Press Review 4/2013 - Vietnam, Water and Sustainability Research,

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No	Title	Date	Source	Region	Catalogue	Description
1	VN vows to improve FDI climate	1/4/2013	VN News	Vietnam	Climate Change	Prime Minister reviews 25 years of foreign direct investment in Viet Nam
2	Belgian dredging project underway	2/4/2013	VN News	HCM	Waste water	The dredger Uilenspiegel arrived in HCM City's Saigon port on Sunday as part of the second phase of a Belgian-funded project to increase the depth of the Soai Rap River so that it can accommodate larger ships.
3	Mekong residents waste groundwater	2/4/2013	VN News	Mekong	Water	The Mekong Delta groundwater's quality and quantity have declined due to local residents' over exploitation for daily life and business use.
4	Comprehensive water supply plan could cost capital $3.4b	3/4/2013	VN News	Hanoi	Water	All Hanoians are expected to get clean water under the city's Water Supply Plan for 2030 with a vision towards 2050 recently signed by Deputy Prime Minister Hoang Trung Hai.
5	Project helps reduce pollution in rivers	3/4/2013	VN News	River Basins	Pollution	A project to reduce industrial pollution in the basins of the Dong Nai, Nhue and Day Rivers kicked off in Ha Noi yesterday.
6	Erosion threatens Mekong houses	4/4/2013	VN Net Bridge	Mekong	Environment	Land erosion in the Mekong Delta provinces, where rivers crisscross, is displacing thousands of families and damaging dozens of houses.
7	HCM City tackles erosion hotspots	6/4/2013	VN News	HCM	Environment	The People's Committee of HCM City has approved investment in 41 erosion-prevention projects in eight city districts to prevent further damage to local households and businesses

V - D OFFICE

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8	Weather forecasting to be improved	6/4/2013	VN News	Vietnam	Environment	Le Thanh Hai, deputy director of the National Centre for Hydro-Meteorological Forecasting, talked to Viet Nam News about the strange weather conditions the country has been experiencing.
9	Flood preparation essential as storms approach East Sea	8/4/2013	VN Net Bridge	Vietnam	Environment	As many as 13 tropical storms will reach the East Sea –with half of them likely to hit Viet Nam, said Bui Minh Tang, director of the National Hydro Meteorological Forecast Centre.
10	Mekong hit by climate change	8/4/2013	VN Net Bridge	Mekong	Climate Change	A new study on Climate Change Impact and Adaptation in the Lower Mekong Basin released on March 29 has revealed that the effects of climate change in the basin is worse than the global average.
11	Falling reservoir levels to hit water supplies	9/4/2013	VN News	Central VN	Water	Water levels in many reservoirs located in the central and Central Highland regions have fallen close to the "dead level" while the ongoing widespread drought continues to hit the area.
12	Quang Nam educates locals about mine risks	13/4/2013	VN News	Quang Nam	Mining	Danish Demining Group (DDG) Vietnam on April 12 launched an education project for the prevention of accidents related to landmines and unexploded ordnances (UXO) in central Quang Nam province's Duy Xuyen district.
13	Vietnam, Australia boost mining cooperation	14/4/2013	VN News	Vietnam	Mining	Viet Nam's response to climate change will focus on adaptation, which would be mainly funded by State budget.

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14	**VN must adapt to climate change**	**18/4/2013**	**VN News**	**Vietnam**	**Climate Change**	**Viet Nam's response to climate change will focus on adaptation, which would be mainly funded by State budget.**
15	**Assembly reviews hydro project environment risks**	**25/4/2013**	**VN News**	**Dong Nai**	**Environment**	**Authorities in southern Dong Nai Province have asked the National Assembly to reject the proposed hydro-power projects Dong Nai 6 and Dong Nai 6A because of environmental risks.**
16	**Hospital, factory sewage flows into Hai Phong rivers**	**25/4/2013**	**VN Net Bridge**	**Hai Phong**	**Waste**	**Biggest rivers of Da Do, Gia and Re of northern port Hai Phong City, as the city's main water source, are getting seriously polluted.**
17	**Japan helps nation prepare for floods**	**26/4/2013**	**VN News**	**Vietnam**	**Environment**	**The second phase of Viet Nam's 'society resilient against disaster' project was launched yesterday with the signing of an agreement between several Vietnamese provinces and the Japan International Co-operation Agency (JICA).**

1. VN vows to improve FDI climate

Prime Minister reviews 25 years of foreign direct investment in Viet Nam

Viet Nam will further concerted efforts to attract and effectively use foreign direct investment (FDI), pledged Prime Minister Nguyen Tan Dung at a national conference held yesterday in Ha Noi..

Reviewing the nation's 25 years of absorbing FDI, the Government leader said, "Attracting foreign investment is the right policy as it has contributed greatly to realising many important socio-economic development goals in the country."

The foreign invested sector has made positive contributions to Viet Nam's economic growth over the past 25 years, he noted.

More efforts will focus on improving the investment climate, perfecting market mechanisms, accelerating administrative reforms and human resource training, he stressed.

The sector was encouraged to develop in a stable, long-term manner and on an equal footing with other economic sectors, thus making use of the country's internal strength and comparative advantages.

More and more foreign investors chose Viet Nam as a trusted destination for their long-term investment, Dung said.

