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Six pressing environmental issues and seven groups of solutions to environmental protection of the country

Achievements and challenges in the past five years of implementation of the Law on Biodiversity

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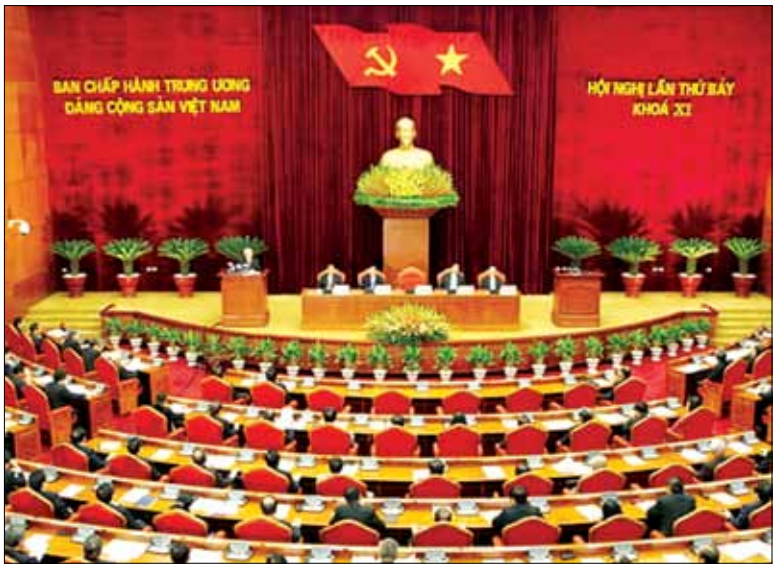
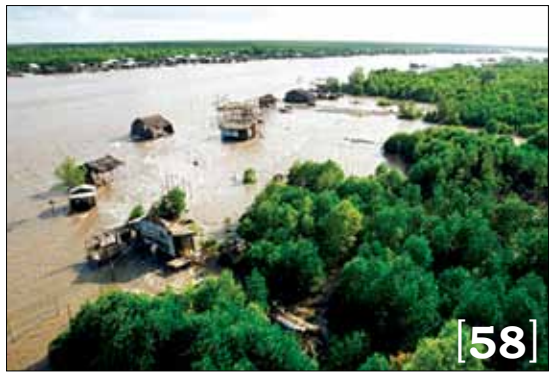


LAW - POLICY



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RESOLUTION ON "ACTIVE RESPONSE TO CLIMATE CHANGE, STRENGTHENING RESOURCE MANAGEMENT AND ENVIRONMENTAL PROTECTION" TO BE APPROVED

▲ *At the end of the 7 th Conference, the 11th Party Central Committee approved a resolution on responding to climate change, managing natural resources and protecting the environment.*

On behalf of the Politburo, General Secretary Nguyen Phu Trong said regarding the proactive response to climate change, natural resource management and environmental protection: The Central Government view the three issues as critical, diverse and multifaceted which are closely related to each other. Over time, these areas have initially captured attention in our country and gained significant results. However, there are still many limitations and weaknesses. The response to climate change still remains stroppy, passive and there have been major loss of life and property caused by natural disasters. In addition, while a lot of resources have not been tapped and used in rational, effective and sustainable way, while many other were so over-exploited that they are now on the verge of degradation and depletion. Environmental pollution is rampant, tends to increase and become more serious in some places. Furthermore, declined biodiversity is creating the risk of widespread ecological imbalance. Forecasts show that in the near future, the situation will be more complicated, unpredictable and troublesome and challenges may get even tougher and more intense.

In order to lead and direct the development of this important and complex issues, first and foremost, it is needed to raise awareness throughout the party, the people and the political system; viewing active response to climate change, resource management and environmental protection as crucial to the sustainable development of the country. The review and solving of these problems must be based on the principles of integrated and unified management approach, which involves interdisciplinary and inter-regional method which can meet the immediate requirements, assure the long-term benefits, focus on the issues in width and depth with appropriate steps.

General tasks posed include: boosting growth model transformation, restructuring the economy towards green growth and sustainable development; piloting green development model by localities, industries, field and hence gradually replicating it across the country; Partitioning bio-function as a basis for socio-economic development planning by sectors and localities consistent with the ecological characteristics of each region, in harmony with nature response to climate change; Establishing and applying the forecast model of overall impact of climate change on natural resources, the environment and socio-economics, experimenting methods of integrated and unified management of resources, environment and proper response to climate change for river basins, coastal areas and eventually replicating nationwide. Building a integrated and unified database system in compliance with international standards, with appropriate mechanisms mining, information sharing, effective use of databases in this particular field.

Accordingly, the expected goal is that by 2020, Vietnam will have achieved proactive implementation in adapting to climate change, disaster prevention and mitigation of greenhouse gas emissions intensity, with a substantial step in the exploitation resources towards rational, efficient and sustainable way, curbing rising levels of environmental pollution and declined biodiversity to ensure the quality of the living environment, maintaining ecological balance towards the green and environmental friendly economy. By 2050, Vietnam will have become a developed country and succeeded in adaptation to climate change, involving effective, feasible and sustainable exploitation and use of resources, its habitat quality, biodiversity and environmental standards will shoulder with that of other industrialized countries in the region. **VNA**

MEETING CELEBRATES WORLD ENVIRONMENT DAY - JUNE 5, 2013

Communities join hands to protect environment

▲ *Deputy PM Nguyen Thien Nhan presents Vietnam Environment Awards 2013*

On June 5th in Hue city, the Ministry of Natural Resources and Environment in collaboration with the Vietnam Fatherland Front Committee and Thua Thien - Hue People's Committee held a meeting in response to the World Environment Day (WED) 2013. Addressing the ceremony, Deputy Prime Minister Nguyen Thien Nhan said this year's WED, with the theme "Think.Eat.Save", sends an important message to each person, household and organisation so that they are more aware of impacts of the food they choose on the environment, thus contributing to protecting natural resources and the environment. Waste of food is waste of natural resources, the Deputy PM affirmed, adding that Vietnam needs to focus on preventing environmental pollution in order to create a cleaner and healthier living environment for local residents today and in the future.

At the meeting, UN Resident Coordinator in Vietnam Pratibha Mehta suggested Vietnam establish a environmentally-friendly lifestyle to minimise negative impacts on the environment and create a big alliance from the Government to social organisations and individuals to make them join hands for a future environmentally-friendly and sustainable environment.

According to the United Nations Food and Agriculture Organisation (FAO), the global food production accounts for 25% of the land area of the world, consumes about 70% of fresh water, contributes 80% of deforestation and causes 30% of the greenhouse- effect emissions. That is the biggest origin of biodiversity loss and changes in land-use types. Meanwhile, 1.3 billion tonnes of food or one third of global food output is wasted or lost every year. One in every seven people in the world suffers hunger and more than 20,000 children under the age of 5 die of hunger a day.

On this occasion, the Ministry of Natural Resources and Environment presented Vietnam Environment Awards 2013 to 31 units, including the News for Foreign Services Department of the Vietnam News Agency, 18 individuals and one community for their outstanding contributions to protecting the environment.

ACTIVITIES RESPOND TO WORLD ENVIRONMENT DAY

Localities nationwide have taken various activities to respond to the World Environment

Day, which takes the theme "Think. Eat. Save"

+ The Vietnam Women's Union (VWU) and the Bac Ninh provincial People's Committee jointly hosted a meeting during which a call for greater efforts to protect the environment and deal with climate change was made for women across the country.

+ 1,000 students of Dong Thap University in the Mekong Delta province of the same name gathered to learn about different ways to preserve the environment healthily. On this occasion, the provincial Red Cross society kick-started a campaign to raise local people's awareness of using fresh water wisely.

+ A tree planting campaign has also been launched at the Bo Y international border gate, Ngoc Hoi district, the Central Highlands province of Kon Tum, with a total of 2,300 trees planted. Kon Tum leaders joined their counterparts from Cambodian province of Rattanakiri at the ceremony.

+ Thousands of trees have been planted in many localities nationwide such as the northern mountainous province of Lang Son and Lam Dong province in the Central Highlands.

+ Joining efforts to protect the environment, the southern province of An Giang on June 5 released over five tonnes of fish into the Hau river, aiming to preserve indigenous and rare species of fish.

+ The capital city of Hanoi has also vowed to set up a network of communications staff whose responsibilities are to monitor the management of environment pollution in industrial, processing and hi-tech zones. The move is in line with the city's goal to equip industrial zones, processing zones, industrial clusters and hi-tech parks with sewage treatment systems by 2015.

+ The Lao Cai provincial Department of Natural Resources and Environment has assigned the provincial environmental protection agency to work with the managing board of industrial areas to supervise the implementation of projects on environmental pollution treatment. The agency has also inspected the performance of production facilities and businesses in environmental protection.

+ The Mekong Delta province of Soc Trang, which is among ten localities hardest hit by sea level rise, has issued a plan of action to cope with climate change during the 2011 - 2015 period.

VEA

Over the past few years, together with increasingly comprehensive international economy integration, Vietnam has witnessed remarkable economic achievements and affirmed its position in international arena. A milestone was marked in 2010 with an event of the country passing a poverty line and becoming a middle income country. However, the country also faces some challenges, including increasing environmental pollution and degradation which threaten socioeconomic achievements. According to environmental economists, without proper environmental protection measures, in the next ten years, if GDP increases by two times, pollution will increase by three times. By 2015, pollution could increase from four to five times. An increase of 1% or GDP could cause a loss of 3% GDP. Pollution causes not only economic losses but also negative impact on human health. The expenditure for public health protection from environmental pollution of 0.3% of GDP in 2010 is estimated to increase by 1.2% of GDP in 2020.

Recognizing an importance of environmental protection in a modernization and industrialization period of the country, Party and State have paid due attention to issuing policies which have resulted in positive achievements. However, together with socioeconomic development, complex environmental problems have arisen. Resolution 35/NQ-CP was issued by the Government on 18 March, 2013. This is the first thematic resolution of the Government on environmental protection. Six pressing environmental issues have been identified in the resolution.

First, industrial zones and clusters have been developed without adequate environmental infrastructure. Many industrial zones and clusters have not invested in centralized wastewater treatment plants, causing serious environmental pollution.

As of September 2012, according to statistics of Ministry of Planning and Investment, 283 industrial zones (IZs), including export processing zones have been established with a total area of about 80,000 ha in 58 provinces. Of these, the area for lease is about 52,000 ha, accounting for 65% of the total area. The rapid development of industrial zones and clusters has not matched with adequate investment in environmental infrastructure. Many industrial zones and clusters fail to comply with approved designs and to build centralized wastewater plants. According to statistics of Ministry of Natural Resources and Environment, only about 66% of industrial zones has centralized wastewater treatment plants. Some industrial zones have built wastewater treatment plants. However, the proportion of the facilities in the zones that have connected to their wastewater outputs into the treatment systems remains low. Some wastewater treatment plants have not operated in full, been left abandon and hence degraded. It is estimated that about 70% of the total of more than one million of cubic meters of wastewater per day from the industrial zones has been discharged directly to the surrounding environment without treatment. Emissions from old facilities in industrial zones and clusters with outdated technology have caused

Six pressing environmental issues and seven groups of solutions to environmental protection of the country

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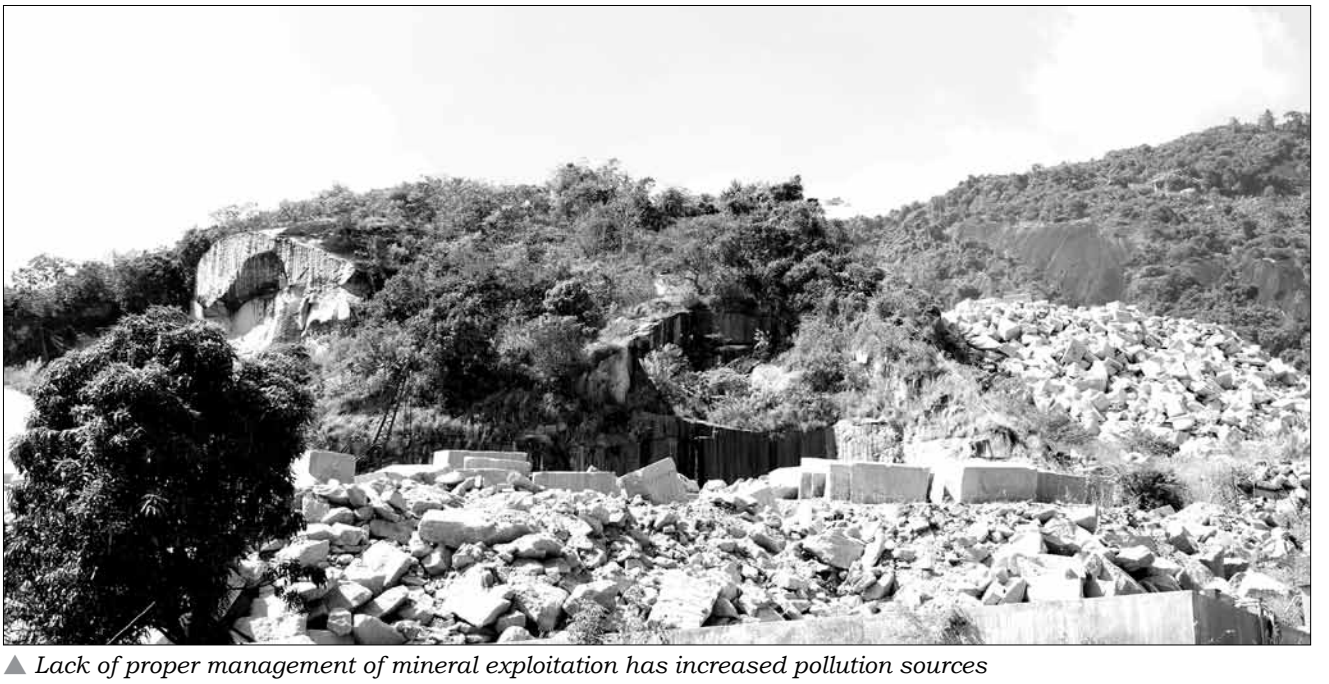
air pollution. A large volume of solidwaste from the industrial zones and clusters is a serious pollution source.

Second, a lack of proper management of mineral resource exploitation in many localities has increased pollution sources.

Since 1999, 786 mineral resource probing and 490 exploitation permits have been issued at a national level. These figures are 747 and 4,398 respectively at provincial levels. Rapid exploitation activities have caused economic inefficiency as well as environment pollution. In particular, outdated exploiting and processing technologies have produced limited added values and caused negative impact on the environment and nature. In general, mineral resource exploitation and processing have caused impact on the community. The supervision team on the environmental compliance of mineral resource exploitation of the Standing Committee of National Assembly in 2012 have pointed out that losses, inefficiency and pollution have occurred in most of the inspected projects (Report of Standing Committee of 13th National Assembly on supervision of policies and regulations of management and exploitation of mineral resource and environmental protection, 2012).

Third, a rate of collection and treatment of solid waste, medical waste, domestic and industrial wastewater remains low. Uncontrolled emissions and dusts from transport, construction and industrial facilities have caused serious pollution in big cities and river basins.

At present, municipal solidwaste accounts for about 46% of the total solidwaste and increases by 10 - 16% per year. Improper treatment and



▲ *Lack of proper management of mineral exploitation has increased pollution sources*

management of solidwaste have not only caused pollution but also created negative impact on socioeconomic development and human health. In addition, increasing medical waste, in particular hazardous medical waste, poses big risks of pathogens and poisons. Most of the urban areas have not had centralized wastewater treatment plants. Some wastewater treatment plants have been built in big cities but with limited operation. Wastewater volume is estimated at about 2 million cubic meters per day in 2009 and this figure is increasing year by year. The State of Environment Report in 2010 shows that air environment quality in big cities such as Ha Noi and Ho Chi Minh city has been degrading. Air pollution, mainly dust pollution, has been increasing. In some areas, CO, SO_2 and noise have exceeded permitted levels.

Fourth, agricultural and domestic solidwaste in rural areas are not properly collected and treated. Careless usage of chemical fertilizers and pesticides has lead to increasing pollution in rural areas. In some areas, this problem is at an alarming level. Pollution in industrial villages remains uncontrolled.

Each year in rural areas, more than 6.6 million tones of domestic waste, 14,000 tones of pesticide and fertilizer packing materials, 76 million tones of rice straw and 47 million of breeding farm waste have been generated (State of the Environment Report 2011- Solidwaste), while the collection rate of domestic waste is only about 40 - 55%. Collection of other wastes also remains limited. Pesticide packing bottles and bags are often disposed of in the fields, in some cases in water sources. This has posed risks to human health and the environment. Careless usage of pesticide has created an increasing number of poisonous cases of unsafe food. These problems have created a great barrier against the policy of developing modern rural areas.

Industrial villages have created great pressure on environmental quality. Most of the industrial villages fail to have waste collection and treatment facilities. A survey of 52 representative industrial villages shows that 46% of them face serious pollution (with respect to air, water, solid or all of these) and 23% have medium pollution. Recent surveys show that these pollution problems are increasing.

Fifth, import of outdated technology and waste in forms of byproducts is complex.

At present, import of byproduct happens in 34 provinces by 155 enterprises. The enterprises that directly use imported by-products for their production and recycling account for 75% (116 enterprises). Eight teen percent (28 enterprises) imports and redistributes byproducts and 11 enterprises import with vesting power. Each year, hundreds of tones of by-products are imported using standard procedures. Of these, many have environmental risks such as outdated or expired equipment and electronic accessories containing hazardous substances which exceed permission levels, violating Law on Environmental Protection and Basel Convention. The management and prevention of waste import are urgent tasks to prevent the risk of turning Viet Nam into industrial waste landfill of other countries.

Sixth, biodiversity is seriously threatened. The number of genes and species is decreasing. The number of threatened species is increasing.

Biodiversity has been degraded and seriously threatened. Marine, wetland, forest ecosystems have degraded that leads to decreasing ecosystem services for the society. The number of genes and species has decreased. Threatened species are disappearing at an increasing rate due to decreasing areas of natural land as a result of conversion of forests to development infrastructure, uncontrolled mineral resource exploitation, over consumption and illegal trade of wildlife animals and invasive species. Biodiversity loss and imbalanced nature will lead to enormous consequences to socioeconomic development of the country.

These problems stem from numerous causes. The main cause is limited awareness and environmental protection responsibilities of governments, managers, business and community. It is common that economic development receives more priority than environmental protection. Some environmental regulations are overlapped and infeasible but have not been revised. Law enforcement is weak. Environmental violations are becoming more complex. Organizational structure has yet met demand and revealed weakness in directions. Staff is inadequate both qualitatively and quantitatively. Environmental protection is yet paid due attention in policymaking processes. Environmental funding remains limited. Mobilization of resources from the community and the community's role in environmental law supervision are inadequate. Shortcomings exist in responsibility division among Ministry of Natural Resources and Environment and other ministries and localities.

To address these issues, the Government's resolution has set out seven priority groups of solutions.

