the Sai Gon on Monday, Nguyen Minh Giam, deputy director of the Southern Hydrometeorology Forecast Centre, said.

Hundreds of houses were flooded, with Thu Duc's Linh Dong Ward being the worst affected after being deluged in nearly 1.5m of water.

Civil defence forces, the police, students, workers, and security forces helped move affected people and their properties to safety.

The HCM City Anti-Flooding Programme Management Centre said 20 roads would be inundated, with Luong Dinh Cua Street in District 2, Ben Phu Dinh in District 8, and Bui Huu Nghia in Binh Thanh expected to be submerged in half a metre of water.

The city Department of Agriculture and Rural Development expected water to spill over the dykes in District 12, some parts of Thu Duc, and the Sai Gon basin in Cu Chi District.

Authorities and residents in these areas have been warned. The river tides are expected to last until today.

On Thursday flood waters from upstream coupled with rising flood tides in the Cuu Long (Mekong) River caused floods in the delta region.

In Kien Giang Province, which like the rest of the delta, has been flooded for the last few weeks, at least 10 people, including eight children, have been killed so far and more than 6,000 houses flooded.

Areas around the An Giang capital Long Xuyen saw flood waters rise by up to half a metre since Thursday.

Can Tho has also been flooded.

In Hau Giang sugarcane farms have been flooded, while in Tien Giang schools have been shut down for several days.

The Cai Lay District Education and Training Office said 1,200 students have been affected by the floods and 43 schools are submerged.

Thousands of houses are in danger of being flooded in Soc Trang as the flood tide has reached the highest level in history.

Thai floods inch closer to city centre

Floods that have sparked an exodus from the Thai capital crept closer to the city centre on Friday, but hopes grew that emergency barriers would prevent a major overflow from Bangkok's main river.

The city of 12 million people is on heightened alert because of threats on two fronts – a seasonal high tide this weekend that is expected to coincide with the arrival of a mass of water from the flood-stricken central plains.

So far, however, central Bangkok has only seen minor inundation in areas along the main Chao Phraya River, including near the Grand Palace, with most of the city centre still dry.

"The Chao Phraya overflowed and flooded some areas along the river but it receded quite quickly," a spokesman for the Bangkok Metropolitan Administration said after Friday morning's high tide.

"The flooding is still serious in northern parts of Bangkok... and in three districts in the west," he added.

Friday morning's high tide – measured at 2.47m above sea level – was lower than expected, raising hopes that the river's flood barriers would prevent a major overflow.

"The Navy predicted 2.57m on Saturday but I think it will be bit lower based on today," said an official at the city's Drainage and Sewerage Department who did not want to be named.

"So the walls can still hold it back, despite flooding on the river banks which is usual during high tide."

At the same time billions of cubic metres of water lie north of the capital, creeping slowly southwards as the authorities attempt to channel the muddy brown liquid through the city's canals and rivers.

Areas in northern Bangkok have seen waist-deep flooding, leading to the shutdown of the city's second airport, Don Mueang.

Thousands of residents have left Bangkok after the government asked employers to give their staff a special five-day holiday.

The three-month flood crisis – partly caused by unusually heavy monsoon rains – has left at least 377 people dead and damaged millions of homes and livelihoods, mostly in northern and central Thailand.

More than 100,000 people have sought refuge at emergency shelters.

The crisis is taking its toll on the lucrative Thai tourism industry, with the United States joining other countries including Britain, Singapore, Canada in advising against all but essential travel to Bangkok.

Confab on climate change adaptation

The 6th international conference on community-based adaptation to climate change will be hosted by the Ministry of Agriculture and Rural Development in Ha Noi on April 16-21 of next year, the ministry announced on Tuesday.

The conference would bring together stakeholders and practitioners to share and discuss knowledge of community-based adaptation, including planning and practices from different parts of the developing world, said Deputy Minister of Agriculture and Rural Development Dao Xuan Hoc.

It was hoped that the event would enhance the capacity of practitioners to help those most vulnerable to climate change improve their livelihoods by disseminating lessons learned through workshops and conference proceedings, Hoc said.

The agenda would include a three-day field trip to community-based projects in different ecosystems in Viet Nam, followed by another three days of interactive discussions.

The conference would be open to anyone interested in community-based adaptation, including policymakers, non-governmental organizations (NGOs), research and policy institutes and government officials.

The event's other organizers include the Ministry of Natural Resources and Environment, the UN Development Programme (UNDP), the International Institute for Environment and Development, the Bangladesh Centre for Advanced Studies and related NGOs.

The conference was expected to draw 300 participants, with at least 250 from outside Viet Nam. Last year's conference in Dhaka, Bangladesh, drew the participation of 400 from around the world.