As of February this year, foreign investors had poured nearly US$211 billion into 14,550 projects in Viet Nam while the disbursed volume stood at some $100 billion.

The foreign-invested sector accounted for 25 per cent of the country's total investment capital and over 60 per cent of the total export value in 2012. It also contributed $3.7 billion to the State budget in 2012 and created millions of jobs for the locals.

Despite these positive results, there remained weaknesses and limitations in the counntry's FDI attraction such as an investment imbalance regarding industries, slow capital disbursement and a low content of high technology and new technology in invested projects.

"All these limitations and shortcomings required comprehensive solutions to be addressed," Dung said.

He asked relevant ministries, sectors and localities to supplement regulations to attract large projects in infrastructure construction, hi-tech and support industries.

Approved socio-economic infrastructure planning schemes would be made public to all investors, including foreigners, enabling them to better prepare for their investment, Dung said.

Future investment promotion activities needed to be co-ordinated on a national scale to prevent unhealthy competition among localities, he said.

Tran Du Lich, a member of the National Advisory Council on Monetary and Financial Policies, said now was the right time to take further initiatives in seeking new FDI.

The nation should select strategic investors based on specific areas, he said, outlining hi-tech industries such as IT, biological technologies for agriculture, support industries, infrastructure construction and finance as promising sectors for FDI attraction.

Stronger commitments from local authorities to cut off administrative procedures are also necessary to create more favourable conditions for foreign investors, he said.

Baking Lich's suggestion, the Japan Business Association in Viet Nam chairman Daiken Murakami said Viet Nam should clarify which products the support industries should focus on, and the government then should have concrete policies to attract investment in those industries.

Hai Phong People's Committee chairman Duong Anh Dien petitioned the State to select localities which have abundant potential to attract FDI to provide financial assistance for their infrastructure development.

Investment promotion should also target specific foreign investors, he said, adding that solving difficulties facing investors were also needed.

2. Belgian dredging project underway

The dredger Uilenspiegel arrived in HCM City's Saigon port on Sunday as part of the second phase of a Belgian-funded project to increase the depth of the Soai Rap River so that it can accommodate larger ships.

The ship will dredge 54 kilometres of the Soai Rap River, creating a shorter route for vessels coming from the sea into Hiep Phuoc Port area in Nha Be District.

The ship, 142.8 metres long and 26.8 metres wide, has a container of 13,700 cubic metres, and can dredge up to 70,000 cubic metres of mud a day.

In addition to the Uilenspiegel, about 30 smaller ships are also being used to dredge the river. The ship is operated under a contract signed between the Soai Rap River Dredging Investment Management Board under the HCM City Transport Department and the Belgium-based Dredging International NV Company.

The project's second phase is expected to be finished by April next year.

At least 54 kilometres of water will be dredged, increasing the river's depth to 11.5 metres, according to the board.

Originally, the river had a depth of five to six metres, but in the first phase (2009-10) of the project, the river was dredged to a depth of 9.5 metres, allowing vessels of 40,000-50,000DWT to traverse it. After the second phase, the Hiep Phuoc Port in HCM City's Nha Be District will be able to receive larger ships with a loading capacity of 50,000-70,000DWT.

The final phase of the project will dredge this same section of the river to a depth of 12 metres, allowing it to receive vessels with a loading capacity of more than 70,000 tonnes by 2015.

Of the investment of nearly VND2.8 trillion (US$134 million), VND2.2 trillion ($105 million) comes from Belgian Official Development Assistance (ODA) loans and the rest from the city budget.

Nguyen Van Cong, Deputy Minister of Transport, said the project would help increase connectivity among seaports and enhance logistics and export services in HCM City.

A representative from the Viet Nam Seaports Association said dredging the Soai Rap River would help to reduce transport costs and make Vietnamese products more competitive.

The use of the Soai Rap River, together with Cai Mep – Thi Vai River in Ba Ria – Vung Tau Province, is expected to help the southern economic zone become one of the country's most important zones and Hiep Phuoc Port one of the major ports in the region.

3. Mekong residents waste groundwater

The Mekong Delta groundwater's quality and quantity have declined due to local residents' over exploitation for daily life and business use.

There are more than 400,000 household bore wells besides hundreds of water-supply stations that draw groundwater in the region. The water is also used for agricultural production and aquatic cultivation.

Tran Van Ho in Soc Trang Province's Vinh Chau Town said he used water from his family's 110-meter deep bore well to irrigate vegetables and watermelons.

"Without this bore well, my family could not produce anything," he said.

Duong Quoc Viet, head of the Soc Trang Sub-department of Irrigation and Flood and Storm Prevention and Control, said groundwater was being used wastefully.

Of the used groundwater, only 20 per cent irrigates crops and the rest just flows away.

The province has told people to use a drip irrigation method, but local residents ignore the method.

Because there is not enough water for household use and production, the province has found it difficult to ban bore well use.

Soc Trang has more than 78,000 household bore wells, according to the province's Department of Natural Resources and Environment.

In Bac Lieu Province's rural areas, groundwater is being used extensively, said the province's Centre for Clean Water and Rural Environmental Sanitation for Rural Areas. Bac Lieu has nearly 6,200 bore wells.

Dr. Le Anh Tuan of Can Tho University's Research Institute for Climate Change said the exploitation of groundwater in the Delta on a large scale could lead to land depression.