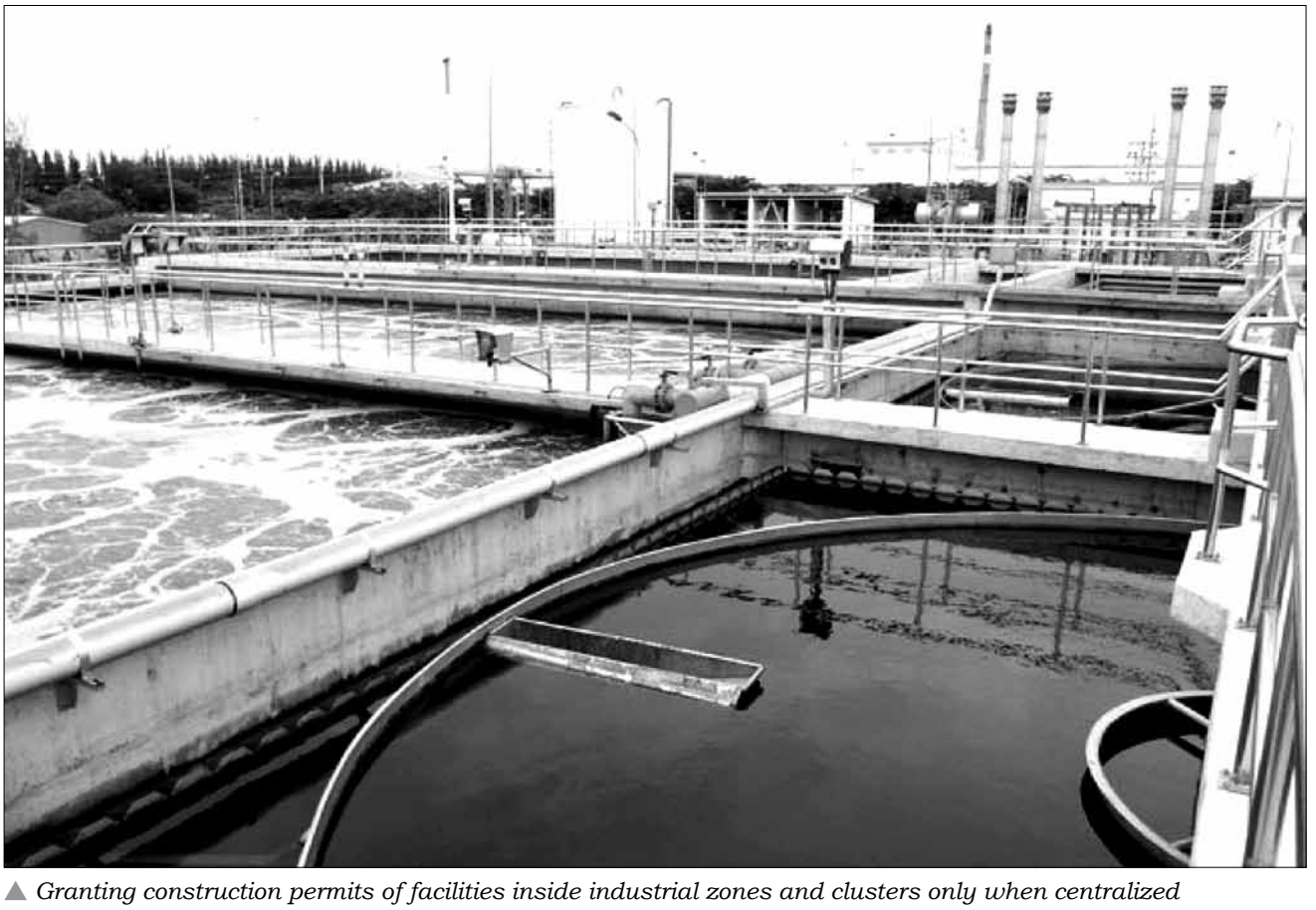
In the first group of solutions, the following measures need to be implemented: Strengthening environmental protection in industrial zones and clusters; Increasing quality of environmental requirements in strategy, master plan, plan and project appraisals; Enhancing environmental inspections in industrial zones and clusters; strictly dealing with violating establishments, ceasing or banning operations for serious polluters; Publicizing environmental violators; Granting construction permits of facilities inside industrial zones and clusters only when centralized wastewater treatment plants have been built; Improving strategic environmental assessment, in particular the appraisal process; Increasing supervision after environmental im-

pact assessment appraisal, ensuring that before operation, projects must have environmental facilities verified.

The second group of solution focuses on environmental protection in mineral resource exploitation. This group includes increasing inspections on resource exploitation, transport and processing, strictly dealing with violations, issuing environmental regulations for these activities, clarifying responsibilities and obligations of organizations and individuals in exploitation, transport and processing of mineral resources.

The third group deals with pollution remediation and environmental rehabilitation in rural areas and industrial villages. This group of solutions includes: Enhancing control of agricultural chemical usage; Increasing collection and treatment of pesticide and fertilizer packing materials; Taking effective measures of treating solidwaste in rural areas and breeding farms; Allocating land for building environmental infrastructure, including waste treatment facilities; Remedying industrial villages and pesticide storages under a framework of the National Target Program on pollution remediation and environmental rehabilitation of the period 2012 - 2015; Implementing a master plan of environmental protection in industrial villages; Developing and issuing mechanisms to mobilize state funding and other sources of funding for improving infrastructure of certified industrial villages, especially for traditional villages; Reviewing industrial village planning and making lists of types and scales of industrial villages that need to conserved and developed, those that need to be eliminated; Issuing policies to support technology development, training, market development and investment; Developing village rules of environmental protection; Reviewing and adding environmental requirements into criteria for verifying industrial villages; Increasing inspection and handling violations; Zoning serious polluting facilities and taking preventive measures to mitigate risks to human health; and integrating environmental protection in the National Target Program on developing new rural areas of the period 2011 - 2020.

The fourth group of solutions is taking drastic measures for pollution remediation in big cities and river basins. These measures include effectively controlling for emission from vehicles; promoting public transport and clean energy transport means; issuing environmental regulations for the construction works and transport means; developing compensation mechanisms in construction activities; enforcing environmental regulations in new residential areas and public works; developing a national program on investment in wastewater treatment, focusing on big cities and river basins in the first phase; directing effective



▲ *Granting construction permits of facilities inside industrial zones and clusters only when centralized wastewater treatment have been built*

implementation of a investment program on solidwaste treatment and a master plan for medical waste treatment; speeding up relocation of serious polluters outside of densely populated areas; strictly dealing with environmental violations in transport and construction in big cities.

The fifth group of solutions deals with strict control of byproduct import. The solutions include complying with Basel Convention on controlling of transboundary movement of hazardous waste and their disposals; increasing information exchange and prevention of import of waste into Viet Nam; reviewing and revising regulations on byproduct import; developing intersector coordination in controlling byproduct import; reviewing regulations on temporary import and export of by-products.

The sixth group of solutions focuses on prevention of biodiversity losses. These include issuing a National Strategy on biodiversity conservation by 2020, vision to 2030 and a master plan of biodiversity conservation; reviewing and revising regulations on biodiversity to centralize state management tasks; studying and developing payment for ecosystem services, genetic access and benefit sharing mechanisms; enhancing state management functions; taking drastic measures on dealing with illegal threatened wildlife animal trading and consumption.

The seventh group of solutions deals with improving effectiveness of state management on environmental protection. These include revising and submitting a revised law on environmental protection to the National Assembly; developing a program on upgrading organizational structure on environmental protection from national to local levels with an emphasis on district levels; issuing guidelines for implementing an environmental crime section of Criminal Code; boosting investigation and prosecution of environmental crime; increasing state budget for environmental protection in accordance with economic growth; reviewing and revising policies on environmental socialization to mobilize more resources for environmental protection; increasing duration and contents of environmental programs on mass media, establishing an environmental channel; enhancing an integration of environmental protection into education programs; increasing environmental training in curriculum; increasing propaganda on environmental protection; issuing mechanisms to encourage organization and individual participation in environmental research and development; facilitating the transfer of waste treatment and environmentally friendly technology and green economy development models; reviewing and updating lists of outdated and polluting technologies which are prohibited from import; integrating environmental requirements into technology import appraisals; and developing an environmental science and technology research program in a list of state priority research programs.

With due attention of the Government and active participation of ministries and localities in implementing these seven groups of solutions, environmental protection will certainly make a good progress, contributing to the success of the industrialization and modernization and sustainable development■

NEARLY $60 MILLION TO PROTECT ENVIRONMENT IN INDUSTRIAL ZONES

The Ministry of Planning and Investment (MPI) has said that from now until 2018, environmental pollution will be improved through a $58.85 million Project on the management of pollution in industrial zones (IZs) in the low streams of the Dong Nai, Nhue - Day rivers.

Accordingly, the World Bank has agreed on a $50 million soft loan sourced from the International Development Association (IDA). The Government and Vietnamese enterprises have pledged to cover the rest for the Project.

The information was announced at the conference to launch the project held by the MPI and the World Bank in Hanoi on April 2, 2013. Addressing the conference, Deputy Minister of Planning and Investment Nguyen Van Trung said that the Project was important for Viet Nam to deal with challenges in environmental pollution caused by waste, waste water and industrial emission.

The Project will help further improve the management of industrial pollution in Viet Nam, especially industrial wastewater in IZs located in the four benefiting provinces for further application.

Under the plan, the Project will have three components to be carried out by the MPI, the Ministry of Natural Resources and Environment, the Viet Nam Environment Protection Fund to support the Government in building and completing the legal system on the environment.

At the conference, representatives from the four benefiting provinces affirmed that they will make greater efforts to enhance environmental protection. **VGP**

▲ *Saurus crane is a precious bird species in Vietnam and International Red Book* *photo by Minh Loc*

Achievements and challenges in the past five years
OF IMPLEMENTATION OF THE LAW ON BIODIVERSITY

PROF.DR.SC. DANG HUY HUYNH
Institute of Ecology and Biological Resources

With the objective of conservation and sustainable development of biodiversity for the socio-economic development and environmental protection strategies, the Party and the Government have issued viewpoints, policies and legal documents including laws relating directly to biodiversity conservation such as the Law on Forest Protection and Development 1991 and revised in 2004; Land Law 1992, revised in 1998 and 2003; the Law on Environmental Protection 1993 revised in 2005; the Law on Fishery 2003 and recently the Law on Biodiversity enacted by the National Assembly on 13th November 2008.

The Law on Biodiversity has inherited and expanded from laws that were enacted previously and promulgated provisions meeting the urgency, integration, practice requirements and the desire of peoples regarding environmental protection, sustainable development and wise use of ecosystems and

▲ *It is necessary to have to prevent effectively biodiversity losses*

natural resources as well as of resources made by people through many generations. The effective implementation of the Law on Biodiversity and other legal documents is the sincere expression to ancestors, predecessors, leaders of the Party and State, particularly great President Ho Chi Minh who always reminded people to protect the nature and the living environment.

After five years of implementation of the Law on Biodiversity, although it is not long but there are recognized considerable achievements in governance. Initially, the Law on Biodiversity has illustrated the harmony between conservation and development; in other words, provisions in the Law combine scientific, humanity and integration aspects in insitu and exsitu conservation management strategies and plans, for which the only focus is to serve people's activities and maintain the sustainability of Vietnam natural heritages.

The Law on Biodiversity was enacted and taken effective for 1,825 days (5 years) has contributed the basis for biodiversity conservation in terrestrial ecosystems, wetlands and marine areas of Vietnam with some encouraging achievements such as the collection of supplemental data and assessment of the biodiversity status of 164 special use forests to be used for the review and management of the natural protected area system in Vietnam, and capacity building on management and conservation of national park and natural protected areas. Some provinces have developed specific criteria for identification, management and protection of species that are in the list of endangered, rare, previous, and protective priority species (Article 37, Law on Biodiversity). Currently, the list is being finalized to submit to Prime Minister for approval; the list of protective priority species has shown scientific, economic, ecological, landscape, cultural and historical values, in particular rare and precious genetic resources of the nature of Vietnam mentioned from Article 16 to 33, Law on Biodiversity.

The identification of efficient management mechanism for ex-situ entities has provided basic information on management system, fauna gardens, flora gardens, animal rescue centers, genetic specimen preservation entities, as well as raised principles in exchange, purchase, selling, giving, storage, transport of species in the list of endangered, rare, precious and protective priority species. This is used as legal basis for management and development of ex-situ biodiversity conservation centers in Vietnam, which, to some extent, meet the re-

quirement of the restoration of precious genetic resources to gradually release the species back to nature.

The Law on Biodiversity proposed the management mechanism on access to genetic resources and sharing of benefits from genetic resources in Vietnam (Article 55 on genetic resources). This reflects the commitments of Vietnam in implementation of the third objective of the Convention on Biological Diversity, which is to share equitably and effectively the benefits from genetic resource uses. This is a very new and difficult issue in the last few years; management agencies (Biodiversity Conservation Agency, Vietnam Environment Administration, Ministry of Natural Resources and Environment) have implemented provisions of the Law by piloting in some national parks, protected areas such as Bach Ma, Ba Vi, Cat Ba, Con Dao, Bidoup Nui Ba, Van Long... As a result, communities living surrounding natural protected areas have improved their living conditions through livelihoods options and job opportunities through biodiversity conservation activities; this is the solution to achieve the consensus and agreement of communities participated in biodiversity conservation strategies.

In the past few years, many localities such as Hanoi, Nghe An, Vinh Phuc have conducted surveys on invasive alien species in order to propose measures on control and prevention regulated in Article 50 of the Law on Biodiversity: Provincial people's committee prepares the list of invasive alien species to propose prevention management measures. To support localities to have criteria on identification of invasive alien species, the Ministry of Natural Resources and Environment promulgated Circular number 22 dated 1st July 2011 guiding the preparation of the list of invasive alien species to be discovered in localities. It is expected that localities can timely identify so hidden threats of invasive alien species on ecosystems and biodiversity will be effectively prevented. Effective implementation is the compliance with the Law on Biodiversity.

Scientific studies at central and local levels have provided many scientific data on geography, landscape, land use and species resources to be used for the national and provincial master plan on biodiversity to 2020 and orientation to 2030. This is the initial result of the implementation of the Law on Biodiversity that many localities have been implementing recently.

The most outstanding achievement during the last five years of the implementation of the Law on Biodiversity is that the Biodiversity Conservation Agency has collaborated with agencies, departments, institutes of the Ministry of Agriculture and Rural Development, and international organizations to organise seminars on awareness raising and dissemination of the Law to managers and communities in localities from Cao Bang to Con Dao, Ba Ria - Vung Tau.

Clearly, the Law on Biodiversity has been enforced and complied yet at a modest extent. Despite achievements during the implementation, it is necessary to revise and improve the Law soon for the conservation and sustainable development of biodiversity in Vietnam. To contribute to achieve that important goal, the author would like to deliberate the backwards during five years of implementation of the Law on Biodiversity, of which:

Firstly, currently, the state management on biodiversity is not clear; there are overlapping between the Ministry of Natural Resources and Environment and the Ministry of Agriculture and Rural Development. This is an important issue in the management of natural resources and sustainable usage of biodiversity. As we have known, biodiversity in terrestrial, wetlands, marine and continentals shelf areas are valuable resources and potentials for the socio-economic development and environmental protection; national assets for which the State and the Government, on behalf of the nation, are responsible for management, protection and development of the natural capitals for current and future generations. The management of any natural resources must rely on the legislation. The Law on Biodiversity 2008 regulates: the Ministry of Natural Resources and Environment is responsible with the Government (representative of people) on state management on biodiversity (Clause 2 Article 6) while the Law on Forest Protection and Development 2004 regulates the Ministry of Agriculture and Rural Development to be responsible for state management on forest biodiversity. This needs to be revised so the management, conservation and sustainable development of biodiversity is under the jurisdiction of one entity as biodiversity is the diversity of all living organisms from terrestrial, marine and aquatic ecosystem. Biodiversity consists of intra-species diversity (genetic resources), inter-species (species diversity) and ecosystems (ecosystem diversity); therefore, biodiversity is also known as biological diversity.

Therefore, the Law on Biodiversity regulates that the management must cover all natural ecosystems. Species and biological genetic resources are not divided but depended on characteristics of each ecosystem. Biodiversity management is the national issue; some complicated issues affect significantly to the management, conservation and development of this precious resources. If the Government does not have scientific measures in clearly assigned responsibilities on biodiversity management in Vietnam, the result will not meet the requirement and expectations of communities and societies. The Law on Biodiversity clearly regulates the multi-sectoral mechanism in bio-

diversity management. However, it is necessary to have a leading agency to be responsible for management and investment on biodiversity conservation and sustainable development.

Secondly, The Law on Biodiversity has not clearly regulated on prohibition of unauthorized breeding, rearing and artificial propagation (Clause 5 Article 42, Law on Biodiversity). This should be taken into consideration in terms of pros and cons in rearing and artificial propagation. In practice, many wildlifes including protective priority species have practical values in human uses in healthcare, spiritual culture, education, scientific study and space science. Therefore, the Law needs to regulate specifically on principles and processes of breeding and rearing of these species that do not affect the genetic resources as well the natural ecosystems.

Thirdly, the Law prohibits to access to genetic resources of the list of rare, precious and protective priority species. In fact, the prohibition is not feasible because the access to genetic resources of precious species is very necessary and important in study and research for finding solutions on restoration and development. In fact, Vietnam has a lot of initial success in access to and breeding of precious and typical genetic resources such as Ngoc Linh gingseng (Panax vietnamensis), Eurycoma longifolia, Aquiliria trees, deer, tiger, freshwater crocodiles, Ha Tinh pheasants, Ha Tinh langur, sea turtles... Therefore, the Law needs to create the mechanism for easy access to genetic resources.

Fourthly, currently, some laws of Vietnam including the Law on Biodiversity has many articles focusing on prohibition. In fact, the prohibition is feasible or not depending on the compliance of people and the management skills of management staff. Therefore, the Law must maintain the harmony between responsibilities and benefits of relevant stakeholders.

After five years of implementation, the Law on Biodiversity has presented its outstanding, comprehensive, broad-spectrum, scientific, integration and practice features of a thematic law on management, conservation and development of biodiversity and contributed importantly in the biodiversity conservation management strategies in Vietnam. Despite shortcomings and backwards during the implementation of the Law on Biodiversity, it is necessary to review and revise the Law in the upcoming time. However, it should be stressed that the Law on Biodiversity in the last five years has been implemented and achieved inspiring results■

▲ *Taking drastic measures on dealing with illegal threatened wildlife animal trading*

Growing Biodiversity Awareness Worldwide

75% of consumers surveyed worldwide are aware of biodiversity, while 48% can give a correct definition of the term biodiversity. These are some of the findings contained in the 2013 Biodiversity Barometer Report recently launched in Paris by the Union for Ethical BioTrade (UEBT). Consumers in Brazil, China and France, according to the study, show a particular awareness about biodiversity.

"The Biodiversity Barometer is an important source of information on global trends in biodiversity awareness. The results not only demonstrate a growing consciousness, they also show that respecting biodiversity provides tremendous opportunities for business around the world", said Braulio Ferreira de Souza Dias, Executive Secretary for the Convention on Biological Diversity.

Very high biodiversity awareness in China

This year's special focus on China reveals interesting results: Apart from a very high biodiversity awareness (94%), Chinese consumers surveyed also show high knowledge of biodiversity: 64% could define correctly what biodiversity means. "The survey results do not come as a surprise. In recent years, the Government as well as civil society organizations in China has undertaken tremendous activities for communicating and raising awareness of biodiversity issues", says Zhang Wenguo, Ministry of Environmental Protection of the People's Republic of China.

Biodiversity offers branding opportunities

Responses to the question "What are the three brands you consider are making the most efforts to respect biodiversity?" were manifold and often country-specific: In Brazil, there is a clear leader with Natura (49%). In the USA, most mentioned food brands, including Kraft, Starbucks and Ben & Jerry's. UK has two leading companies: Bodyshop and CO - OP (23% and 20%). In France Yves Rocher, Nestle and Danone top the list, while in China the perceived leaders are Yili, Mengliu and Amway. "There are clear opportunities for brands to position themselves around the issue of biodiversity, and anticipate increasing consumer interest on this issue" concludes Rémy Oudghiri, Director of Trends and Insights at IPSOS.

Biodiversity reporting is growing, but still weak

"Today 32 of the top 100 beauty companies in the world refer to biodiversity in their corporate communications such as sustainability reporting and websites. This is considerably higher than in 2009, but much lower than what we found in the top 100 food companies" says Rik Kutsch Lojenga, Executive Director of UEBT. In 2013, 87% of consumers say they want to be better informed about how companies source their natural ingredients, and a large majority of consumers say they would to boycott brands that do not take good care of environmental or ethical trade practices in its sourcing and production processes.

Youth is the future of biodiversity

For brands interested in reaching consumers on biodiversity, the 2013 Biodiversity Barometer offers the following insights: Young people tend to have the highest awareness of biodiversity (80%), as well as more affluent and well-educated people. Traditional media remain by and large the key sources of awareness: 51% of all surveyed consumers learned about biodiversity through television, 33% through newspapers and magazines.

On the UEBT Biodiversity Barometer

The UEBT Barometer provides insights on evolving biodiversity awareness among consumers and how the beauty industry reports on biodiversity. It also illustrates the progress towards achieving the targets of the Strategic Plan of the United Nations Convention on Biological Diversity (CBD), and its results will be reflected in the next edition of the Global Biodiversity Outlook as a midway point analysis of the achievement of those targets. Since its first edition in 2009, the Global Research Organisation IPSOS, on behalf of UEBT, has interviewed 31,000 consumers in 11 countries (Brazil, China, France, Germany, India, Japan, Peru, South Korea, Switzerland, UK and USA). In 2013, the biodiversity barometer survey was conducted among 6,000 consumers in six countries - Brazil, China, France, Germany, UK and USA.

SOURCE -UNEP

Main contents of the draft National Strategy on Biodiversity by 2020, vision to 2030

HOANG THI THANH NHAN
Biodiversity Conservation Agency

▲ *Vietnam is one of countries that have high biodiversity in the world*

Vietnam is one of countries that have high biodiversity in the world with diverse and typical ecosystems, species and genetic resources. By now, Vietnam has identified more than 48,000 species, of which about: 7,500 microorganisms, 16,428 flora species, 10,300 terrestrial fauna species, 3,500 freshwater aquatic species and more than 11,000 marine species. Vietnam is assessed to be one of the world centers of diverse local plant and animal genetic resources, consisting of 800 plant species and 14 main poultry and cattle species. Biodiversity of Vietnam brings direct benefits to people and contributes significantly to the economy, in particular in agriculture, forestry and fishery production; maintains plant and animal genetic resources; provides construction materials and materials for food and medicine for human beings; ensures the national food security. Ecosystems also play an important role in climate regulation and environmental protection, in particular in the context of climate change.

Biodiversity in Vietnam is degrading: the area of natural forest has seriously reduced; it is estimated that only 0.57 million ha of primitive forest is left, including those in protected areas; the number of species in Vietnam Red Book increases, in 2007 the number of recognized vulnerable flora and fauna species was 882, an increase of 161 species in 1992; wetland and marine ecosystems continue to be threatened; coastal coral reefs are degraded, of which 44% of coral reefs are slightly and considerably degraded, 56% of coral reefs are seriously and very seriously degraded, even many areas are lost; the area of sea grass ecosystem reduced about 40 - 50% in the last ten years. Biodiversity degradation is potential to cause great impact on the long-term development of economic sectors such as agriculture, forestry, fishery, tourism and particularly negative impacts on ecological balance.

Main causes of biodiversity degradation consist of: inappropriate conversion of land use and surface water use purposes; overexploitation and overconsumption of biological resources; impacts from environmental pollution and climate change. The number of violation cases on wildlife trade and consumption is still very high. It is estimated that in 2010, there were 11,000 violation cases on illegal exploitation and trade of wildlife. The extinction of one-horn Java rhino, bear customization, illegal trading of rhino horns, elephant horns, tigers and many other rare, precious and threatened fauna species are causing negative impact on the image of Vietnam in the world stance.

In the last 20 years, the State has promulgated a considerably comprehensive legal framework on biodiversity conservation. Many important laws on natural resources have been enacted and revised, such as: Land Law (2003); Fishery Law (2003); Law on Forest Protection and Development (2004); Law on Environmental Protection (2005); Law on Water Resources (2012). In particular, the Law on Biodiversity (2008) creates a change on biodiversity conservation, which identifies principles and priorities for biodiversity conservation at national, ministerial, local levels; creates legal base for communities to participate in conservation of natural resources through co-management and benefit sharing mechanisms. In 1995, the Government of Vietnam approved the first "Action Plan on Biodiversity of Vietnam" right after Vietnam became a party to the Convention

on Biological Diversity. In 2007, Prime Minister approved the "National Action Plan on Biodiversity by 2010 and vision to 2020" at Decision no. 79/2007/QD-TTg dated 31st May 2007 (Decision 79). In 2010, the Ministry of Natural Resources and Environment conducted the assessment and reported to the Prime Minister on the results of the implementation of Decision 79. The report shows that, in addition to achievements in biodiversity conservation namely: the conservation area of ecosystems has been gradually increased; newly discovered species has contributed significantly to science; conserved and stored genetic resources have enhanced the values in genetic selection and creation...; the current biodiversity conservation is facing many challenges and it is necessary to have visions and measures to be appropriate with the national and international context.

The national and international context creates new challenges and opportunities for Vietnam: the biodiversity conservation master plan is a new issue but there is lack of specific legal documents and methodology, management and operationalization; the benefits from biodiversity and ecosystem services have not adequately assessed and the equitable and fair benefit sharing mechanism is not in place; the participation of communities in biodiversity management and development is limited; the impact of climate change on biodiversity is not sufficiently assessed as well as the biodiversity conservation plan response to climate change is not available; there are also issues arised from the globalization such as invasive alien species, genetic modified organisms, illegal trade and transport of wildlife and their products ...

Therefore, the newly developed National Strategy on Biodiversity by 2020, vision to 2030 not only contributes to implement the commitments of Vietnam to the Convention of Biological Diversity but also identifies objectives and priority tasks on conservation and sustainable usage of biodiversity for the sustainable development of Vietnam.

The viewpoint of the draft Strategy strengthens: Biodiversity plays an important role in the national development and climate change mitigation and adaptation, contributes to poverty reduction and enhances the living conditions of people; the conservation and sustainable use of biodiversity task is the responsibility of the whole society and the obligation of all individuals which will be only effective having the participation and self-awareness of communities and civil organizations and effective and efficient usage of international resources; the integration of biodi-

Table: List of 9 national priority programs, schemes and projects

NO	PRIORITY PROGRAMS, SCHEMES AND PROJECTS	LEADING AGENCY ON PREPARATION AND SUBMISSION	COORDINATING AGENCY	SUBMISSION TIME
1	Scheme on organization system on biodiversity	MONRE	MOHA, MARD, PPC	2015
2	Scheme on investigation, survey on biodiversity and development of the national database on biodiversity	MONRE	PPC, MOST, MARD, VAST	2014
3	Program on biodiversity awareness raising	MIC	MONRE, MARD, Protected area management board, PPC	2014
4	Program on control of trade and consumption of endangered and protective priority species	MARD	MONRE, MPS, MOIT	2014
5	Scheme on capacity building on management of protected areas	MARD	MONRE, PPC, Protected area management board	2014
6	Program on conservation of endangered native plant and animal species and their wild relatives	MARD	MONRE, MOST	2014
7	Schemes on prevention of criminals on biodiversity	MPS	MONRE, MARD	2014
8	Scheme on restoration of degraded important natural ecosystems	MARD	MONRE, PPC	2014
9	Project on valuation of ecosystem services and biodiversity	MONRE	MARD, VAST	2015

versity into national, sectoral and local development strategies, master plans, plans and policies is to ensure that development activities are in harmony with natural rules.

The overall objective to 2020: "Natural important ecosystems, rare and precious species and genetic resources are conserved and sustainably used in order to contribute to the national development towards the green economy and active response to climate change". In terms of orientation for the next 20 years, the draft strategy states: "By 2030, 25% of the degraded natural ecosystems of international and national importance are restored; biodiversity is conserved and sustainably used to bring the essential benefits to local people and contribute significantly to the national socio-economic development".

Three specific objectives on conservation of natural ecosystems, species and genetic resources are elaborated with quantitative requirements and indicators:

- To enhance the quality and the area of protected natural ecosystems, to ensure: the area of terrestrial natural protected areas make up 9% of the national terrestrial area, the area of marine protected area constitutes 0.24% of the marine areas; the forest cover rate is 45%; primitive forest is kept at 0.57 million ha and effective protection plan is in place; the area of mangroves, sea grass and coral reefs is maintained with the existing volume; 15% of degraded important natural ecosystems areas are restored; the number of natural protected areas of Vietnam recognized by the world to be: 10 Ramsar sites, 10 biosphere reserves, 10 ASEAN heritage parks.

- To improve the quality and quantity of populations of endangered, rare, precious, protective priority species, to ensure: no increase in the number of extinction species and significant improvement in the status of some endangered, rare, precious, prone to extinction species.

- To inventory, store and conserve native, endangered, rare and precious genetic resources (animal, plant, microorganism), ensuring no loss and degradation of native, precious and rare genetic resources.

Specific indicators are proposed to be appropriate and compatible with indicators of other strategies previously approved by Prime Minister: The Strategy on Forestry Development for the period of 2006 - 2020, Strategy on Fishery Development to 2020, National Strategy on Environmental Protection by 2020, vision to 2030.

The draft Strategy has proposed five target groups in order to achieve specific objectives. Based on main tasks, the draft Strategy proposed the list of nine national priority programs, schemes and projects to be implemented during 2013 - 2020 (Table).

The draft national Strategy on biodiversity by 2020, to 2030 has been submitted to Minister to review and submit to Prime Minister for approval■

PM APPROVES PLAN ON ENVIRONMENTAL PROTECTION IN CRAFT VILLAGES

Prime Minister Nguyen Tan Dung has given the green light to a master plan on environmental protection in craft villages from now until 2030.

According to the plan, environmental pollution will be comprehensively tackled in the 47 most seriously polluted craft villages nationwide in the next two years.

The addressing of pollution there will also go hand in hand with a national programme targeting pollution mitigation and environmental improvement in the 2012 - 2015.

In the next five years, facilities causing environmental pollution are expected to be removed from residential communities.

Vietnam has about 3,500 traditional craft villages, 1,000 of which now need financial support to deal with environmental pollution.

The plan is part of the Government's effort in realising Resolution 35/NQ-CP on urgent issues of environmental protection with seven tasks and solutions.

They include enhancing environmental protection at industrial parks and clusters, enhancing the requirements in environmental protection in terms of strategies, planning schemes, development plans and projects.

▲ *Bat Trang Ceramic Craft Village*

The resolutions also focus on environmental protection in exploitation of mineral resources, reducing pollution in rural areas and craft villages and then in big cities and river basins, controlling the import of wasted materials, preventing degradation of eco-systems and decline of species, and improving effectiveness of State management over environmental protection. **VEM**

BIOLOGY TECHNOLOGY - KEY TO ESTABLISH "GREEN INDUSTRY"

From February 27 to 28, 2013, in Hanoi, Ministry of Science and Technology (MOST) organized the International Workshop on Vietnam - India Biology Technology. Attending the Workshop were scientists, S&T research and development organizations of Vietnam and India.

In the Workshop, scientists focused on discussing some fields of agriculture, health, food as research on applying biology technology on preservation and development of agricultural trees; research on applying biology technology in preservation and development of animals; technology development for initial application of food and dairy industry; application of biology technology on vaccine, research on gene shortcoming for cancers and brain diseases... Deputy Minister MOST Chu Ngoc Anh clearly stated that the Government of Vietnam has always considered Biology Technology as one of four prioritized fields in the country's socio-economic development strategy. Vietnam has issued policies in strengthening the development and use of biology technology in order to maximized the exploitation, protection and development of the country's organism resources, serve for the sustainable development of agriculture, forestry and fishery, protect people's health and living environment, then efficiently serve for the country's industrialization and modernization.

The Workshop has defined biology technology is the spearhead technology of the 21 century. Biology technology achievements have been applied in many fields and brought in significant benefits for many countries in fields of agriculture, medicine, food, new materials, and clean biology energy. Biology technology has help people's life to become more safety and sustainable... Vietnam and India have many characteristics of economic development based on agriculture; therefore biology technology would play an important role and be the key to create breakthroughs for establishing "green industry" of the two countries.

It is known that on March 29, 2012, Vietnam and India signed the Cooperation Program on Biology Technology field, which focused on molecule biology field, biology technology in agriculture, biology technology in medicine and biology technology in environment.

PNR

STRATEGY FOR USING CLEAN TECHNOLOGIES BY 2020

Deputy Prime Minister Hoang Trung Hai has assigned to the Ministry of Industry and Trade to be responsible and to coordinate with the Office of the Government in order to finalize the draft strategy for using clean technologies by 2020, and vision to 2030.

Deputy Prime Minister called Ministry of Industry and Trade's attention to renovation and application of clean technologies in key industries that consume a lot of energy and charge great emissions but not only limit to the industries under the management of the Ministry. At the same time, the Ministry should research and integrate its activities, research results of development and application of clean technologies from the Prime Minister-approved programs and strategy for national technology and key product development and innovation.

VNS

GOVERNMENT APPROVED RENEWABLE ENERGY FOR WATER SUPPLY IN THE MEKONG RIVER DELTA

The Prime Minister has approved the "Renewable Energy for Water Supply in Mekong Delta" Project with total non-refundable aid of 4 million Danish krone.

The Project is to promote sustainable renewable energy water supply for rural communities in the Mekong Delta providing water to users and being used as demonstration site to make an informed change from non-renewable energy systems. Through the monitoring works, the Project makes the community understand how much energy can be saved and CO_2 can be reduced by renewable energy systems. The Project will also provide the knowledge of solar and wind energy for the local people. The Project will benefit residents of 12 provinces and a city, namely Soc Trang, Tra Vinh, Bac Lieu, Ben Tre, Ca Mau, Long An, Kien Giang, Hau Giang, An Giang, Vinh Long, Dong Thap, Tien Giang and Can Tho city. Prime Minister assigned The People's Committee of Can Tho city to verify, approve and sign related documents.

VGP

IMPLEMENT THE NATIONAL TARGET PROGRAM
TO OVERCOME POLLUTION AND IMPROVE ENVIRONMENT

Treatment of environment pollution caused by persistent plant protection chemical

MSC. NGUYEN HOA BINH
ENG. VU THANH THUY
Department of Waste Management and Environmental Improvement

The result of a realistic assessment of the current environmental problems in our country indicates that the urgent and prominent environmental pollution issues (EP) causing huge economic losses and negative impact in people's health and life as well as in future generations are coming from craft villages and from plant protection chemical (PPC) residues, normally happening in the river basins.

On implementation of Resolution no. 13/2011/QH13 on the National Target Programme for the period 2011 - 2015 issued by the National Assembly XIII 9th November 2011 and Decision No. 1206/QD-TTg on approval of the National Target Program to overcome pollution and improve environment for the period 2012 - 2015 (NTP) issued by the Prime Minister in 2nd September 2012, the Ministry of Natural Resources and Environment (MONRE) is assigned to be the lead agency of the NTP, responsible for coordinating with the ministries, ministerial-level agencies, governmental agencies and Provincial People's Committees to effectively organize the implementation for this program. The 2015 goals for the NTP include: (1) Overcoming and improving the environment quality for 47 seriously polluted villages; (2) improving and restoring the environment for 100 areas severely contaminated by pesticide stockpiles and (3) for 100 % wastewater collection and treatment projects in the urban centers grades II or upper, where wastewaters are discharged directly into the river basin of Nhue - Day river, Cau river and Dong Nai river system.

Of the three urgent environmental issues under the Program, the environmental improvement and restoration in some seriously pesticide-contaminated areas plays a critical part in the Program. Statistically, as of 31 December 2009, there are 1,153 pesticide contaminated areas nationwide, scattered in the Northern provinces and mainly concentrated in the provinces from Thanh Hoa to Quang Tri, with pesticides stockpiles from the war period and PPC was of unknown origin or smuggled. Accordingly, on 21/10/2010, the Prime Minister issued Decision No. 1946/QD-TTg, approving the nationwide plan for treatment and prevention of environmental pollution caused by persistent PPC, with the 2010 - 2015 goal of focusing on environmental treatment, rehabilitation and restoration at 240 pesticide sustained areas causing serious and particularly serious environmental pollution. Therefore, the Program aims to handle 100/240 of pesticide persistent areas causing serious environmental pollution in 2015 and contribute to prevent and minimize the negative impact of pesticide stockpiles in humans and the environment, ensuring sustainable development and achievement of objectives

After more than 2 years of NTP implementation, MONRE collaborated with Provincial People's Committees to provide financial support for treatment of 13 pesticide persistent points in 7 provinces and cities, with the total cost of VND 88.85 billion. To ensure the timelines and effectiveness of the Program as well as to achieve the goals, currently, MONRE is actively mobilizing other resources to implement and organize implementation the following contents:

▲ *It's Hon Tro pesticide persistent area in Dien Yen, Dien Chau, Nghe An in the National Target Program to overcome pollution and improve environment for the period 2012 - 2015*

First, prepare a medium-term plan to deploy the NTP period 2013 - 2015, which defines the cost, the schedule and specific measures to reach its objectives. For the task related to pesticide stockpiles, clearly identify the proposed treatment points and treatment plan.

Second, in order to enhance the effectiveness of treatment for environmental pollution caused by pesticide stockpiles, it is advisory to support a group of geographically adjacent with processing model. The experimental construction of this model will be implemented through the Project UNDP/GEF "Building capacity to eliminate POPs pesticides stockpiles in Vietnam".

Third, finish the technical guideline on the management of environmental pollution caused by pesticide stockpiles, and issue it in 2013. This will be the basic document to guide the local environmental management process from the stage of preliminary investigation, detailed investigation, priority classification, risk assessment, treatment plan development, project planning and supervision, monitoring and management after the treatment period.

Fourth, revise and promulgate regulations to replace the current Regulation 15:2008/QC-BTNMT of pesticide stockpiles in the soil, in order to create adequate legal basis for safe management and thorough treatment of PPC in the environment. It is expected to be issued this regulation in 2013.