Sea water levels are already rising, according to Nguyen Ngoc Tran, director of the Cuu Long Delta Development Research Institute.

The Bac Lieu Centre for Clean Water and Rural Environmental Sanitation for Rural Areas said groundwater contains alum and salt. Bac Lieu water quality has declined in general.

The water level of many bore wells in Bac Lieu has fallen by 10-12 metres over the last few years, according to the National Observation Centre.

In Soc Trang Province, the groundwater level has also fallen by 0.5-1 metres a year.

Tran Van Thanh, deputy director of the Soc Trang Province Department of Natural Resources and Environment, said the province's groundwater contained too much alum and iron.

The department has issued warnings to the public, asking them to not use groundwater for irrigation.

Because many abandoned bore wells had not been filled properly, the water has become polluted.

4. Comprehensive water supply plan could cost capital $3.4b

All Hanoians are expected to get clean water under the city's Water Supply Plan for 2030 with a vision towards 2050 recently signed by Deputy Prime Minister Hoang Trung Hai.

By 2020. the city's population will require an estimated 1.28 million cubic meters of clean water each day. This number will increase to 1.39 million by 2030.

The VND72 trillion (US$3.4 billion) project will build 24 water supply plants on the Hong (Red) River, Duong River and Da River to meet the growing demand.

Funding will be mobilised from various sources including the State Budget, official development assistance and international and domestic capital, Hai said.

Hai assigned the Ministry of Natural Resources and Environment to co-operate with the city People's Committee to implement the plan.

He also ordered the ministry to identify the underground water reserves in the city and assess how exploiting the underground water would impact land and water resources.

Ha Noi has about 6.4 million people living on an area of 3,300 square kilometres. According to local authorities, 100 per cent of the population in urban districts has access to clean water, while only 33 per cent of those living in outlying areas enjoy these conditions.

5. Project helps reduce pollution in rivers

A project to reduce industrial pollution in the basins of the Dong Nai, Nhue and Day Rivers kicked off in Ha Noi yesterday.

The five-year project will be initially carried out in four provinces – Ha Nam, Nam Dinh, Ba Ria–Vung Tau and Dong Nai – with a total investment of nearly US$59 million, including $50 million in loans from the World Bank.

Vu Dai Thang, Head of the Industrial Zone Management Department under the Ministry of Planning and Investment, said that under the project, 17 observation stations will be set up to monitor the amount of waste discharged into the rivers and a fund will be established for enterprises to build waste water treatment systems.

At least 10 industrial zones in the four provinces will receive preferential loans to build their treatment systems, while 2,500 officials will be trained to improve their pollution management capacity.

6. Erosion threatens Mekong houses

Land erosion in the Mekong Delta provinces, where rivers crisscross, is displacing thousands of families and damaging dozens of houses.

In An Giang and Dong Thap provinces, thousands of households are scheduled to be relocated to safer areas because of erosion along the Tien and Hau rivers, two tributaries of the Mekong River.

The two provinces have asked the Government to fund an additional 24 residential areas to relocate more than 6,500 households in erosion-prone areas.

Erosion has worsened along the Tien and Hau rivers, as river levels are low because of the dry season, according to the An Giang Province Department of Natural Resources and Environment.

In An Giang's Phu Tan District, land erosion of one to two metres deep each year has occurred along a 1,500-metre section along the Tien River in Long Hoa Commune. Last year, erosion of this section caused damages to six houses.

This year, provincial road 954 could be affected as well, according to the province's department.
In Tien Giang Province, nearly 2,000 households along the Cho Gao Canal are concerned about their homes as erosion continues along the canal's banks.

In Can Tho, seven of 12 houses located in an erosion-prone area in My Khanh Commune in Phong Dien District collapsed into a river on Monday.

Tran Hoang Lam, chairman of the My Khanh Commune People's Committee, said that riverbank erosion in this area had caused cracks in five other houses in the area.

"The houses are leaning and could collapse at any time," he said, adding that local authorities had moved residents in these houses to safer areas.

Land erosion has caused total damages of VND3 billion to the 12 households.

Also, nearly 2,000 houses in Can Tho's Phong Dien District are located in erosion-prone areas, according to the district's People's Committee.

Nguyen Long Hoai, head of the Ca Mau Province's Irrigation Sub-department, said the impact of climate change and rising sea water levels had caused severe erosion of the East-Sea and West-Sea dykes.

Since the end of last year, Ca Mau has spent more than VND100 billion (US$4.7 million) to upgrade 3.5km of the West Sea Dyke.

The upgrade is expected to be completed before the beginning of the rainy season.

Other coastal provinces such as Bac Lieu, Soc Trang, Kien Giang and Ben Tre have also faced coastal erosion in recent years.

The 50-km-long Vinh Chau Beach in Soc Trang Province's Vinh Chau District has seven severely eroded sites totalling 2-km long.

Huynh Ky Hamlet in Vinh Chau's Vinh Phu Commune is one of the most seriously eroded sections along the coast, according to the Soc Trang Irrigation Sub-department.

However, the province, in an effort to save rice crops, upgraded only 2km of the Huynh Ky Dyke.

The other eroded sections of the coast are waiting for investment capital, according to the sub-department.

In addition, land erosion has also affected six islets in Soc Trang Province.

7. HCM City tackles erosion hotspots

A landslide along the Xom Cui River in HCM City's Binh Chanh District. The city will conduct 41 erosion prevention projects to prevent further damage to residents' lives and businesses.

The People's Committee of HCM City has approved investment in 41 erosion-prevention projects in eight city districts to prevent further damage to local households and businesses.

To cost a total of VND171.39 billion (US$8.1 million), the projects will also include improvements to rural transport, high-tide control, water drainage and irrigation.

Work will be done in areas with the highest need, including Thu Duc, Binh Thanh, Binh Chanh, Can Gio, Cu Chi, Hoc Mon and Nha Be districts as well as District 12.

The city's Department of Planning and Investment and local departments will submit project plans to the People's Committee for approval.

In Nha Be District's Hiep Phuoc Commune this year, one house and 100sq.m of land fell into the river due to land erosion, according to the city's Steering Committee for Flood and Storm Prevention and Control.

On Wednesday, officials from the city's People's Council's economic/budget division inspected vulnerable areas on Thanh Da Peninsula in Binh Thanh District.

Seven ongoing sub-projects are being conducted on the peninsula by the city's Inland Waterway Management Authority.

However, 42 households have not agreed to relocate, and the project has been stalled because of land clearance issues.

At a working meeting with HCM City officials, the Binh Thanh People's Committee also asked the city to allocate VND2 billion for two projects in need of urgent land clearance and compensation.

HCM City aims to eliminate 13 of 62 erosion-prone sites by completing several projects to prevent river and canal bank erosion this year, including sections of Thanh Da canal, a 233m-long bank embankment along the Sai Gon River in Thu Duc District, and a 400m-long river embankment in Nha Be District's Nhon Duc Commune.

8. Weather forecasting to be improved

Le Thanh Hai, deputy director of the National Centre for Hydro-Meteorological Forecasting, talked to Viet Nam News about the strange weather conditions the country has been experiencing.

Continuous hailstorms have wreaked havoc on at least eight northern mountainous provinces since last week, causing one death, 43 injuries and huge damages to property. In addition, the drought, which is believed to be the most severe in the last decade, has devastated the central region for several months. Do you think that these are unusual weather phenomena?

Firstly, we should clearly distinguish the two types of weather phenomena. Drought in the central region belongs to the category of ‘extreme' weather while whirlwinds and hailstorms should be classified as ‘severe' weather.

Extreme weather phenomena are rare and irregular occurrences. They happen about once every couple of years, and they usually come in the form of droughts, floods and powerful storms.

The drought in the central region is linked to the previous rainy season that finished in late October 2012, much earlier than the usual December. Rainfall only reached half the expected amount and the region saw only a few storms of note last year, except for Gaemi in October.

As a result, water levels in hydro-electric power plants, reservoirs and groundwater have been seriously reduced. The drought is forecast to last until the end of July in the central region, with rains expected to arrive at the beginning of August.

The increasing number of extreme weather cases is thought to be one of the effects of climate change, while severe weather is now occurring on a cyclical basis in many regions around Viet Nam. bringing hailstorms and thunderstorms.

Severe thunderstorms are most common in the northern mountainous provinces of Lao Cai and Ha Giang during spring – end of March to May.

I think the hailstorms that hit northern mountainous provinces in late March are not unusual. However, the magnitude of these hailstorms might be the biggest yet. We recently measured hail stones with an unprecedented diameter of 10-14 centimetres. Hail stones normally are no bigger than 3-5 centimetres, the same size as an average big toe.

We may see even more severe thunderstorms continuing to occur in northern mountainous provinces until May.

How can we improve our forecasting capacity to help people take immediate precautions?

Extreme weather is foreseeable. By November of last year, we had already forecast the drought that is now hitting the central region.

However, it is difficult to give detailed forecasts to communes and wards about severe thunderstorms. The lack of facilities and human resources are one of difficulties we meet, so we are only able to give warning about heavy rains and thunderstorms in big areas such as the whole region of the north, central or the south.

Severe thunderstorms are a weather phenomenon happening on a small scale- small in terms of both space and time- making them hard to predict.

We can forecast in detail about how and when a storm or tropical pressure system will hit because storm and tropical pressure systems reach out hundreds of kilometres and over five or seven days.

Meanwhile, severe thunderstorms, including hailstorms, only spread out over dozens of kilometres and last for just a few minutes. So warnings can only come 1-2 hours beforehand.

Tornadoes are one such example. In America. a tornado's warning time is only 5-10 minutes before it occurs and it covers just hundreds of metres and lasts only for a few minutes.

Recently, big cities such as Da Nang, Ha Noi, Hai Phong and HCM have piloted warning systems that can give a short-term alert for heavy rains and thunderstorms. However, such warnings cannot yet be reproduced in other provinces due to the shortage of human resources and facilities.

In the long term, Viet Nam will draft a plan to operate a digital weather forecast system with observation stations, weather radar and advanced technologies to upgrade on their current weather forecasting activities. Such plans however will require a big investment in time and will need a strong strategic plan.

What advice would you give for people living in regions vulnerable to extreme weather and severe thunderstorms?

The people living in the mountainous provinces near Hoang Lien Son Mountain particularly should observe weather changes to detect severe thunderstorms early.

Severe thunderstorms occur when black clouds cover the sky during the day time, which can continue longer into the night if there is a sudden drop in temperature.