That the NTP period 2011 - 2015 was passed by National Assembly XIII and approved by the Prime Minister have marked the great effort of the MONRE in the work of environmental protection in general and the work of pollution overcoming and environmental improvements in the areas seriously contaminated by pesticide stockpiles in particular. However, in order to effectively implement the NTP period 2012 - 2015 and the treatment and prevention Plan as well as to achieve the proposed goals, MONRE will closely coordinate with ministries, ministerial-level Governmental agencies, and Provincial People's Committees to urge, guide, control and supervise the implementation of the Program and the Plan in accordance with the direction of the Prime Minister in Decision 1206/QD-TTg and Decision 1946/QD-TTg■

Determined non-issuance

OF PERMITS FOR NEW INVESTMENT PROJECTS WHICH DO NOT MEET ENVIRONMENTAL PROTECTION REQUIREMENTS

Environment Magazine had an interview with Deputy Director of Dong Nai Department of Natural Resources and Environment, Mr. Vo Van Chanh about the results of provincial management of natural resources and environment in 2012 as well as their plan in 2013.

•Could you tell us the prominent results in the Dong Nai provincial management of Natural Resources and Environment (NRE) in 2012?

VO VAN CHANH: Although many difficulties in economic & social situation exist in 2012, Dong Nai provincial management of NRE has well completed the proposed tasks with a united effort of the staffs. The notable results are as follows:

We have completed major sector's planning, including: Land use planning until 2020 and 5-year Provincial Land use planning (2011-2015) have been approved by the Government with Resolution No. 69/2012/NQ-HDND in 30th October 2012, adjusting the planning of mineral resources exploration, exploitation and use until 2015, with a vision of 2020 and water resources planning until 2020. This is an important basis for the management of the environmental protection sector.

We focus on guiding the issuance of land use rights certificate. We have basically completed the certificate issuance according to Resolution of the National Assembly and Instruction of the Prime Minister with 611,673 certificates for 1,177,292 land parcels with total area of 458,046 ha, equivalent to 98.6% of issuance - eligible areas across the province so far.

In addition, we continue to strengthen EP work and make full use of communication activities to raise people's awareness of EP. Specifically, all the results of waste collection and treatment in the province area meet Provincial Resolution. For businesses, the province focused on promoting inspection and control of pollution, from appraising and approving the environment impact assessment reports and EP commitments, to inspect and supervise company's operation. Moreover, Dong Nai also invested in 7 air and water surface automatic monitoring stations and 13 wastewater automatic monitoring stations in the industrial zone. At the same time, Dong Nai collected 6.5 billion VND as environment protection fee, 18.2% more than the plan and 30% higher than that of 2011. We've been thoroughly handled all the "hot spots" of pollution in the province, such as: Tan Phat Tai Company, AB Mauri Vietnam Company, Kim Phong Company.

Provincial inspection and supervision are strengthened and implemented frequently. We have inspected and supervised 511 locations, 22.5% more than that of 2011 (including 114 periodical inspection units, 75 sudden inspection units; 322 enterprises; by other division, 163 environment samples, 96 land samples, 35 water resources samples and 24 mineral samples). We administratively sanctioned 247 violation cases, an increase of 58% compared to 2011, the sanctioned amount put in budget revenues was more than 4.3 billion VND, rising 38% compared to 2011.

•It is known that the EP has always been identified as one of the top responsibility of the guidelines of provincial leaders. Could you please let us know a number of solutions that have been effectively deployed locally?

MR. VO VAN CHANH:
In order to ensure set sustainable development goal, Provincial Commission, People's Council and People's Committee have always placed top priority on environmental protection task. Accordingly, the Provincial Commission issued the Environmental Protection Action Plan, the Council has issued thematic Resolution, and People's Committee has issued many policies, plans, programs, and guiding documents to direct the implementation of the local environmental protection.

Along with the province's strong direction, officials at all levels, sectors and localities in the province have made great efforts in environmental protection work. We focused on the propaganda and education on environmental protection legislation. Consequently, awareness of the importance and value of EP in the business and people community has been raised. We also have deployed many programs and projects on EP to minimize, control and gradually overcome environmental pollution. Moreover, we have regularly implemented monitoring of environmental components (e.g. air, water, and soil) with increasing frequency, volume and net-

▲ *Launching ceremony of automatic monitoring station in industrial zones*

work to monitor the changes in environmental quality. From those activities, we have detected and treated many violation cases. Annually, Dong Nai province spends a large funding source for EP work. The above results have contributed to significant improvement of the environmental quality in the province.

In addition, we put more attention to communication activities to raise people's awareness of EP. We accelerated all construction progress; bring normal and hazardous waste landfill to operation in accordance with the approved plan. The authority's inspection and control of the firms' observance of regulations on environmental protection, and their EP activities have been increasingly efficiently implemented. The province has extended and enhanced the monitoring network and currently invested in 7 automatic environmental monitoring station and 13 automatic water monitoring stations in the industrial zone.

●***Could you please tell us some key tasks of environmental protection Dong Nai in 2013?***

MR. VO VAN CHANH: In order to enhance the EP works in the province, Binh Duong Department of NRE would continue the following activities. Strengthen the management and protection of natural resources and environment; include environmental protection in the planning, sectoral development planning, programs and projects to ensure the harmony between economic development and environmental quality; at the same time focus on mitigation measures for pollution levels, recession recovery and environmental quality improvement.

Improve the quality of wastewater treatment in industrial zones, ensuring that 100% operating industrial zones have concentrated wastewater treatment systems as environmental standards. Keep regular investment; ensure that 100% of the industrial zone filled with over 50% area would have automatic wastewater monitoring system. Construct waste water treatment system in Bien Hoa city and other urban area in the province. Finish the treatment of local temporary landfill; speed up the construction progress and bring waste treatment areas to operation as planned. Continue to invest and upgrade medical waste incinerators at health facilities in the area.

Determine to carry out the relocation of the polluting areas to the planned residential areas, urban areas and industrial zone basing on some criteria and approval timeline. Implement the conversion scheme to convert the Bien Hoa Industrial Zone 1 into a commercial - service area to protect the environment of Bien Hoa city and Dong Nai river.

Strengthen the inspection and examination of people's EP regulations observance, aiming to timely prevent new generation of environmental problems, handling pollution sources, particularly in the key areas of industrial zones, breeding facilities and the mining sector. Absolutely not to issue permits for new projects that do not meet environmental protection requirements.

Invest in expansion of automatic monitoring system at the industrial zone in order to improve the efficiency of supervision and monitoring of waste sources. As a result, manufacturing and service facilities polluting the environment could receive strict resolutions timely and lawful for their violation. Last but not least, we will coordinate with other localities to carry out environmental protection project 2020 in the basin of Dong Nai river system.

PHAM TUYEN *(Reported)*

Mainstreaming an ecosystem based approach to climate change into biodiversity conservation planning in Vietnam

MSC. HUYNH THI MAI
Deputy Director
Biodiversity Conservation Agency

The National Assembly of the Socialist Republic of Vietnam, Legislature XII, 4th Session has adopted the Biodiversity Law on November 13th, 2008 to conserve and develop the important natural resource in a sustainable way. An important mission with many difficulties regulated in the Biodiversity Law of Vietnam is to develop the National Biodiversity Conservation Planning (NBCP). The Document No. 3353/VPCP-HTQT of the Prime Minister dated on May 31st, 2010 also assigned the Ministry of Natural Resources and Environment (MONRE) to develop the NBCP until 2020 and submit to the Prime Minister for approval in the end 2013. Biodiversity Conservation Agency (BCA) under Vietnam Environmental Administration (VEA) has been assigned taking a lead, coordinating with line ministries, sectors to develop NBCP. It is a new mission, first time to develop in Vietnam, so there are many difficulties in technique, experience and finance in its development. To overcome these obstacles, BCA/VEA has found the technical and financial supports from Partnership Driven Cooperation Programme of Sida, Sweden.

NBCP as a first focused effort for spatial planning of sustainable use and biodiversity conservation for improved human wellbeing in Vietnam. There is an urgent need for spatial planners to act now to ensure that biodiversity and the wildlife can respond to the impacts of climate change. Spatial planning can create networks of high-quality, well-connected habitats, and thereby help wildlife to become more resilient to climate change. Therefore, taking into consideration of climate change in the biodiversity conservation planning is a must. The planning will propose activities and solutions that will increase the diversity of ecosystems to constitute adaptation measures and reduce ecology loss and degradation to constitute mitigation measures. Besides, poverty is known to be a root cause as well as an effect of forest degradation as many poor forest dependent peoples continue to live heavily off the forest. Increasing pressure and demand for wood and wildlife products also leads to increasing pressure on the forest ecosystem, which

is in danger of becoming degraded and losing its ecosystem functions. Therefore, the proposed Project will assess the dependence of the poor (especially ethnic groups) on the natural resources/ecosystem services and develop recommendations on livelihood considerations.

Ecosystem-based approach (EBA) is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way that helps people and biodiversity adapt to the adverse impacts of environment change, including climate change. The mainstreaming EBA into biodiversity conservation planning, provide a the cost-effective way to improve the effectiveness management of natural resources in Vietnam, which can generate social, economic and cultural co-benefits and help maintain ecosystem resilience.

To gain access to international experiences and to establish a learning relationship with international researchers on management of biodiversity and ecosystem services and mainstreaming an EBA to climate change into biodiversity conservation planning, BCA has cooperated with SRC to initiate and develop a long term cooperation on biodiversity and ecosystem services with a specific focus on mainstreaming EBA to climate change into the NBCP. The Project will assess how a sustainable use of biodiversity and ecosystems services could be integrated in national and local planning with an aim to enhance ecosystems resilience, improve poor people livelihoods and provide ecosystem based options to adapt to environment change, including climate change.

The collaboration between SRC, BCA and WWF in this Project to mainstream biodiversity and ecosystem services into national planning processes. SRC is currently cooperating with WWF-Vietnam and Vietnamese universities on improved management of wetland ecosystem services for sustainable aquaculture development in the Mekong Delta, and it is hoped that this Project will further strengthen the link to MONRE and specifically BCA, for further uptake of policy relevant results into national and provincial biodiversity conservation planning processes.

Because of mutual concerns and interested in biodiversity conservation, especially using EBA in management of biodiversity and ecosystem services, this proposal has jointly been developed according to the Partnership Driven Cooperation of Sida. All of us can find many important benefits in this cooperation: SRC has large international networks and experiences related to biodiversity and ecosystem service. Their achievements will be shared with Project partners and to train students; WWF has lots of experience in technical supports and duplication of the results to another countries; BCA has substantial experience in policy development on biodiversity conservation. We expect the mutual benefits in this cooperation will create a sustainable partnership and long-term cooperation between Vietnam and Sweden.

The general objective of the Project is to create a strategic partnership and long-term cooperation among BCA, WWF, SRC and another Vietnamese and Swedish partners on sustainable use and conservation of biodiversity and ecosystem services.

The specific objectives are to support that an EBA to climate change are incorporated in the Vietnam Government's National Biodiversity conservation planning; develop a pilot model for incorporating an EBA to climate change in provincial biodiversity conservation planning; improve knowledge and experiences in EBA for improved management of biodiversity and ecosystem services and to improve the capacity on biodiversity conservation in the context of climate change for Swedish and Vietnamese partners.

The Project expected to reach some main outcomes as follows: Technical guidelines for mainstreaming an ecosystem based approach to climate change into biodiversity conservation planning developed; Ecosystem based approach to climate change in national biodiversity conservation planning incorporated; One provincial biodiversity conservation planning incorporated ecosystem based approach to climate change developed; and Capacity and cooperation on biodiversity conservation strengthened. The Project implemented from June 2012 until October 2013. The Project results will contribute to improvement of policy on biodiversity conservation in Vietnam■

GIZ VIETNAM COMMITS TO WILDLIFE SAFETY PROTECTION

The Deutsche Gesellschaft-für Internationale Zusammenarbeit (GIZ) in Vietnam has called on all its staff to protect wildlife.

In response to the campaign of nature conservation, half of GIZ staff already pledged in their cards to protect Vietnam's biodiversity by refusing wildlife products and report wildlife crime.

The Wildlife Safety Zone in Vietnam is part of GIZ's contribution to the "German Action Week for Sustainability", which takes place from June 15-21. The Action Week is a project by the German Council for Sustainable Development who aims to make sustainability an important public issue, including environmental, social and economic aspects.

GIZ joins a number of government offices, businesses, and other organizations throughout Vietnam in ENV's Wildlife Safety Zone programme to raise awareness of threats to Vietnam's wildlife.

Vietnam is home to over 11,000 different animal species, making Vietnam one of the most biologically diverse countries in the world. Today's demand for wildlife and wildlife products is putting the survival of entire species at risk, as many of the species traded are endangered.

Source: GIZ

WASTE-TO-ENERGY, THE LATEST TECHNOLOGY OF WASTE RECYCLING

MIKLOS HORVATH, DANG THI THANH THUY, NGUYEN VAN DINH
Capacity Development Center for Environment and Natural Resources

Many people think waste is a problem that has either to be buried or burned; this attitude applies particularly to household (or municipal) waste. Wastes are produced from most industries, commercial, institutional, institutions, such as hospitals and other medical facilities, sewage systems, along with food and agricultural wastes and various wastes produced by processing industries etc. There are an increasing number of technologies available which claim to deal with this waste problem and also generate some power from the process. However, they are more than often, uneconomical, pollutant, inefficient, give off damaging emissions which result in toxic residues and emissions to atmosphere and ground water.

Waste-to-Energy (or WTE) is the use of modern combustion and biochemical technologies to recover energy, usually in the form of electricity and steam, from urban wastes. These new technologies can reduce the volume of the original waste IN EXTREMIS by 90%, depending upon composition and use of outputs. The main categories of waste-to-energy technologies are physical technologies, which process waste to make it more useful as fuel; thermal technologies, which can yield heat, fuel oil, or syngas from both organic and inorganic wastes; and biological technologies, in which bacterial fermentation is used to digest organic wastes to yield fuel.

Waste-to-energy is not only a solution to reduce the volume of waste that is and provide a supplemental energy source, but also yields a number of social benefits that cannot easily be quantified. Waste-to-energy systems offer two important benefits of environmentally safe waste management and disposal, as well as the generation of clean electric power.

WASTE HAS ALSO BECOME AN IMPORTANT REPLACEMENT FOR CONVENTIONAL SOURCES OF ENERGY AND MATERIAL

The following strong trends in waste generation are posing growing challenges:

- *Cities are facing more rapid population growth, and shares in GDP growth, resulting in - among other things - increasing quantities of waste being generated.*
- *Industrialization and economic growth have produced greater quantities of waste, including hazardous and toxic wastes.*
- *There is a growing understanding of the negative impacts that wastes have had on the local environment (air, water, land, human health etc.) and also on climate change.*
- *Complexity, costs and coordination requirements have necessitated multi-stakeholder involvement in every stage of waste management. This calls for an integrated approach.*
- *Governments and stakeholders are now looking at waste as a business opportunity, (a) to extract valuable resources contained in it that can still be used, and (b) to process safely and dispose of wastes with a minimum impact on the environment.*
- *Valuable habitats and biodiversity are being threatened by improper management of waste.*

Conventional waste management systems are not well suited to deal with increased waste generation rates and new and special waste streams. These systems in many developing countries were also not based on 3R principles (Reduce, Reuse, and Recycle) as the per capita generation rates were low, and scavengers picked up almost all recyclable waste.

Source: UNEP

THE CAPYBARA TECHNOLOGY

The Capybara Process (named after a South American rodent which recycles its own waste) is extremely economically efficient, and environmentally beneficial. Compared to current EfW processors it can be as much as 60% less in Capital Costs than Incineration, Gasification, AD Plants and other practices. The Capybara Process converts the majority of wastes which traditionally would have been put to landfill or incinerated.

The Capybara process converts waste to "Commodities" such as Water, Oil (Diesel), Bio-Char, Soil Stimulants, (Bionic Fertilisers), Gas, and Electricity whilst recycling metals back to foundries. The secret lies in bringing together these machines into a patented design concept to create an adaptable processing plant which generates up to four times more electricity than traditional waste-to-energy plants per tonne of mixed waste. Nothing is wasted or goes to landfill (even the water is recycled)!

The Process is highly profitable and provides a true environmentally friendly revolution for not just the Waste Industry but a large number of other associated industries. It provides a virtuous sustainable cycle converting waste back into its original natural components and building blocks to allow for their true recycling and "green" electricity generation for now and the future. The Capybara Process is based upon proven technology which incorporates a mix of machinery available from established manufacturers along with a carefully adapted patented machine using "Advanced Vortex Technology combined with Kinetic Energy Technology". The main processor is based on an original patented idea first invented in the 1950s.

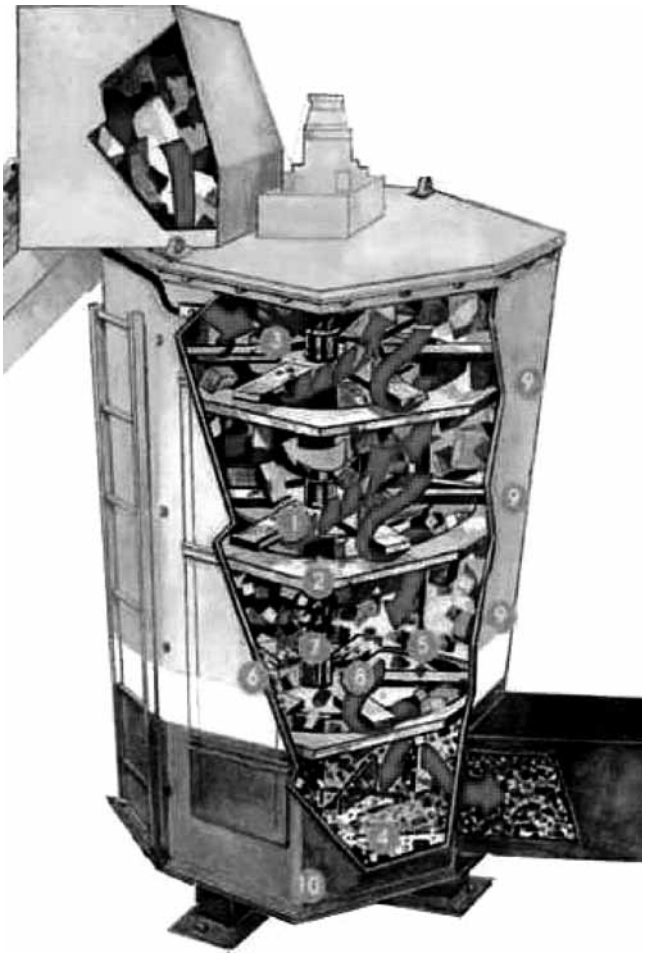
THE CAPYBARA PROCESS HAS MANY OTHER ECONOMICAL AND ENVIRONMENTAL BENEFITS:

- The Capybara Process does not require household wastes to be sorted thus saving local authorities the substantial costs on kerb side segregation and administration of imposing on their residents a so-called "recycling system". From unsorted household waste, metals, glass and other con-combustibles are first extracted to be recycled using conventional technologies. The remaining waste is then separated out into two processing lines, (1) combustibles and (2) organic fraction.

- The combustible fraction includes paper, cardboard, woods and all hydrocarbon based materials, (Post Consumer mixed waste unsorted plastics). Some plastics can be recycled on a conventional basis, which is limited, but on the whole this practice is uneconomic). The combustibles are then submitted to the Advanced Vortex and Kinetic processor.

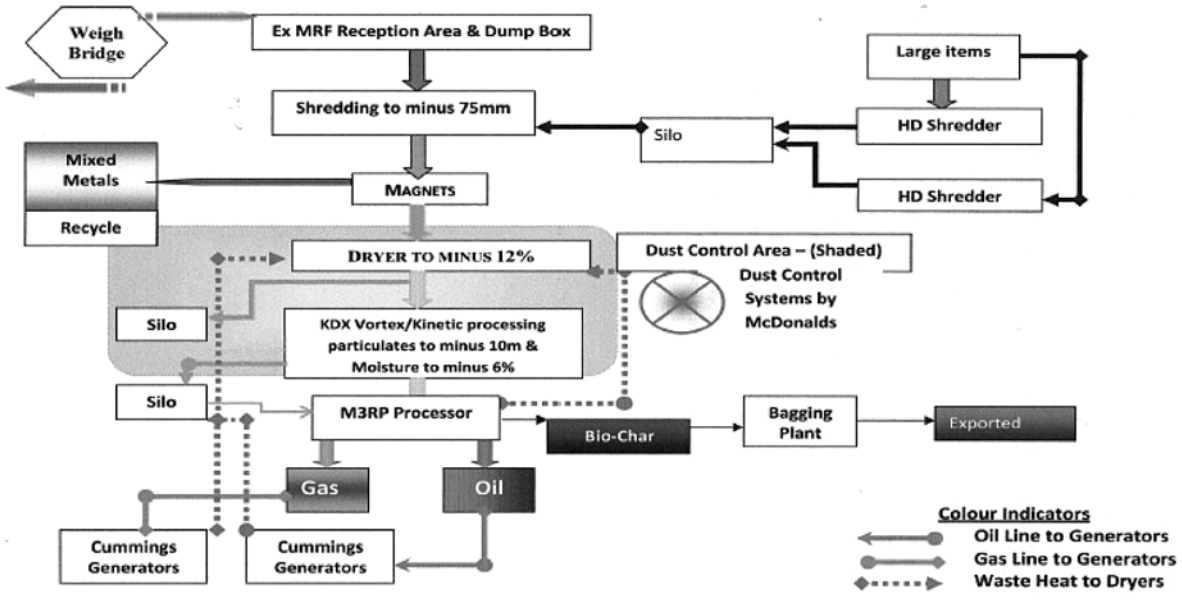
- Incineration and other Gasification processors produce either "Bottom Ash" or residues which are highly toxic and are put to landfill, this amount can be as much as 25% of the mass infeed of the waste incinerated/processed. The Capybara has no waste to landfill but produces a high versatile by-product to sustain agriculture and food production, which is "Bio-Char" which has been scientifically proven as a soil stimulant that considerably increases the fertility and replaces essential soil organic matter (SOM), thus significantly increasing agricultural and horticulture yields both initially and on a continuing basis to obtain the optimum yield(s) whilst reducing costs to the user dramatically.

- The processor transforms this mixed waste into a uniform, homogeneous, deodorized, sanitized, co-mingled confetti type of flock. This co-mingled flock is compressed to less than 40% of its original size and injected into the second processor, which is a Materials Recyclable Recovery Processor (M3RP). The feedstock is fed into a retort and heated to produce Syngas, a portion of the feedstock becomes a char known as "Bio-Char".

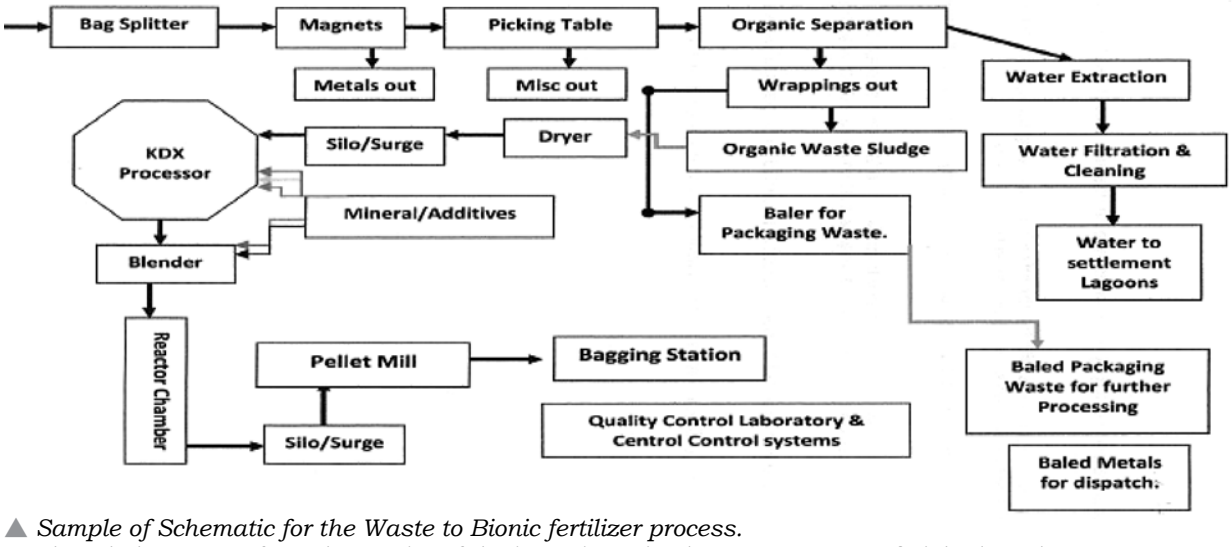


▲ *The schematic model of an Advanced Vortex and Kinetic processor*

▲ *A typical M3RP installation before shipping*



▲ *Sample of Schematic for the Waste to Energy process*



▲ *Sample of Schematic for the Waste to Bionic fertilizer process.*
(The whole process from the receipt of the incoming mixed waste stream to finished products has taken less than 28 minutes).

● The gas produced is a stabilized "Syngas" which is compressed, filtered and used as such, or turned into biodiesel type oil. The oil is transported to large industrial electric generators producing electrical power for general distribution to the national grid whilst a portion is used for internal consumption.

This process eradicates the need for steam generation of electricity, thus the potential efficiency loss. The exhausts from the generators are recycled via the Vortex/Kinetic (KDX) processor which absorbs the CO_2 into the char, thus eliminating all emissions to atmosphere. The Capybara process can produce up to 40% more electrical power than traditional incineration or any other methods of waste to energy systems.

● The Vortex/Kinetic (KDX) processor eliminates all pathogens preventing pollutants such as PCB's from being released into the atmosphere. Because the KDX does not use any combustion there are no chimneys, flues or exhausts of any kind going to atmosphere.

● The by-product of this process is Bio-Char, a product which absorbs CO_2 from the air and immobilizes excess herbicide concentrations and therefore prevents ground water from being contaminated. Bio-Char can also "fix" toxic substances for many thousands of years within the Char. It has been scientifically proven that these substances are released very slowly and harmlessly over long periods of time, in most cases as long as thousands of years. The Bio-Char provides an essential component for the organic Soil Stimulant; Bio-Char has been used by humans to increase the fertility and increase agricultural yields since the time of the Aztecs. Bio-Char can be costly to produce and is made from a number of raw materials such as agricultural wastes and bio-waste products during a special type of Pyrolysis Process. Bio-Char is a by-product of the Capybara process and not a toxic waste.

● The remaining organic fraction contains everything organic, such as general food wastes, food processing waste, supermarket wastes, Sewage Sludge, Manures, agricultural wastes, green wastes and a great deal more. This fraction is de-hydrated (water removed) using a technology developed by NASA. The water produced is filtered purified to a "potable" standard which can then be used for agricultural needs or even fed into water mains. The remaining dried waste is passed through a second KDX processor. Snatch samples are taken to maintain strict quality control; any nutrients which have been removed during the process are blended back into the Soil Stimulants along with Bio-Char. The processed product is converted into pellets, using a standard pellet mill to produce Enhanced Bionic Organic Slow Release Pelletized fertilizers■

SCIENCE, TECHNOLOGY CREATIONS HONOURED

Forty-one projects winning the Scientific and Technological Innovation Award of the Vietnam Fund for Supporting Technological Creations (VIFOTEC) were honoured at a Ceremony in Hanoi on March 23, 2013.

The projects cover various areas, including mechanical automation material technology, information technology, electronics, telecommunication, biology, and environmental protection and energy-saving technologies. Speaking at the Ceremony, Dinh The Huynh, Politburo member and Head of the Party Central Committee's Commission for Popularisation and Education, extended his congratulations to the winners.

Hynh, who is also Secretary of the Party Central Committee, asked ministries, departments, agencies and branches to encourage scientists to contribute creations that are relevant and in demand in both regional and international markets.

On behalf of the Party, State and Government, Deputy Prime Minister Vu Van Ninh presented the second class Independence Order to VIFOTEC for its outstanding achievements and contributions to national construction and defence.

Since its establishment 20 years ago, VIFOTEC has granted awards to nearly 600 projects, and tens of thousands of scientists, creators and businesses. Most of the projects are now used in daily life and production, yielding high socio-economic results.

VNA

HO CHI MINH CITY PLANS FIVE WASTE TREATMENT PLANTS

The Ho Chi Minh City People's Committee is preparing for the implementation of five waste treatment projects. Of these, two plants each with a daily capacity to process 2,000 - 2,500 cu.m of mud will be located in the Da Phuoc Waste Treatment Complex in Binh Chanh district. They will cover 40 ha in total. Another project, which will be also located in the complex, is a 15 ha plant that will recycle and treat industrial and toxic waste with a capacity of 500 tonnes a day.

The remaining two are an industrial waste treatment plant with a capacity of 200 - 360 tonnes a day and a 6.3 ha toxic waste landfill with a capacity of 100 tonnes a day. These two projects will be located in the Phuoc Hiep Waste Treatment Complex in Cu Chi district.

The city now releases about 1,500 - 2,000 tonnes of industrial and toxic waste and 2,800 - 3,850 cu.m of mud waste a day. However, it has only one plant to treat mud waste from septic tanks that has a capacity of 100 - 150 cu.m a day.

The city currently does not have a large-scale industrial and toxic waste treatment plant. **VNA**

BANK LENDS ON CLEAN WATER PROJECT

Signatories were the State Bank of Viet Nam (SBV) and the Asian Development Bank (ADB). The first loan agreement, worth $212 million, will be spent on supplying piped water to nearly 500,000 poor households in the provinces of Binh Duong, Dak Lak, Quang Tri and Thua Thien - Hue, and the cities of Da Nang and Hai Phong.

The second loan and grant agreement, including a $25 million loan from the ADB and a grant of $12 million from the Australian Agency for International Development, will be used on improving the quality of roads and traffic safety, and reducing the risks of HIV and human trafficking along the southern coastal route to Cambodia.

Funds will also be made available to improve construction quality and plug finance gaps of the Greater Mekong Sub-region Southern Coastal Corridor Project so the remaining sections of the project along the southern coastal corridor from Ha Tien to Rach Gia can be completed. The loan is planned for 2014. **VNS**

THUA THIEN - HUE: 30.9 BILLION TO IMPROVE THE ENVIRONMENT IN CRAFT VILLAGES IN PERIOD 2013 - 2015

In the period 2013 - 2015, Thua Thien - Hue province will invest 30.9 billion to improve the environment in craft villages. Specifically, the province will focus on solving and improving the pollution situation in 6 villages; including three villages which, according to Decision 64/2003/QĐ-TTg of the Prime Minister, cause serious pollution and has not been dealt with, including: Lang Co lime Phu Loc village, bronze casting villages casting in Duc and Thuy Xuan communes and Huong Vinh, Huong Toan brick villages (Huong Tra town); fish sauce villages in Phu Thuan and Phu Hai districts and tapioca village in Loc An.

In addition to the fund from National Target Program, Thua Thien - Hue mobilized from the local budget and financial support by manufacture households and other sources of funding, including international co-operation activities... **VNA**

A WASTEWATER TREATMENT PLANT TO BE BUILT IN BINH DUONG

Vice Chairman Binh Duong Tran Thanh Liem had a working meeting with sponsor's representatives of the Project "Building collection and wastewater treatment system in Binh Duong Province". The Project is sponsored by the Facility for Infrastructure Development (ORIO) which is funded by the Dutch Ministry of Foreign Affairs and the Dutch Ministry of Development Cooperation is responsible for implementation of the Project.

The Project will build a wastewater treatment plant with a capacity of 15,000 m^3/day, contributing to the waste water treatment for about 10,000 households in Binh Duong province. According to initial estimates, the Project has a total investment of 35 million Euro including 50% of local counterpart funds and the non-refundable remain funded from ORIO. **VOV**

STRENGTHEN THE MUTUAL UNDERSTANDING AND PROMOTE THE COOPERATION BETWEEN MONRE AND INTERNATIONAL PARTNERS

▲ *Minister Nguyen Minh Quang delivering speech at the meeting of international partners on March 8th, 2013*

On behalf of the Ministry of Natural Resources and Environment of Vietnam, Minister Nguyen Minh Quang, warmly welcomed the presence of the Ambassador, Chief Representative of the international organizations and especially wished warm greeting to female delegates on the International Day Women 8/3. Simultaneously, the Minister affirmed that Vietnam has expanded its bilateral and multilateral cooperation activities, especially those in the field of climate change, environment, water resources, climate hydrology and land management; as well as carrying out the scheme to diversify funding support sources...

In addition to sharing cooperation experience, the international delegates highly appreciated the achievements that the natural resources and environment sector in Vietnam have achieved in the past year. Besides, participants shared their views that it is essential to establish comprehensive bilateral and multilateral relations covering technical cooperation, management technology, effective and sustainable exploitation of natural resources and environmental security. **Monre**

VIETNAM ATTRACTS $100 BILLION FDI IN TOTAL INVESTMENT

Vietnam has attracted 14,550 foreign direct investment (FDI) projects worth $211 billion for over the past 25 years.

Dao Quang Thu, Deputy Minister of Planning and Investment said at a meeting to review the country's FDI attraction during the 25-year period, that by February 2013, FDI disbursements had reached nearly $100 billion.

FDI firms' contribution to the country's GDP had gradually increased year after year, reaching 19pct in 2011. The FDI sector contributed around $3.7 billion to the state budget in 2012, accounting for 11.9pct of total state budget revenue during the year. The sector has helped directly create jobs for over two million people and indirectly for from three to four million people during the 25-year period.

FDI firms were responsible for 45.2pct in 2001 to 64pct in 2012 of the country's export revenues.

According him, there are several inadequacies in the sector as investment seemed to focus on industries that use a large number of workers and consume a lot of natural resources instead of high-tech industries. Numerous FDI firms have tried to appear unprofitable to avoid taxes.

FDI investment in Vietnam remains still modest compared to several other regional countries such as Thailand, Indonesia and Malaysia. Just over 100 out of 500 trans-national groups operate in Vietnam, compared to 400 groups of such kind in China.

Capital disbursement was lower compared to registered capital, which was estimated at only 47.2pct.

Most FDI projects in Vietnam remain small to medium-sized in scale, and averaged at $15.4 million each during the 1988-2011 period, and falling to only $13.47 million each in 2011. A handful of FDI firms have used modern technologies for projects in Vietnam. Over 80pct of FDI firms use medium technologies while 14pct use outmoded technologies.

While average incomes of employees in the sector are higher than private sector overall, the incomes are still lower than the public sector.

VNS

STRENGTHENING COOPERATION BETWEEN JICA AND THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT TO RESPOND TO CLIMATE CHANGE

At the meeting receiving Mr. Tsuno Motonori - Representative of JICA in Vietnam on 22/5, the Minister of Natural Resources and Environment Nguyen Minh Quang expressed his appreciation for the fruitful cooperation of JICA in Vietnam. Minister Nguyen Minh Quang said the two countries were going to sign a memorandum of cooperation on the field of environment. Particularly, with regard to the issue of climate change in the Mekong Delta, Vietnam longs for the support of JICA in the mangrove reforestation a and sewer projects. Toward the spirit of the Resolution "Actively respond to climate change, strengthen resources management and environmental protection" adopted by the Party Central Committee's 7th conference, Minister recommended JICA focus on funds for climate change. On the other hand, Trans-ministries Circular of Natural Resources among the Ministry of Environment, Ministry of Finance, Ministry of Planning and Investment was signed, clearly defining the responsibilities of each ministry, facilitating the implementation of JICA in support program to respond to climate change (SPRCC).

In the upcoming time, Mr.Tsuno Motonori's term in Vietnam will terminate. On showing gratitude for his devotion in the past time in Vietnam, Minister Nguyen Minh Quang presented Mr.Tsuno Motonori with flowers and a medal for his career for the environment. Mr.Nguyen Minh Quang hoped that his successor will join Vietnam toese people cope with climate change, protection the environment towards a green economy. **Monre**

VIETNAM APPRECIATED JAPANESE COOPERATION IN WATER MANAGEMENT AND ENVIRONMENTAL PROTECTION

Government of Japan through the Japan International Cooperation Agency (JICA) has supported many joint research programs in the field of environment, such as environmental monitoring, watersheds protection, building databases and biodiversity. "Vietnam always appreciates Japan's cooperation in strengthening water management and environmental protection", said Deputy Minister of Natural Resources and Environment Nguyen Manh Hien during a project evaluation workshop on strengthening capacity of management of water environment in Vietnam, held on May 20, 2013 in Hanoi.

Under the Project, five participating localities, namely Hanoi, Ho Chi Minh city, Hai Phong city, and Thua Thien - Hue and Ba Ria - Vung Tau provinces with the participation of MONRE were assisted in improving their water environment management capacity, focusing on policy making, water analysis, inspection capacity, and database establishment. **Monre**

JICA HELPS WITH WATER SECTOR'S HUMAN RESOURCE DEVELOPMENT

A Japanese-funded project on enhancing human resource capacity for the water sector in Vietnam's central region has been a success, the Japan International Cooperation Agency (JICA) said at a review conference on May 28, 2013.

The three-year Project starting in August 2010 targeted 18 water companies in the central region with the aim of helping them ensure safe and stable water supply. The Project's major partner, a training centre in Hue city, has been provided with adequate skills and equipment to develop short - term training courses for local water companies. In addition, the Project organised training trips and seminars in Japan for the target companies' leaders to increase their awareness of the importance of human resource development.

Accordingly, five leading companies have completed theirs plans of safe water supply, human resource development and operation manuals. The training centre in Thua Thien - Hue also succeeded in building a cooperation model with Thua Thien-Hue Water Supply and Construction Company (HUEWACO), which will be maintained and expanded after the project ends.

JICA has worked with Vietnam's water sector for almost 10 years supporting, particularly in human resource development. **VNA**

Cooperation between Vietnam and South Korea on environmental resources

On 20th June, the 10th Meeting of Environment Minister between Vietnam and Korea opened in Seoul, under the co-chairmanship of Minister of Vietnam Natural Resources and Environment – Mr. Nguyen Minh Quang and Minister of Korean Environment, Mr. Yoon Seong-kyu. This is the annual event co-organized by the two parties since the signing of The Cooperation Memorandum between the two ministries in 2004.

The conference focused on discussing, evaluating the cooperation between the two ministries in the field of environment in recent years, exchanging the ability to improve cooperation, focusing on the contents of mutual interest which have the ability to deploy in the period of 2012 - 2015.