Following weather forecasts on the radio and television is also highly recommended.

9. Flood preparation essential as storms approach East Sea

As many as 13 tropical storms will reach the East Sea –with half of them likely to hit Viet Nam, said Bui Minh Tang, director of the National Hydro Meteorological Forecast Centre.

During a meeting to review last year's flood prevention and rescue activities, Tang warned that this year's rainy season would see many dangerous developments.

He urged localities to take action to prevent strong storms, flash floods and landslides in the northern mountainous regions and Central Highlands.

Drought in the central and southern provinces will likely ease by the end of August, the director said.

Four of the 10 storms that hit the East Sea last year caused severe consequences to Vietnamese people and property, according to the National Steering Committee for Flood and Storm Prevention and Control.

Natural disasters resulted in 258 people dead and missing and wounded 408 people. Losses reached about VND16 trillion (US$762 million).

Nguyen Viet Hung, deputy chairman of the northern province of Nam Dinh's People's Committee, said that it was necessary to install more observation stations in order to be able to predict and respond to floods and storms in a more efficient and timely fashion.

"We hope to receive more investment from the Government and related agencies for facilities offering climate and hydro meteorological forecasting and helping localities respond to natural disasters," Hung said.

Lieutenant-general Tran Quang Khue, Deputy Chief of the General Staff of the Vietnamese People's Army and deputy head of the National Search and Rescue Committee, emphasised the need to step up inspections of fishing ships.

"We should not allow ships that fail to meet technical standards and lack contacting equipment to go to sea," he said.

Currently, ships are not even required to provide life-jackets, according to Khue.

Minister of Agriculture and Rural Development Cao Duc Phat, who is also the head of the National Steering Committee for Flood and Storm Prevention and Control, asked relevant agencies and localities to ensure that rescue equipment was available and that enterprises and households were aware of contingency plans for floods.

Irrigation projects such as dykes and reservoirs, in addition to electricity and communication systems, must also be strengthened before the rainy season came, Phat said.

Do Quang Vinh, deputy head of the Ministry of Industry and Trade's Flood Prevention and Search and Rescue Board, said local agencies must co-operate more closely with hydro-power plants in their areas to manage the water level in reservoirs and control floods.

10. Mekong hit by climate change

A new study on Climate Change Impact and Adaptation in the Lower Mekong Basin released on March 29 has revealed that the effects of climate change in the basin is worse than the global average.

Fish farms in the Mekong Delta province of An Giang. Climate change is likely to have a great impact on fish farming along the Mekong River as erratic rainfall will disrupt the flood pulse cycle of the river, predicts a new study.

Final results of the United States Agency for International Development (USAID)-funded study, that were released at a regional workshop in Bangkok, indicate that changes in climate will likely trigger decreases in yields and in the suitability of key commercial and staple crops of the region.

The basic staple crop of the region – the rain-fed rice – would see a significant decrease in yield in seven out of eight provinces across the region that had been identified by the study as "hot spots."

These included two provinces of Viet Nam in Gia Lai in the Central Highlands and Kien Giang in the Cuu Long (Mekong) Delta.

The study- that falls under USAID's Lower Mekong Initiative – downscaled the global climate models for this region that is not only highly vulnerable to the impact of climate change but also significantly dependent on its natural resources for livelihoods.

Apart from detailing climate projections and trends, the study examined how changes in temperature and rainfall would affect land suitability and species productivity for a range of livelihood sectors.

Speaking at the workshop, lead author of the study, Dr. Jeremy Carew-Reid of the International Centre for Environmental Management, said: "We've found that this region is going to experience climate extremes in temperature and rainfall beyond anything that we expected."

The study projected that the annual average temperature in some parts of the Lower Mekong Basin, including the eastern plains of Cambodia and Tay Nguyen (Central Highlands) of Viet Nam, would increase by 4 to 6 degrees Celsius by 2050.

This figure, which is two or three times higher than the so-called "critical threshold" of 2 degrees Celsius, makes a climate catastrophe a realistic possibility.

The region is projected to have drier dry seasons that start earlier and wetter wet season which start later. Changes will be greatest in the wet season and the areas that will experience greatest change include the Sekong, Sesan and Sre Pok catchment area of eastern Cambodia and the Cuu Long (Mekong) Delta of Viet Nam and Cambodia.

While hotter climate and higher rainfalls may trigger shifts in crop suitability around the region, some areas in higher altitudes, such as northern Thailand or northern Lao, would be better adapted and will be able to grow a number of industrial crops such as rubber, Robusta coffee and cassava.

"Meanwhile, Robusta coffee which is now widely grown in the Central Highlands of Viet Nam would see reduced suitability in the future," said Carew-Reid.

Climate change is projected to cause an overall reduction in fish stocks in this export-oriented region, as the erratic rainfall would disrupt the Flood Pulse cycle of the Mekong River which in turn would harm fish migration and fish production.

The study found out that the greatest impact would be expected in fish farming. The region is already coping with the extreme limits of the aquaculture system and any additional stress could cause a collapse, Carew-Reid warned.

Flash floods occurring in a higher frequency would cause a sudden drop in salinity and invite diseases into shrimp ponds in Viet Nam's Mekong Delta.

While the study's main objective was to understand the impact of climate change, other participants at the workshop called for a more integrated approach that would take into consideration the development influences that are already going on.