The main contents is proposed to promote bilateral cooperation between Vietnam and South Korea in the near future. They consists of exchanging information and experiences; strengthening human resources in the field of natural resources and environment sector; developing technology and industrial environment; constructing environmental infrastructure construction in Vietnam; supporting Vietnam in the amendments of the Law on Environmental Protection 2005; implementing the National Target Program in overcoming pollution and improving the environment in Vietnam.

The strengthening of the legal framework and implementation of polluted soil and groundwater restoration activities in the period of 2012-2015; the feasible project on the environmental protection of Nhue and Day River; the management of hazardous waste; etc. have also been discussed on the conference. In addition, the two parties also discussed the cooperation potential in solving problems related to the global and regional environment such as response to climate change, green growth issues and green economic.

VEA

Fourth Regional 3R Forum in Asia

The 4th Regional 3R (Reduce, Reuse, Recycle) Forum in Asia opened in Hanoi, on 18 March, 2013, on the theme of "3Rs in the Context of Rio+20 Outcomes - The Future We Want". This meeting is co-organized by the Ministry of Natural Resources and Environment of Viet Nam, the Ministry of the Environment of Japan, and the UN Centre for Regional Development (UNCRD). The Forum was attended by approximately three hundred participants, comprising of government representatives from thirty Asia - Pacific countries, subsidiary expert group members of the Regional 3R Forum in Asia, international resource persons, representatives from various UN and international organizations, scientific and research organizations, NGOs, representatives from the private and business sector, and local observers and professionals on waste management from Viet Nam.

Deputy Prime Minister of Vietnam Nguyen Thien Nhan, opening the meeting, has said that the Forum has achieved many important achievements and contributed towards global efforts for sustainable development. It is a chance for Vietnam to learn from other countries' experience in waste management and to bolster cooperation with UNCRD, the Japanese Ministry of Environment and participating nations in environmental protection, efficient use of energy and resources and coping with climate change.

The Minister of Natural Resources and Environment of Vietnam Nguyen Minh Quang, in his speech in the opening ceremony, said: "In Asia, we are facing a significant increase of waste, due to rising population increasing consumption and lifestyle. That leads to the emergence of waste streams such as electronic waste and other hazardous wastes. These wastes, if not managed properly, will have a significant adverse impact on human health and ecosystems, threatening sustainable development of the region and the globe. In this context, the UN Conference on Sustainable Development which was held in Rio de Janeiro, Brazil in June 2012 (Rio+20) has recently adopted the Declaration "The Future We Want". The Rio+20 Outcome emphasizes the importance of green growth, green economy for sustainable development. The 4th Regional 3R Forum in Asia is to promote the exchange and sharing of experience on policy solutions, technologies and techniques towards achieving the Rio +20 Outcome. The ultimate aim is towards an Asia greener and more sustainable."

Japanese Deputy Minister of the Environment INOUE Shinji says, "In the last four years, 127 parties have signed agreements to reduce waste, as a result, we reduced 7,100 tonnes of waste plastic bags

and saved US$ 15 million. We all together have discussed the opportunity in promoting 3R and resource efficiency measures towards achieving the Rio +20 Outcome. It is expected to address new and emerging waste issues in terms of policy, institutional and technological consideration and promote 3R as a tool towards a green economy and green growth model. "

At the Forum, countries in Asia-Pacific expressed their firm commitment to effectively promote 3R and unanimously adopted the "Ha Noi 3R Declaration – Sustainable 3R Goals for Asia and the Pacific for 2013-2023".

The Hanoi Declaration provides a comprehensive framework for countries in the region to voluntarily develop and implement 3R policies and programmes, including monitoring mechanisms to measure achievements against agreed goals and targets under the Declaration■

HA NOI 3R DECLARATION
SUSTAINABLE 3R GOALS FOR ASIA AND THE PACIFIC FOR 2013 - 2023

I. 3R Goals in the Urban/Industrial Areas

a) 3Rs in municipal solid waste

Goal 1: Significant reduction in the quantity of municipal solid waste generated, by instituting policies, programmes and projects at national and local levels, encouraging both producers and consumers to reduce the waste through greening production, greening lifestyle and sustainable consumption.

Goal 2: Full scale utilization of organic component of municipal waste, including food waste, as valuable resource, thereby achieving multiple benefits such as the reduction of waste flows to final disposal site, reduction of GHG emission, improvement in resource efficiency, energy recovery and employment creation.

Goal 3: Achieve significant increase in recycling rate of recyclables (e.g., plastic, paper, metal, etc.), by introducing policies and measures, and by setting up financial mechanisms and institutional frameworks involving relevant stakeholders (e.g., producers, consumers, recycling industry, users of recycled materials, etc.) and development of modern recycling industry.

Goal 4: Build sustainable cities/green cities by encouraging "zero waste" through sound policies, strategies, institutional mechanism, and multi-stakeholder partnerships (with specific importance to private sector involvement) with primary goal of waste minimization.

b) 3Rs in industrial waste

Goal 5: Encourage private sector, including small - and medium-sized enterprises (SMEs) to implement measures to increase resource efficiency and productivity, creation of decent work and to improve environmentally-friendly practices through applying environmental standards, clean technologies and cleaner production.

Goal 6: Promote the greening of the value chain by encouraging industries and associated suppliers and vendors in socially responsible and inclusive ways.

Goal 7: Promote industrial symbiosis (i.e., recycling of waste from one industry as a resource for another), by providing relevant incentives and support.

Goal 8: Build local capacity of both current and future practitioners, to enable private sector (including SMEs) obtain the necessary knowledge and technical skills to foster green industry and create decent, productive work.

Goal 9: Develop proper classification and inventory of hazardous waste as a prerequisite towards sound management of hazardous waste.

II. 3R Goals in Rural Areas

Goal 10: Reduce losses in the entire food supply chain (production, post harvesting and storage, processing and packaging, distribution), leading to reduction of waste while increasing the quantity and improving the quality of products reaching the consumers.

Goal 11: Promote full scale use of agricultural biomass waste and livestock waste through reuse and/or recycle measures as appropriate, to achieve a number of co-benefits including GHG emission reduction, energy security, sustainable livelihoods in rural areas and poverty reduction, among others.

III. 3R Goals for New and Emerging Wastes

Goal 12: Strengthen regional, national and local efforts to address the issue of

▲ *Participants from participating countries and organizations attended the 4th Regional 3R Forum in Asia*

waste, in particular plastics in the marine and coastal environment.

Goal 13: Ensure environmentally sound management of e-waste at all stages, including collection, storage, transportation, recovery, recycling, treatment and disposal, with appropriate considerations on working conditions, including health and safety aspects of those involved.

Goal 14: Effective enforcement of established mechanisms for preventing illegal and inappropriate export and import of waste, including transit trade, especially hazardous waste and e-waste.

Goal 15: Progressive implementation of "extended producer responsibility (EPR)" by encouraging producers, importers and retailers and other relevant stakeholders to fulfill their responsibilities for collecting, recycling and disposal of new and emerging waste streams, in particular e-waste.

Goal 16: Promote 3R concept in health care waste management.

IV. 3R Goals for Cross-cutting Issues

Goal 17: Improve resource efficiency and resource productivity by greening jobs nation-wide in all economic and development sectors.

Goal 18: Maximize co-benefits from waste management technologies for local air, water, oceans, and soil pollution and global climate change.

Goal 19: Enhance national and local knowledge base and research network on the 3Rs and resource efficiency, through facilitating an effective and dynamic linkage among all stakeholders, including governments, municipalities, the private sector and scientific communities.

Goal 20: Strengthen multi-stakeholders partnerships among governments, civil society, and the private sector in raising public awareness and advancing the 3Rs, sustainable consumption and production, and resource efficiency, leading to the behavioral change of the citizens and the change of production patterns.

Goal 21: Integrate the 3Rs in formal education at primary, secondary and tertiary levels as well as non-formal education such as community learning & development, in accordance with ESD (Education for Sustainable Development).

Goal 22: Integrate the 3R concept in relevant policies and programmes, of key ministries and agencies such as Ministry of Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Industry, Ministry of Trade and Commerce, Ministry of Energy, Ministry of Water Resources, Ministry of Transport, Ministry of Health, Ministry of Construction, Ministry of Finance, Ministry of Labour, Ministry of Land and Urban Development, Ministry of Education, and other

relevant ministries towards transitioning to a resource efficient and zero waste society.

Goal 23: Promote green and socially responsible procurement at all levels, thereby creating and expanding 3R industries and markets for environmentally friendly goods and products.

Goal 24: Phase out harmful subsidies that favor unsustainable use of resources (raw materials and water) and energy, and to channel the freed funds in support of implementing the 3Rs and efforts to improve resource/energy efficiency.

Goal 25: Protect public health and ecosystem, including freshwater and marine resources by eliminating illegal activities of open dumping, including dumping into the oceans, and controlling open burning in both urban and rural areas.

Goal 26: Facilitate the international circulation of re-usable and recyclable resources as well as remanufactured products as mutually agreed by countries and in accordance with international and national laws, especially the Basel Convention, which contributes to the reduction of negative environmental impacts and the effective management of resources.

Goal 27: Promote data collection, compilation and sharing, public announcement and application of statistics on wastes and the 3Rs, to understand the state of waste management and resource efficiency.

Goal 28: Promote heat recovery (waste-to-energy), in case wastes are not re-usable or recyclable and proper and sustainable management is secured.

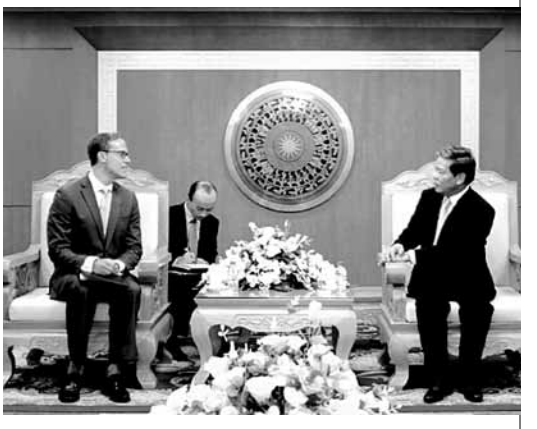
Goal 29: Promote overall regional cooperation and multi-stakeholders partnerships based on different levels of linkages such as government-to- government, municipality-to-municipality, industry-to-industry, (research) institute-to-institute, and NGO-to-NGO. Encourage technology transfer and technical and financial supports for 3Rs from developed countries to less developed countries.

Goal 30: Pay special attention to issues and challenges faced by developing countries including SIDS for achieving sustainable development.

Goal 31: Promote 3R + "Return" concept which stands for Reduce, Reuse, Recycle and "Return" where recycling is difficult due to the absence of available recycling industries and limited scale of market in SIDS, especially in the Pacific Region.

Goal 32: Complete elimination of illegal engagement of children in the informal waste sector and gradually improve the working conditions and livelihood security, including mandatory provision of health insurance for all workers.

Goal 33: Promote 3R taking into account gender considerations■



STRENGTHENING VIETNAM - US RELATIONS IN THE FIELD OF ENVIRONMENT

On 23 April, 2013, in Hanoi, the Minister of Natural Resources and Environment Nguyen Minh Quang has warmly received the Acting Trade Representative of the US, Ambassador Demetrios James Marantis.

The Minister said Vietnam attended Trans-Pacific Partnership, which has some to environment-related contents. Recently, along with socio-economic development, coping with climate change and the environment are main interests of Vietnam Government. The Government is directing the amendment of the Law on Environmental Protection to keep pace with the development of the country. Vietnam hopes to increasingly cooperate with the United States, especially in the field of environment.

According to Mr. James Demetrios Marantis, Vietnam is a developing country, so many goals in the trade agreement would be an obstacle to the development of Vietnam. The U.S wishes Vietnam will strictly implement the contents in the upcoming round of negotiations.

Monre

The 4th High Level Seminar on Environmentally Sustainable Cities

The 4th High Level Seminar on Environmentally Sustainable Cities (HLS ESC) is organized by the Governments of Viet Nam, Japan, Australia, Indonesia and ASEAN Secretariat in Ha-noi on 21 - 22 March 2013. More than 200 delegates, including 150 foreign delegates and representatives of central and local agencies were attended the Seminar.

▲ *Deputy Minister of Natural Resources and Environment Bui Cach Tuyen addressed in the Seminar*

In his address, Deputy Minister of Natural Resources and Environment Bui Cach Tuyen says, the annually - held seminar brings about opportunities for environmental management and create the foundation for all stakeholders to share information and exchange knowledge on environmentally sustainable city development in the region.

Urban environmental issues are top concerns of the Government of Viet Nam. A series of policies and regulations have been issued in order to build a model of environmentally sustainable city. Therefore, Vietnam issued the Law on Environmental Protection 2005, the Law on Urban Planning 2009, and National Strategy for Green Growth and Development Plan Framework for Environmentally Sustainable City. Ministry of Natural Resources and Environment has made efforts to promote activities related to build environmentally sustainable city as well as the objectives of the program in accordance with the conditions of Vietnam.

The Seminar's main objective is to provide platform for information sharing and knowledge exchange on ESC development in the region among all stakeholders, to review and report the progress of the ASEAN ESC Model Cities Programme funded by the Japan-ASEAN Integration Fund (JAIF) building on the programme's Year 1 achievements, to discuss necessary legal reforms and policy development for realizing ESC development and to identify possible cooperation among EAS countries on ESC with other initiatives, including "Future City" Initiative by Government of Japan.

Ha Long city in Quang Ninh province and Da Nang City received ASEAN Environmentally Sustainable City Award. It is the honor that the two cities achieved in their development and sustainable development. This Award also reflected the initial steps in the process of building the City of Environment by 2020.

Monre

ADB SUPPORTS GREEN AGRICULTURE IN VIETNAM

The Asian Development Bank (ADB) will provide Vietnam with loans worth 111.88 million USD to help Vietnam enhance low carbon agriculture development, and strengthen the Government's capacity to set up and implement ADB-financed projects.

Agreements on the loans were signed in Hanoi on March 7, 2013, according to a press release issued by the ADB the same day. ADB Country Director for Vietnam Tomoyuki Kimura said his institution is ready to support Vietnam to realise the vision of low carbon and inclusive growth and transform the country's agriculture production into a more environment-friendly and

sustainable system.

The 74 million USD loan sourced from the ADB's Asian Development Fund (ADF) will be used for a low carbon agricultural support project. The project will focus on mainstreaming climate-smart agricultural waste management practices by supporting waste management infrastructure, providing credit for biogas value chains and facilitating the transfer and deployment of advanced technologies to manage agricultural waste. It looks to reduce pollution from agricultural waste and improve the environment in some ten provinces across the country.

The 37.88 million USD sum, also coming from the ADF, will help improve the Vietnamese Government's setting up, preparation and implementation of ADB-financed projects to ensure effective aid utilization.

VNA

SYMPOSIUM TO DISCUSS MEKONG RIVER ENVIRONMENTAL CHALLENGES

The Ministry of Science and Technology in collaboration with the German Aerospace Center Federal Ministry of Education and Research (Germany) held 2013 Mekong Environmental Symposium on Mekong River environment in 2013 in Ho Chi Minh City. The 3-day platform for decision makers, scientists and industry from six Mekong countries (Vietnam, Thailand, Laos, Cambodia, Myanmar and China) as well as international community to share experience and knowledge. At the conference, German and Vietnamese experts have handed over the extensive Mekong Delta Information System which has been developed in the WISDOM project to relevant ministries and branches in Vietnam.

The symposium is bringing together over 300 stakeholders and scientists from over 20 countries. Deputy Minister of Science and Technology Tran Viet Thanh says that the research results have formed a database system on water resources in the Mekong River Delta and will be handed over to the Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development. This is the basis for policy-makers, scientists giving out reasonable and effective policies and measures related to water resources, agriculture, aquaculture in the Mekong River Delta. During the conference, participants also focused on the social, economic and environmental impacts through the expansion of hydropower capacity in the Mekong River Basin and other relevant issues.

VNA

VIETNAM, SOUTH AFRICA TOGETHER PROTECT BIODIVERSITY

Vietnamese Deputy Minister of Agriculture and Rural Development Ha Cong Tuan and South African Deputy Minister of Water and Environmental Affairs Rejoice Thizwelondi Mabudafhasi recently concluded an action plan in the South African capital of Pretoria to implement the memorandum of understanding on cooperation in biodiversity preservation and protection.

The action plan will take effect until 2017 including major cooperative fields such as managing and preserving biodiversity, implementing CITES regulations and other international conventions, implementing the law on protecting wildlife, and managing and protecting natural reserves.

Mr. Thizwelondi Mabudafhasi said that the action plan was the result of cooperation between the two countries and the memorandum of understanding on enhanced cooperation in preserving and protecting biodiversity, which was concluded on December 10, 2012 in Hanoi by Vietnamese Minister of Agriculture and Rural Development Cao Duc Phat and South African Minister of Water and Environmental Affairs Edna Molewa.

VEN

MESSAGE FROM BAN KI-MOON, UN SECRETARY GENERAL TO THE 27th SESSION OF THE UNEP GOVERNING COUNCIL AND GLOBAL MINISTERIAL ENVIRONMENT FORUM (FEB 18, 2013)

"When the environment is neglected, poverty and instability follow. When it is nurtured, well-being and prosperity flourish".

I am pleased to send greetings to this historic gathering. For the first time, all United Nations Member States are participants in the UNEP Governing Council and Global Ministerial Environment Forum. Universal membership - an outcome of the Rio+20 UN Conference on Sustainable Development and endorsed by the General Assembly - reflects your key role as a policy making forum on the environmental dimension of sustainable development.

I urge you to make the most of this opportunity. You understand how the environment underpins all social and economic development - past, present and future. It is a recurrent motif throughout the Millennium Development Goals and will be an indispensable component of the post-2015 development agenda. When the environment is neglected, poverty and instability follow. When it is nurtured, well-being and prosperity flourish.

You have a responsibility to articulate these truths and to help craft the policies and programmes that will benefit all people - and especially those most at risk from environmental degradation and climate change. To do so, you will need to engage closely with your counterparts in government to enable them to see that investing in the environment and a green economy is not a cost but a sound insurance policy for the future we want.

In the General Assembly, discussions are taking place to provide additional resources for UNEP from the Regular Budget. Universal membership and predictable funding will greatly empower UNEP to provide the science and analysis we need to sustainably manage the developmental demands of a growing population while protecting and restoring essential ecosystems and tackling the root causes of climate change.

In the coming months, I will count on UNEP to help carry forward some of the key Rio+20 Outcomes, including the 10-Year Framework of Programmes on Sustainable Consumption and Production and the formulation of sustainable development goals - which must have a strong environmental dimension. I will also continue to rely on UNEP's support for important initiatives such as Sustainable Energy For All and the Zero Hunger Challenge.

We live in a time of profound transformation. The challenges are great, but so are the opportunities. We can afford no wrong turns. Under your wise stewardship, UNEP can be the guiding light we need to navigate to a more prosperous, equitable and sustainable world.

Source UNEP

WORLD HEALTH DAY:

Climate and Clean Air Coalition Targets Indoor and Outdoor Air Pollution

As one of the world's fastest-growing environmental initiatives, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) renewed its call for rapid action to reduce some of the greatest hazards to human health.