For example, the current threat to fisheries, as some suggested, has to do more with the 30,000 dams and structures that are now in place in the region, which block various waterways for fishes.

Representatives from the Vietnamese agriculture ministry at the workshop, while welcoming the study, took its results with caution, arguing that the input for the study's modelling should have been more comprehensive.

The Lower Mekong Basin, which covers parts or whole of four countries Thailand, Laos, Cambodia and Viet Nam, is home to 65 million people, 70 per cent of whom are farmers and fishermen.

11. Falling reservoir levels to hit water supplies

Water levels in many reservoirs located in the central and Central Highland regions have fallen close to the "dead level" while the ongoing widespread drought continues to hit the area.

Surveys show that water levels in the majority of reservoirs have dropped to between 30-70 per cent of designed capacity, making it difficult to generate power and supply water for lowland areas during the dry season.

Head of the Reservoir Operations Team at A Vuong Hydropower Joint Stock Company Nguyen Minh Hoang said the water level in A Vuong reservoir was just 350m at the end of March, 30m lower than normal and the lowest in the past 37 years.

Ka Nak hydropower plant is another example where the water level is 9.5m lower than the norm.

Deputy head of the Technical Office at Vinh Son-Song Hinh hydropower plant Ngo Minh Hung said the water level in one of the plant's reservoirs was now just 5.5m above the dead level.

"There will be no more water by mid April if the plant operates at its full capacity," he said.

Prolonged hot weather from early this year has made it difficult for hydropower plants to store water to generate electricity and provide water for lowland areas to fight the drought.

The water flow running into A Vuong reservoir is just 8.3cu.m per second, equivalent to 46 per cent of the average level in previous years.

The total power generated from the Buon Tua Srah, Buon Kuop and Srepok 3 hydropower plants was just 230.8 million kWh in the first quarter of this year, equivalent to 55 per cent of the same period last year.

Electricity of Viet Nam is working with the General Department of Irrigation and local authorities to discuss ways to release water to meet local farmers' water demand for production and daily activities.

More than 17,200ha of crops in the south-central region and 51,000ha of crops in the Central Highland region are facing water shortages.

12. Quang Nam educates locals about mine risks

Danish Demining Group (DDG) Vietnam on April 12 launched an education project for the prevention of accidents related to landmines and unexploded ordnances (UXO) in central Quang Nam province's Duy Xuyen district.

The first phase of the project aims to raise awareness on threats posed by left-over landmines and UXO for more than 11,000 affected school children and more than 10,000 local people.

The project will also look to conduct capacity-building activities in building mine risk education (MRE) for almost 600 teachers of 22 target schools.

At the launching ceremony, DDG Vietnam's country director Roger Fast committed to providing almost 100,000 USD in financial and in-kind funding for this mine action project in Vietnam.

"Our target beneficiaries are children, who are major landmines and UXO victims. The project has been developed to respond to Vietnam's strong determination and commitment to meeting the targets in the approved National Mine Action Strategy for the period of 2010-25," Roger said.

"Our ultimate goal is to remove the immediate threat caused by landmines and UXO, thereby improving and establishing sustainable livelihoods for the local population," he said.

He also said that DDG will continue calling for the international community's support for Quang Nam and its neighbouring provinces to be able to deploy technical clearance.

Le Van Chi, a teacher of Duy Tan junior secondary school in Duy Xuyen district, said the project is significant to children and the local people.

"Landmines and UXO left over from the war pose a serious danger to thousands of students, buffalo herders and farmers. Students are very active and they can mistake UXO and landmines as toys, so they are the main victims of explosion," Chi said.

"Teachers, students and local farmers will have a better awareness of landmines and UXO by receiving illustrated education day by day," he said.

According to the latest report, more than 30,000 casualties have been recorded, of which 12,000 deaths and almost 19,000 injuries have occurred since the American war ended in 1975.

Quang Nam is one of provinces with the largest number of explosive remnants of war. The total contaminated area is over 1 million hectares, but only 5 percent of the area has been cleared with landmines and UXO. DDG has been present in 13 countries heavily affected by landmines and UXO.

13. Vietnam, Australia boost mining cooperation

Australia is one of Vietnam's most promising partners in collaborative mining projects, especially in technology sharing and provision of mining equipment.

The statement was made by Deputy Minister of Natural Resources and Environment Nguyen Linh Ngoc at a conference held in Hanoi on April 11 to discuss mining cooperation in Vietnam , and the latest mining techniques and developments from Australia .

Experts from nine leading Australian mining equipment and technology services companies also attended the event and provided Vietnam with many solutions to improve safety, efficiency and competitiveness in the mining sector.

Australian Ambassador to Vietnam Hugh Borrowman emphasised that the forum is an important event for national and international leaders to share information on development and collaborative opportunities in the field.

Jointly held by the Ministry of Industry and Trade, the General Department of Geology and Minerals of Vietnam and the Australian Competence Network Agency, the event is part of activities to mark the 40th anniversary of diplomatic ties between Vietnam and Australia (1973-2013) .

Australian businesses joining the Ozmine Vietnam 2013 mining mission are due to undertake site visits and technical meetings at the Vietnam Coal and Minerals Industries Group (Vinacomin) coal mine in northern Quang Ninh province and the Besra Phuoc Son gold mine in central Quang Nam province.

14. VN must adapt to climate change

Viet Nam's response to climate change will focus on adaptation, which would be mainly funded by State budget.

This left the other approach to climate change, mitigation, open for engagement by the private sector as it concerns technology changes, and low-carbon energy technologies in particular.

These remarks were made by Truong Duc Tri, deputy director of Meteorology, Hydrology and Climate Change at the press briefing on the national action plan for climate change in the period of 2010-20 held in Ha Noi yesterday.

As part of on-going efforts, Prime Minister Nguyen Tan Dung has approved 61 climate change projects that aim to deal with urgent matters. As many as 15 projects have received funding from the State to start their working plans, Tri announced.

Viet Nam has also received considerable amounts of international support. From 2010 to 2012, aid for climate change stood at US$500 million and Viet Nam was expected to receive an additional amount of $830 million.

Tri said that since the first script about climate change and sea level rise for Viet Nam by the end of this century was introduced in 2009, there has been an increased awareness about the seriousness of the issue of climate change across different stakeholders in Viet Nam, particularly local authorities.

"This has been reflected in the fact that 45 provinces out of the total 63 have finished compiling their action plans to cope with climate change," he said.

While it was clear to climate change experts that Viet Nam would opt for adaptation, some experts have expressed their concern that the country may overuse hard-engineering solutions, particularly in constructing dykes, and suggested Viet Nam focus on "no-regret" strategies.

Responding to this, director of Viet Nam's Institute of Meteorology, Hydrology and Environment Tran Thuc said that while the hard-engineering approach was obviously important in coping with climatic changes and had in fact been adopted on a large scale, it was not true that Viet Nam had abused that approach.

"In addition to this, we also put in place other options, such as soft techniques which relied on natural systems. For example, Viet Nam is planning to expand the mangrove area along the coastal lines in the south," he said.

Updated script

During the press briefing, deputy director of the Viet Nam Institute of Meteorology, Hydrology and Environment Nguyen Van Thang said that in 2012, the climate change script for Viet Nam had been updated with the latest data and analytical methods while adapting the information for local levels.

In the latest script, climate change maps were presented in low, medium and high emission scenarios.

A new component to the updated version included inundation 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.

The results showed that with a one-metre sea level rise, the risk of inundation was high for more than 10 per cent of the Red River Delta and Quang Ninh province, 2.5 per cent of coastal provinces in the central region, more than 20 per cent of the HCM City area and 39 per cent of the Mekong Delta.

More than 4 per cent of the railway system, 9 per cent of national roads and 12 per cent of provincial roads of Viet Nam were also likely to be affected.

Thuc said the script will be updated again in 2015, one year after the Inter-governmental Panel on Climate Change (IPCC) published the global and regional climate change scenarios in its 5th assessment.

Viet Nam has been using IPCC reports as a benchmark for its analysis.

Support to reduce greenhouse gas emissions

A project to increase Vietnamese industries' capacity to control greenhouse gas emissions and their ability to adapt to climate change was launched yesterday.

The US$3.05 million project funded by UNDP, which will end in 2016, aims to reduce greenhouse gas emissions in industrial production and open trading opportunities for Vietnamese companies in the "green" field.

It comprises of three sub-projects, one of which is to analyse policies and factors that have influenced greenhouse gas emissions in production and consumption as well as recommend suitable technical solutions to the matter.

The project also aims to improve policy makers' awareness of climate change and support links to industrial businesses, financial institutions and service providers to boost investment in sustainable industrial production.

Deputy Minister of Industry and Trade Le Duong Quang said that in the past, the Vietnamese Government had many programmes aimed to adapt, control and minimise the impact of climate change.

In the National Strategy of Green Growth, Viet Nam has targeted a reduction of 8-10 per cent in greenhouse gas emissions in 2020 compared to 2010, he said.

15. Assembly reviews hydro project environment risks

Authorities in southern Dong Nai Province have asked the National Assembly to reject the proposed hydro-power projects Dong Nai 6 and Dong Nai 6A because of environmental risks.

The hydro-power projects would destroy all upstream forests in the region, said the chairman of Dong Nai People's Council, Tran Van Tu.

Tu spoke at a meeting with a visiting mission from the National Assembly's Science, Technology and Environment Committee on Tuesday.

"Residents along Dong Nai River, including those in HCM City, would suffer an unimaginable disaster if the reservoirs of these hydro-power plants broke," said Tu, who also heads the group of NA deputies from Dong Nai Province.

The change of the stream's flow of Dong Nai River would seriously affect the life of 20 million residents in HCM City as well as Dong Nai and other provinces in the lower section of the Dong Nai River, Tu added.

A representative of the Ministry of Natural Resources and Environment said the project investor's Environmental Report had left out many potential problems on the side of the project. In addition, the report has not been approved by the authorities, he added.

For example, the investor, the Duc Long Gia Lai Group, did not map out afforestation plans for the land that would be used to build the hydro-power projects. Phan Thi My Thanh, deputy chairwoman of the Dong Nai People's Committee, said that existing hydro-power plants built on the upper section of Dong Nai River have had a negative impact on the socio-economic development of the lower section, including Binh Duong Province and HCM City.

These plants had brought profits, but not much, she said.

Vo Van Chanh, deputy director of Dong Nai Province's Department of Resources and Environment, said the Dong Nai 6 and 6A projects could produce 1 billion kWh of electricity at a low investment, but the project would negatively affect the living conditions of nearly 20 million people residing on the lower section of Dong Nai River.