According to the World Health Organization (WHO), the health dangers presented by air pollution are far larger than previously thought. “Air pollution is becoming one of the biggest public health issues we have in front of us at the moment” Dr. Maria Neira, Director of Public Health and Environment at WHO, said at a recent CCAC meeting. “The estimations we have now tell us there are 3.5 million premature deaths every year caused by household air pollution, and 3.3 million deaths every year caused by outdoor air pollution”.

Indoor air pollution alone is the leading risk factor for burden of disease (years of life lost combined with years lived at less than full health) in South Asia. It is ranked second in Eastern, Central and Western Sub-Saharan Africa, and third in South East Asia.

Ground-level ozone pollution is estimated to cause an additional 200 thousand premature deaths annually. The CCAC, whose partners include some of the world’s leading governments and advocates for a healthier environment, targets so-called short-lived climate pollutants, or SLCPs, as major culprits in the damage to health, as well as crop loss and climate change, caused by air pollution.

SLCPs that are particularly harmful to human health are released through sources ranging from diesel engine exhaust, to smoke and soot from inefficient cook stoves and traditional brick production, to leakage and flaring from oil and natural gas production, to emissions from solid waste disposal.

Fast action on SLCPs, which the CCAC believes is possible through existing technologies and national policies, has the potential to reduce dramatically the number of deaths each year from air pollution.

The CCAC has launched several initiatives to combat SLCPs. With an estimated 19 percent of global black carbon emissions worldwide coming from the transportation sector, and with a relatively large share coming from diesel vehicles, efforts to lower black carbon emissions from heavy-duty vehicles and engines are receiving particularly strong attention from the Coalition.

Efforts to reduce pollution from transportation include pushing for widespread reduction of the sulfur content in fuels. A World Bank study shows that, when combined with cleaner vehicles, adoption of low-sulfur fuel would result in annual savings in health costs of US$6 billion in Sub-Saharan Africa alone.

Efforts to lower black carbon emissions also include creation of a public-private collaboration called the Green Goods Movement Supply Chain Partnerships, which aims to accelerate the adoption of emission-reducing and fuel-saving technologies. The CCAC is also working with city governments and stakeholders to implement so-called City Action Plans to reduce diesel emissions in urban areas.

The CCAC has launched efforts to reduce black carbon and other pollutants from brick production through adoption of modern technologies, which can lower pollutant emissions between 10 and 50 per cent.

A major source of indoor air pollution is smoke from cook stoves, which emits carbon monoxide and other pollutants at levels up to 100 times higher than the recommended limits set by WHO. The government of Bangladesh, a CCAC founding partner, recently announced a major initiative to increase the distribution of clean cook stoves in the country.

Source UNEP

Japan's Support for Realizing Environmentally Sustainable Cities

JOINT CREDITING MECHANISM FOR ACHIEVING LOW CARBON AND CLEAN CITIES IN ASIA

Joint Crediting Mechanism (JCM) aims to provide solutions for various urban environmental issues in the Asia region harnessing on the reduction of carbon emission through leveraging Japanese experiences, policies and technologies. Through this process, it reinforces the capacity of developing countries to implement relevant programmes by supporting the formulation and implementation of higher institutional dimensions such as the Nationally Appropriate Mitigation Actions (NAMA) and urban planning.

Japan has advanced technologies for reducing carbon emission. These technologies have various co-benefits that could contribute to resolving a number of local environmental issues. Trams, the Bus Rapid Transit (BRT), and electric vehicles and bikes, for example, can reduce air pollution and traffic load, as well as carbon emission. 3R (Reduce, Reuse, Recycling) and Waste to Energy plants have multiple environmental benefits such as carbon reduction and improved waste treatment and public health.

Many developing countries in the Asian region have difficulties in implementing effective solutions for environmental issues with limited know-how. Many cities in Japan, on the other hand, have become environmentally advanced after overcoming environmental pollution. For example, Kitakyushu, Yokohama and Kawasaki cities and Tokyo metropolitan government have accumulated environmental know-how. Private industries with sophisticated environmental technologies and civil society in these cities also have substantial roles to play.

Ministry of the Environment of Japan aims to establish the partnership between cities in Asian developing countries and Japanese cities with accumulated environmental know-how, and provides these partner cities a supporting package of technologies, low carbon development strategies and capacity development programs. A large-scale implementation of JCM could promote shifting the development of Asian cities toward a sustainable path.

HOW JAPAN WILL ASSIST ASIAN CITIES

Now we will take a look at specific ways of the JCM Project through examples in the waste sector and ESCO businesses.

Japanese cities have been facing waste issues for many years, but underpinned by robust waste management systems and technologies, from collection to final treatment. Experienced Japanese municipal staffs from these cities can transfer these systems and technologies to the partner cities through capacity building programs. This will then establish the rules for waste management and separation and raises residents' awareness of these rules. The 3Rs will be achieved by introducing management systems and waste separation. Japanese know-how and technology can enable appropriate waste management.

Methane recovery from landfills is a potential technological option. Waste incinerator is another cleaner option. Japanese incinerators emit very low level of air pollutants, wastewater and residue. Many Asian cities recently started considering the intro¬duction of incinerators due to the difficulties in finding new landfill sites and have also become interested in energy and heat recovery from incinerators to supplement growing demand for electricity. Proper management of waste will prevent health hazards for workers, make living environments sanitary, and result in a beautiful townscape.

The Energy Service Company Project (ESCO Project) is a promising option for energy saving in many Asian countries where energy saving has not permeated. Moreover, Japanese legislations such as the Energy Saving Act and Eco Action 21 provide backing for the dissemination of energy-saving equipment. Eco Action 21 was formulated by the Ministry of the Environment of Japan for certifying and registering the process of planning, implementing, inspecting and evaluating environmental management of private or public organizations. Such instruments can raise awareness of Asian people for energy saving and give them incentive to adopt advanced Japanese technologies such as inverter and heat-pump. ESCO Projects can also promote adoption of advanced facilities for energy saving in developing countries by diminishing their initial investment cost.

TOWARD ENVIRONMENTALLY SUSTAINABLE CITIES

In FY2013, the Ministry of the Environment of Japan will conduct surveys on partner countries and carry out pilot projects in a number of cities. It is also slated to begin the full-scale

WHAT IS ESCO BUSINESS?

In an ESCO business, one contractor evaluates the energy performance and retrofits and operates the energy-saving facility consistently. The cost for the contract is covered by the benefit from energy saving. By this, the users are not required to make any investment in retrofitting facilities, rather to continue conventional utility payment until the cost for the contract is met. The consistent contract accurately verifies the energy-saving results and promotes the dissemination of energy-saving technologies

Source: Clean Asia Initiative

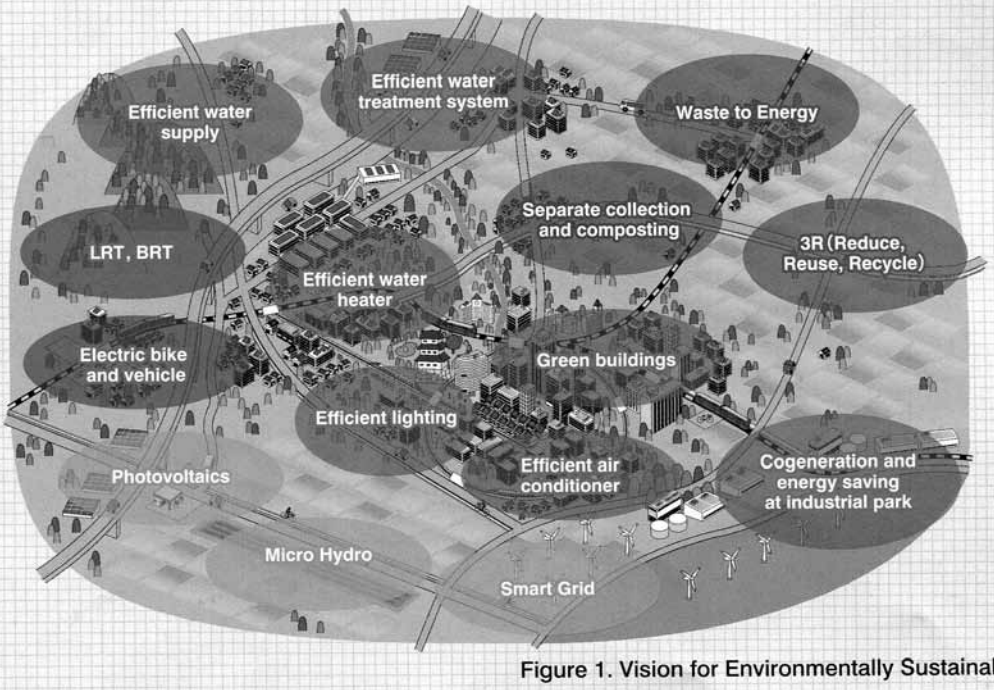


Figure 1. Vision for Environmentally Sustainable Cities

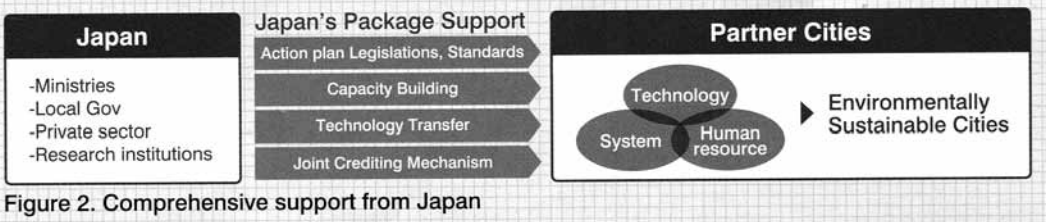


Figure 2. Comprehensive support from Japan

operation of the project starting from FY2014. Launching a large number of such projects in Asian cities will contribute to the mitigation of carbon emissions and other local environmental issues in Asian cities. This could produce carbon credits, which could be used for the achievement of the Japan's reduction target and contribute to the achievement of global target of 50% carbon reduction by 2050 as well.

The Asian region currently accounts for roughly 30% of global carbon emissions, which is estimated to increase further due to the expected high economic growth in the region. Moreover, cities which emit approximately two thirds of global greenhouse gasses are simultaneously facing various different issues such as waste management, air and water pollution, water shortages, and electricity shortages. To comprehensively tackle these issues, the Ministry of the Environment of Japan will be implementing the "Project to Support the Large-Scale Formation of Joint Crediting Mechanism Programs to Realize Low Carbon Societies in Asia (hereafter referred to as the "JCM Project") from the fiscal year of 2013.

VPEG Project - a milestone in cooperative relationship between Vietnam and Canada

▲ *Monre Deputy Minister Bui Cach Tuyen giving speech at the meeting*

On 13th June 2013, the MONRE hosted the conclusion meeting of "Vietnam Provincial Environmental Governance" project (VPEG Project) in Hanoi.

VPEG is a 15 million CAD technical assistance project funded by the Canadian International Development Agency (CIDA) from 2010 to 2013 with the goals of supporting sustainable development in Vietnam through capacity improvement in environmental governance, particularly in industrial pollution management (IPM).

After 4 years, the Vietnam Environment Administration and 8 Departments of Natural Resources and Environment (including DoNREs of Hanoi, Bac Ninh, Hai Duong, Da Nang, Quang Ngai, Binh Duong, Soc Trang and Long An) have taken many activities such as developing legal documents, pollution management plans and Regulations on coordination mechanisms in IPM; strengthening the environmental monitoring capacity; developing the environmental information system, environmental communication and awareness raising, ect.

In the national component, the Project has supported MONRE in improving the effectiveness of the EP legislation and policy, in particular, reviewing the implementation of EP regulations at industrial parks (IPS); assessing the assignment and decentralization of environmental governance, proposing solutions for modification of the Decree 25/2013/ND-CP on the EP fee for wastewater ... Especially, this component has contributed effectively to the revision of Law on Environmental Protection 2005, with number of new contents including: legislating the mainstreaming climate change adaptation with EP in plans and projects, developing new articles on land and air management, legislating the EP responsibility of the IPS and ICS (Industrial clusters) management boards as well as EP responsibility of the producers in the IPS and ICS, and assigning their responsibilities with the State environmental management Agencies...

In the local component, many programs and priority initiatives in IPM have been implemented, specifically: experiment of the automated monitoring system for wastewater treatment at IPS in Long An province; development of environmental-friendly IPS and ecological IPS in Da Nang city; IPM at Bung Bu streams in Binh Duong province, popularization of clean production in Soc Trang and Hai Duong, response to the storms and floods in Quang Ngai, relocation of polluting industrial facilities in Soc Trang, and popularization of environmental management model in craft villages in Hanoi and Bac Ninh.

Those activities play an important part in improving the EP policy, strengthening environmental governance in either central or local sectors, making significant changes in the environment protection.

Giving speech at the Conference, Mr. Bui Cach Tuyen – Deputy Minister of MONRE appreciated the efforts of the parties in the project, especially the professionals of CIDA, Canadian Executing Agency, units under VEA and DoNREs. Deputy Minister also suggested authorities pay due attention and guide the agencies to continue the development and applications of project outputs effectively.

Ms. Deborah Chatsis, Ambassador of Canada in Vietnam, confirmed that VPEG project has marked a milestone in 40 years of cooperation between the two countries, including 18 years of co-operation in Industrial Pollution Management and Environment Protection. The project has taken many activities that positively contribute to pollution reduction and model greening. In the coming time, Vietnam should further promote the development of the policy in which there is a joint participation of the government, businesses and community in order to mitigate environmental pollution.

▲ *Introduction to the products of VPEG Project after 4 years of its deployment*

The conclusion meeting of VPEG project took place at the same time with many important events celebrating 40 years of diplomatic relations between Vietnam-Canada. It is considered as one of the effective and successful collaborations, marking cooperative relationship between the two countries. **PT**

SUSTAINABLE PRODUCT INNOVATION FOR 500 COMPANIES IN VIETNAM, LAOS AND CAMBODIA

The Sustainable Product Innovation Project (SPIN) is funded by the European Union and implemented together with other partners: the Delft University of Technology (TUD), Vietnam Cleaner Production Centre (VNCPC), UN Environment Programme (UNEP) and Asian Institute of Technology Vietnam (AITVN) from April 2010 until December 2013. The Project has been deployed for 500 businesses in Vietnam, Laos and Cambodia in food processing, textile, footwear, handicraft and furniture to develop and produce more sustainable and advance products. So far, 110 small and medium enterprises in Vietnam have manufactured environmentally friendly products.

SPIN aims at promoting the flexible production to cope with resource scarcity and environmental factors by combining production process with the effective use of non-renewable resources, and finding alternative resources as well as re-use of scarce resources which are not destroyed. This is very important for sustainable economic growth of a nation as well as for the industry's competitiveness. Ms. Janet Salem, United Nations Environment Programme Regional Office for Asia-Pacific says the overall objectives of this project is to build awareness and national capacity for government officials in the three countries in approach to support sustainable products policy as well as the development of tools, mechanisms and institutions. **TBR**

POPs Pesticides Project regains the speed

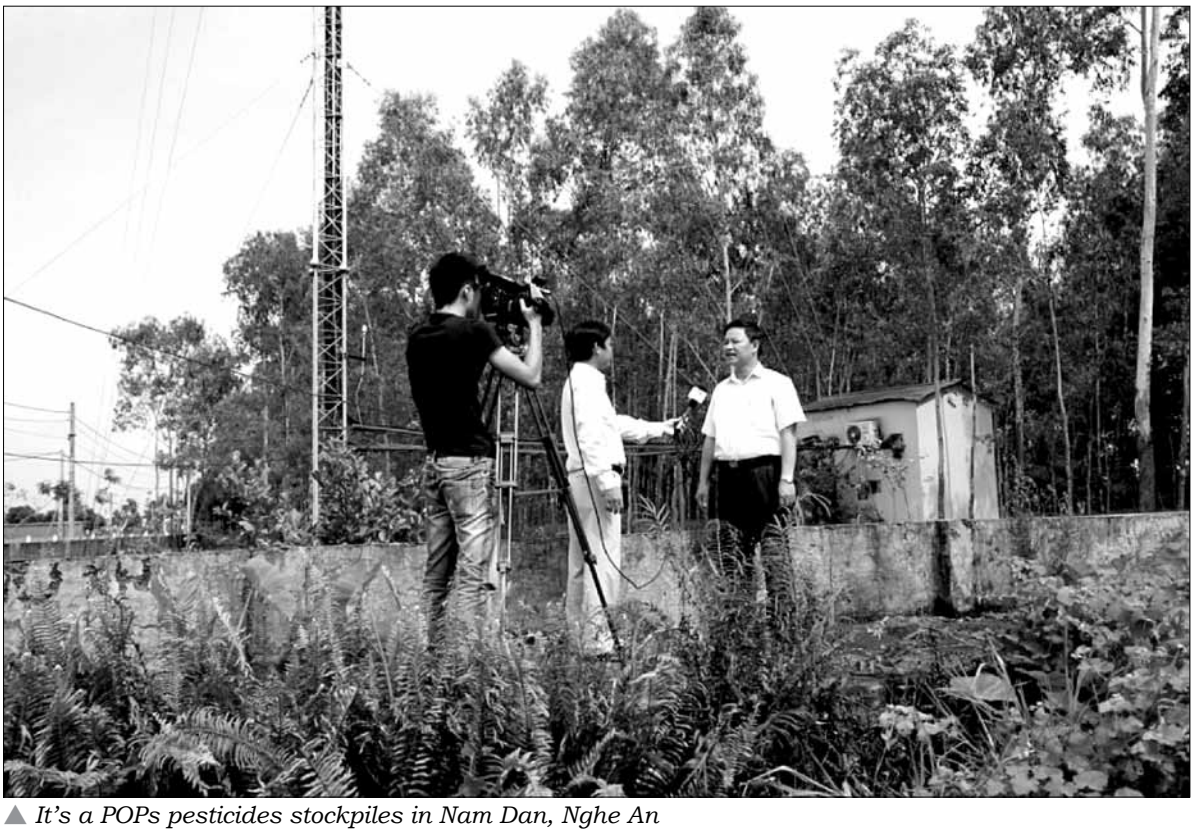
DAO NHAT DINH
Project's technical expert (POPs Pesticides Project)

The Project "Building capacity to eliminate POPs pesticides stockpiles in Vietnam" as originally approved has the objective "To remove barriers to the sustainable elimination of POP pesticides in Vietnam". A mid-term review was conducted in later 2012 concluded that the project is on right track though some delays occurred at the early stage of Project start-up. The situation of POPs Pesticides stockpiles in Vietnam has changed to POP Pesticides waste due to past burying and mixing of pesticides into the ground instead of storing stockpiles in stores. The Project is now accelerating to deliver the main output of elimination 1000 tons of POPs Pesticides stockpiles.

The Project has completed most of Outcome 1 - "Improved capacity facilitates elimination of POPs pesticides stockpiles". Many consultant contracts to survey stockpiles and contaminated sites, to deliver training for governmental staffs, testing new disposal facilities have completed successfully. For the Outcome 3 - "Improved chemicals management prevents importation and use of POPs pesticides", the project has cooperated Customs Department General to conduct training courses on management and handling of confiscated POPs pesticides.