Investment

Le Quang Huy, deputy chairman of the NA Science, Technology and Environment Committee, asked the investor and several ministries to supply further figures on the proposed Dong Nai 6 and 6A projects' environmental impact on Cat Tien National Park, as well as the legality of issues related to investment and governmental agencies' assessment procedures.

Tu said the legal status of the project must be determined before being submitted to the NA for approval.

"The hydro-power projects 6 and 6A, under articles of the Law of Heritage and the Law of Water Resources, must be carefully considered before investment decisions are made," said Tu.

"In petitions sent to the National Assembly, the Politburo, and the Prime Minister, Dong Nai Province has stated our point of view, to stop the hydro-power projects named Dong Nai 6 and 6A."

Dong Nai 6 and Dong Nai 6A, with the total design capacity of 240MW, were proposed to be built on the main stream of the Dong Nai River.

If the two plants were built, they would inundate a large forest area and would encroach on a large area of 170 hectares of the Cat Tien National Park, according to Tu.

In addition, the building of big water reservoirs and hydro-power plant dams would stop the migratory path of endangered wildlife. Also, serious environmental damages caused by the project could not be repaired.

Although the project investor has committed to protect the forest by planting trees in allocated land areas and enriching the varieties in the forest, the investor's report did not show the location for forest re-plantation.

Meanwhile, there has been no proof showing that the Cat Tien National Park's Board of Management and the local authorities of the three provinces where the projects are located have committed to allocate 372 hectares of land to the Duc Long Gia Lai Group to implement the forestation project.

16. Hospital, factory sewage flows into Hai Phong rivers

Biggest rivers of Da Do, Gia and Re of northern port Hai Phong City, as the city's main water source, are getting seriously polluted.

According to the city's Environment and Natural Resources Department, the three rivers have a total water volume of 40 million cubic metres.

The survey of Viet Nam Academy for Water Resources showed an excess of common bacteria in the Da Do River, including Coliform and E coli, is 29.4 and 11 times higher than the allowed level respectively. Ammonia also exceeds the limit by 15 times.

The contamination of Coliform, E coli and ammonia in the Gia and Re rivers also exceeds the limit, as shown by the city's water works companies.

Besides, about 30- 50 per cent of water samples recently taken from these rivers by the department does not meet requirements for the purpose of domestic use.

According to the department, the rivers are suffering from untreated sewage directly discharged from industrial areas, hospitals and residential areas.

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Nguyen Van Chon, director of Da Do Water Works Company, said the quality of water river was being seriously degraded.

There are more than 120 workshops, 50 traditional craft villages, 11 hospitals, 60 health clinics and all residential areas discharging sewage without treatment into the Da Do River.

Tran Quang Hoat, director of An Hai Water Works Company said 50 residential areas, agencies and companies and An Duong Hospital, Luong Quy Cemetery and market were directly discharging rubbish and sewage into the Re river.

Nguyen Tien Son, a resident in the city's An Duong District, said the Re River was being polluted by hundreds of residential households.

They did not think they caused pollution because rubbish from markets was dumped into the river daily, he said.

Dao Huu Loc, director of the Thuy Nguyen Water Works Company, said nearly 40 violation cases who directly discharged rubbish into the Gia River had received punishments.

The experts said too many agencies were responsible for supervising and managing the rivers, leading to overlapping of functions.

They also agreed it was beyond of their capacities to manage the operation of companies to ensure they obeyed regulations of environment protection.

The city's relevant agencies were seeking solutions to save these rivers by improving infrastructure systems to collect and treat rubbish and sewage as well as raising people's awareness about protection of river water sources.

The Da Do River is a water resource for water supply companies of Cau Nguyet, Song He and Dinh Vu Industrial Area and another 35 companies supplying water for the city's rural areas.

The Gia River is responsible to provide water for 300,000 residents in the Thuy Nguyen District and some industrial areas.

The Re River serves as a water source for two local water supply companies.

17. Japan helps nation prepare for floods

The second phase of Viet Nam's ‘society resilient against disaster' project was launched yesterday with the signing of an agreement between several Vietnamese provinces and the Japan International Co-operation Agency (JICA).

The deal will see the Government of Japan develop an integrated flood management (IFM) system in Viet Nam to counter water-related disasters.

The investment is worth Y$393 million (approximately US$4.17 million) spread across central level and the four provinces. Japanese experts will be sent to Viet Nam to help the country transfer technology while Vietnamese partners will receive training in Japan.

Vietnamese agencies involved in the project include the Ministry of Agriculture and Rural Development, the Ministry of Natural Resources and Environment and authorities from the central provinces of Nghe An, Quang Binh, Ha Tinh and Thua Thien Hue.

The phase is being funded by JICA, who will also provide machinery and equipment.

"Japan has a long history and experience of dealing with natural disasters. I hope this project can utilise that knowledge and contribute to the reduction of flood risks in the central provinces while increasing the resilience of society against the dangers," said JICA Viet Nam Chief Representative Tsuno Motonori.

The first phase of the project was carried out by JICA from 2009 to 2012. It was successful in its aims, including the formulation of an Integrated Flood Management Plan in Thua Thien Hue Province and the preparation of guidelines on community-based disaster resilience management.