On the main focus of the Project document, namely Outcome 2 - "All known stockpiles are destroyed", the Project Management Unit has gathered enough data to draft tender documents for disposal and rehabilitation contracts. In the Project's plan, POPs pesticides wastes will be packed in bags and drums then the disposal contractor will come and pick the waste to conduct destruction treatment. Finally, a civil work contractor will construct risk reduction works including drainage, re-surfacing and building rain water collection and filtering unit.

The contract for excavation and packaging of POPs is on-going. PMU, international



▲ *It's a POPs pesticides stockpiles in Nam Dan, Nghe An*

supervisor and contractor are facing serious challenges during field work. June, July are supposed to be dry season with few rainfalls in Nghe An and Ha Tinh but this year it rained three days in a row at the Vuc Rong site, creating many additional works for the team. So the question of having a good store got critical. Due to administrative procedures, contractor can only rent an existing store and upgrade it to meet POPs pesticide waste storage requirements. Sunny days are better for the waste but not for the workers and engineers who are in full personal protection equipment and respirators. All clothes become damp with sweat just few minutes of work. Gloves are full of sweat so that each time somebody raises hands water drop down to the ground. After two weeks of hard work the workers managed to excavate and pack 308 tons of dry POPs waste.

There are two more hot spots to excavate and the rainy season is approaching. The typhoon number 2 is defying all climate traditions, heading to North Vietnam in June. It poured more than 100 m of rain into hot spots, which made the nature of excavation and packaging work change significantly. More concerns are linked to the tendering process for disposal contract.

The disposal tender has finalized the Pre-qualification stage and is drafting revised TOR and evaluation criteria. It may have to be implemented after the tropical storm season in Nghe An and Ha Tinh. It is international bidding to get the lowest possible price for disposal at an acceptable level of quality. The quantity of 1000 tons of POPs pesticides wastes has attracted more than 10 international bidders at pre-qualification round.

Contracting a test laboratory to take samples and analyze the level of contamination during the excavation, civil work and disposal is also racing to catch the field work. The tendering was a bit slow due to administrative procedures. Developing a standard storage and application of design in improving existing stores for confiscated pesticides is another minor work that the project has to take into account while maintaining the focus on disposal work.

The PMU is working hard to race against time and against the early rainy season. Continuous innovations at the field are required to complete the work in good timing■

VIETNAM TO NEGOTIATE WITH THE WORLD BANK TO IMPLEMENT THE PROJECT "SUSTAINABLE DEVELOPMENT OF DA NANG CITY"

Deputy Prime Minister Hoang Trung Hai has agreed on the proposal of the State Bank of Vietnam to negotiate with the World Bank (WB) on the Invesment Agreement and other relevant legal documents related to the Project “Sustainable Development of Da Nang city”.

The Project "Sustainable Development of Da Nang city" will be implemented in the period from 2013 to 2018 and consists of four components: Improving the urban environment; Focusing on improving drainage and sewerage; Developing public transport system with the focus on high-quality bus rapid transit (BRT); Establishing strategic transport infrastructure and Enhancing performance capacity. The Project aims to promote the sustainable development of socio-economic of Da Nang city, bringing benefits to the people by improving urban utilities, living conditions and implementation of poverty reduction; meeting travel demand and traffic congestion as well as mitigating environmental pollution and enhancing the work of disaster prevention. **VNA**

"Green Books" helps businesses promoting their brands in the market and in communities

In 2012, the Department of Natural Resources and Environment of Binh Duong Province was assigned by the Provincial People's Committee on implementing the Project "Investigation, survey, evaluation and publishing the " Green Book "of Binh Duong province in 2012". There are 47 businesses good execution of environmental protection and rewarded. Regarding the above outcomes, the Head of Environmental Protection Department of Binh Duong province - Mr. Tao Manh Quan shared some experiences in order to promote economic - social development and environmental protection in the province.

•After two years of publication of the "Green Book", how is the awareness on the environmental issues in Binh Duong province, at present?

MR. TAO MANH QUAN:
Along with the rapid development of the industries, the environmental protection has become a major challenge and is the top concern of the Provincial Party Committee, People's Committee of Binh Duong province. Many policies and different approaches have been issued, applied to improve efficiency in the environmental management in the province. One of the environmental management measures have been implemented, such as publicizing environmental information of industrial facilities for communities participation in monitoring, creating pressure to businesses, or strongly motivating and encouraging businesses to better business environmental tasks themselves, such measure have initially brought positive results.

Every year, in addition to the publication of the list of businesses causing environmental pollution, since 2010, Binh Duong province has focused on improving motivations and incentives, giving timely encouragement to businesses with good implementation of environmental protection by the publication of "Green Book" to honor, promptly rewarded these businesses. With this approach, businesses with good implementation of environmental protection will be praised by the Provincial People's Committee, recognized and appreciated by communities, since then, business's reputation has been promoted and widened. On contrary, businesses with poor awareness on environmental protection will suffer pressure from communities, since then it will urge such businesses on investment in improving environmental quality to be listed in the "Green Book", promoting their images and brands in the marketplace and in the communities.

From 2011 to date, the Department of Natural Resources and Environment has conducted investigations, surveys, classification and publication of the "Green Book" of Binh Duong province based on criteria issued by Binh Duong province People's Committee in Decision No. 03/QD-UBND dated January 27, 2011. As a result, there were 32 businesses in 2011 and 47 business in 2012 classified as green color (businesses with good implementation on environmental protection).

After two years of awarding the prize, now awareness on environmental protection of businesses are markedly enhanced, in particular, the number of businesses named in the "Green Book" of Binh Duong province in 2012 increased compared to the first publication; Rate of businesses sanctioned for administrative violations in the field of environmental protection in 2012 decreased compared to 2010, in particular: In 2010, total number of businesses inspected were 455, of which 270 businesses violated, accounted for 59.3%, 185 businesses not violated, accounted for 40.7%; In 2011, total number of businesses inspected were 495, of which 270 businesses violated, accounted for 54.4%, 225 businesses not violated, accounted for 45.6%; In 2012, total number of businesses inspected were 388, of which 184 businesses violated, accounted for 47,4%, 204 businesses not violated, accounted for 52.6%

•It is known that environmental protection goal of Binh Duong province in the period 2011 - 2015 is to prevent and remedy the environmental pollution, improve the quality of the environment as the top priority, so, the Department of Natural Resources and Environment has any plan to accomplish this goal?

MR. TAO MANH QUAN:
To achieve the above the environmental protection goal, the

▲ *The ceremony on publication and the Green Book award in Binh Duong province in 2012*

Evaluation of the "Green Book", Vice Chairman of Binh Duong People's Committee - Mr. Tran Van Nam hopes that businesses will continue to preserve and maintain the achieved results and further develop a sense of responsibility to the community and society, actively contributing to the success of the goal of prevention, improving environmental quality in the province. Besides, relevant authorities, departments and industries need to accelerate the dissemination of criteria for the classification of businesses for their awareness and implementation; attention should be paid to find out and nominate businesses with good environmental protection to honor them.

Department of Natural Resources and Environment outlined the following plan:

Issuing many guidelines and regulations to specify the Law on Environmental Protection that helped environmental protection in the province oriented and in long-term stability, namely: developing Environmental Protection Program and Plan for each phase; issuing the Environmental Protection Rule and the Rule on arrangement of industrial sectors in the province. In addition, the province has also developed several plans, projects related to the environment such as overall planning on solid waste management and disposal towards 2030; the project on treatment of medical waste for the period 2011 - 2015 and orientations towards 2020; Planning to develop industrial zones towards 2020; the Drainage Planning towards 2020; The overall planning of urban construction towards 2020, with a vision to 2030...

Implementation of the Environment Protection project in Dong Nai river basin in the province, in the period 2011 - 2015; Strengthening the Provincial Steering Committee of Environmental Protection; Issuing the rule on organization and operation of the Steering Committee and the assignment of responsibilities to individual member of the Steering Committee. Every year, the Steering Committee holds 2 meetings for preliminary evaluation of environmental protection;

Develop and implement 26 priority investment projects and 27 major tasks of environmental protection, of which 5 investment projects and 5 key tasks are listed in the list under the environmental protection plan in Dong Nai River basin, with a total budget of 4,000 billion VND;

Strengthening inspection and check on environmental protection businesses, strictly handling businesses causing serious environmental pollution. In addition, the province continues to build, install and operate the automatic waste water monitoring system and cameras to monitor the operation of wastewater treatment plant concentrated in industrial parks and businesses with large drainage discharge in the province;

Every year, submission to the Provincial People's Committee for issuing the list of businesses causing environmental pollution, serious environmental pollution for proper treatment. Announcing the list of businesses causing environmental pollution having to move out of residential areas, urban areas, currently relocation is strongly forced for moving;

Besides, actively coordinate with neighboring localities such as Ho Chi Minh City, Dong Nai province on solving interprovince environmental problems such as pollution in Ba Bo Canal, Siep stream, sand exploitation in Dong Nai river...

● As a province located in the southern key economic area and Dong Nai river basin system, Binh Duong province has any specific solutions to the EP in the coming years?

MR. TAO MANH QUAN: Specific solutions for environmental protection in the province are as follows:

Regularly innovating on propaganda and education of environment, creating drastic changes in awareness, forming public opinion to harshly criticize unsanitary behaviors and environmental pollution, coupled with the application of severe penalties on every violation. Annually, developing and announcing the "Green Book", "Black Book" on environment to enhance the role

of community in supervision of businesses operating in the province

Implement policies on giving incentives and support for businesses with change and improvements on production technologies causing less pollution and environmentally friendly style or apply new technologies in treatment and recycling of waste; Building and expansion of the automatic monitoring system of large drainage discharge in the province; To invest in building the automated air monitoring system, surface water and ground water;

To accelerate the implementation of projects, drainage projects, wastewater and solid waste treatment in the provincial environmental protection plan;

Working closely with the Central Committee and 11 provinces and cities in Dong Nai river basin system in environment protection activities in river basin system; To boost regional and international cooperation on environmental protection, promote socialization and multi-diversifying funding sources for environmental protection.

●***Thank you for this conversation.***

DUC TRI *(Reported)*

Corporate Social Responsibility Award Ceremony

Honoring and encouraging enterprises to implement corporate social responsibility (CSR) in Environment and Labor fields are the main content of CSR Award Ceremony 2012 which was broadcasted on Vietnam television (VTV1) on March 30, 2013.

The Award is conducted by Vietnam Chamber of Commerce and Industry (VCCI) in collaboration with ministries, agencies and the project "Helping Vietnamese SMEs Adapt and Adopt Corporate Social Responsibility (CSR) for Improved Linkages with Global Supply Chains in Sustainable Production"(funded by European Union (EU), carried out by The United Nations Industrial Development Organization (UNIDO) together with its consortium of other partners).

Around 50 businesses were selected into the final round of which 41 companies have won the Awards including 1 First Prize, 2 Second Prizes, 3 Third Prizes and 15 Honorable Prizes in each sector (Environment and Labor).

"CSR practice is not new in the world, but in Vietnam this issue has just been mentioned and implemented within two decades. VCCI is one of the pioneers supporting Vietnamese business community to implement CSR during this time. So far, many enterprises have realized that profit thinking need to be associated with human resource development and environmental protection towards to sustainable development", said Mr. Nguyen Quang Vinh, Director of the Office for Business Sustainable Development, VCCI.

The Award encourages enterprises to follow recent approved National Strategic Objectives by the Government, such as: The National Green Growth for the period 2011 - 2020 and with a vision to 2050; the Viet Nam Sustainable Development Strategy for the 2011 - 2020 as well as others regulations related.

VCCI

HO CHI MINH CITY:

Towards becoming a green city

▲ *Many new urban areas in Ho Chi Minh city have saved more areas for green space*

Towards the goals of the urban green space plan, many new urban areas in Ho Chi Minh city have saved more areas for green space. Ho Chi Minh city is striving to transform into a "green city" in the future. With each passing day, the appearance of green space is becoming clearer in every corner and street of the city.

Roadmap for urban green space planning for the period of 2013 - 2015

In 2012, the movement for urban improvement "Green - Clean - Beautiful" was started with the formation of the systems of green tree and building in order to restore the ecosystems and biodiversity and contribute to the reduction of environmental pollution. Specifically, the city also planted 500,000 trees along the rivers and canals in Thu Duc, Binh Thanh, Nha Be, Hoc Mon, Cu Chi, etc. In addition, green landscapes with trees and water surfaces for tourism and entertainment along the banks of the rivers of Saigon, Dong Nai and Nha Be will also be planned with a total area of about 7,000 hectares. Besides, the city prescribed that any perennial and annual tree area to be converted to other uses must retain at least 35 - 40% of the planted trees.

However, the current green space in Ho Chi Minh city is not evenly distributed. Therefore, in the roadmap for urban green space planning for the period of 2013 - 2015 and the orientation to 2020 recently approved by the People's Committee of the city at the end of 2012, in addition to the development of additional 250 hectares of green tree, the city will preserve and improve the existing parks and trees which cover an area of about 200 hectares.

The goals need the consent of the people

In fact, in major cities such as Ho Chi Minh city and Hanoi, urban green space is mainly formed from tree-populated streets, parks, zoos, etc. Facing the challenges of the process of urbanization, green urban development is the solution to help the Vietnamese cities achieve a prosperous, sustainable, unique and environment-friendly development. Green space, green building, green transportation, green industry, green urban environmental quality together with the conservation of natural landscape will create a community lifestyle which is friendly to the environment and nature. Though many plans were approved, the implementation of the projects on green trees, green space, building parks and planting trees in new residential areas was not easy. In fact, the number of existing trees in Ho Chi Minh city is not sufficient enough to meet the defined requirements to improve the ecological environment for a major city. Therefore, the planning of urban green space is still a long road which requires a strong consensus between the authorities and people of the city.

VNS

ASEAN ESC MODEL CITIES PROGRAMME:

Lessons Learnt and Way Forward

Kuching North city (Malaysia) won the Sustainable Cities Environment Award in 2006/2007 and 2009/2010

By 2020, the ASEAN community wishes to become clean and green, with a high quality of life for its people. For this, green, clean and liveable cities, which are the hubs and drivers for the sustainable growth, will be absolutely crucial. Yet, presently most ASEAN cities still lack guiding frameworks, capacity and resources to meet the challenges of sustainable urban development. Hence, in 2003, ASEAN Environment Ministers established the AWGESC to address these challenges. Furthermore, EAS Environment Ministers have also prioritised collaboration on ESC since 2008. The ASEAN ESC Model Cities Programme generously supported by the Japan - ASEAN Integration Fund - is one of AWGESC's key initiatives. In just one year (from 2011 - 2012) it has managed to extend assistance to 7 national governments on enhancing national ESC frameworks, as well for capacity building in 14 cities on key areas of ESC. The key lessons learnt from Year 1 were: Several ASEAN Member States have already established effective national sustainable city frameworks, definitions, indicators and programmes to encourage bottom-up actions for ESC, which are being expanded and strengthened further.

These programmes are the core elements for supporting a regional programme like the ASEAN ESC Model Cities Programme, and could serve as reference for mutual learning among ASEAN Member States; Priority capacity building areas in ASEAN cities are: Solid waste management, wastewater treatment and sanitation, air quality management, urban greenery as well as on emerging issues relating to climate change, including overall low carbon city development and adaptation; and City-to-city partnerships are effective and much appreciated. Cities want to exchange knowledge, and be recognised for their good achievements, serving as "models' to inspire others. A regional platform enables this. The ASEAN ESC Model Cities Programme is perceived as an "umbrella" platform and framework within AWGESC for connecting the best of ASEAN"s cities with each other, national governments as well as supporting stakeholders who can assist them to achieve their goals and visions. It is also the "seed" for growing to a wider East-Asia wide platform and network of cities and their supporters.

INDONESIA

Indonesia has had a long standing issue with solid waste management in terms of collection, transportation and final disposal. To ameliorate this situation, two main strategies have been established. First, the Adipura Award Scheme has been created to incentivise cities to improve environmental management focusing on four indicators - solid waste management, green open space management, water pollution control and air pollution control. Second, waste banks have been established where people are paid to take de-

posit waste which is then used to make handicrafts, as well as for raw materials in recycling industries. These waste banks generate income, reduce landfill and combat negative views of waste. Through these two programmes, Indonesia has had success in reducing waste going to the landfill by 7%, increase green open space, decreasing incidents of disease and building the economic value of waste through 3Rs. The replication of waste banks is being fast tracked. It is estimated that by 2013 there will be nearly 1,400 waste banks in 65 cities handling 2.5 million tonnes of waste per month.

Key success factors have been the commitment of leaders, institutional capacity, public participation, establishing effective laws, adequate funding and data management and information systems. The main challenge is changing people's mindset concerning waste. These programmes have been linked to ASEAN ESC Model Cities Programme, and it is hoped that waste banks can be further spread across the country to help Indonesia meet national waste reduction targets. Indonesia hopes that international stakeholders can assist through expanding assistance to other environment sectors and support further city to city exchange.

MALAYSIA

Malaysia presented an overview of its Sustainable Cities Program, known as Sustainable Cities-Environment Award (Anugerah Alam Sekitar - Bandar Lestari) which gave recognition to the local authorities and urban centres for their overall commitment and efforts towards environmental sustainability.

Malaysia nominated City of Kuching North, which won the Sustainable Cities - Environment Award in 2006/2007 and 2009/2010, to participate in the ASEAN ESC Model Cities Programme Year 1 as an incentive to the city, and to motivate more cities to participate in the Sustainable Cities-Environment Award.

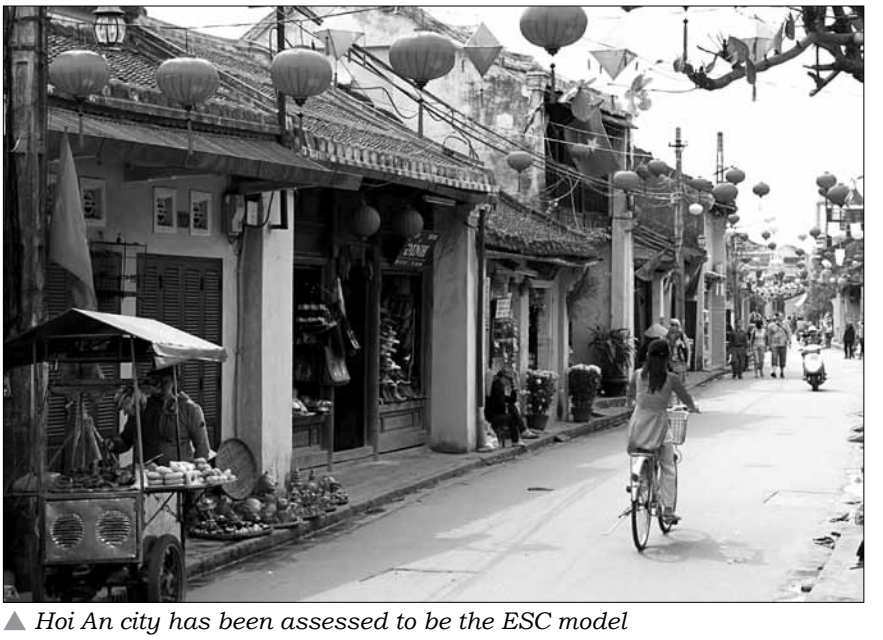
In this programme, the city achieved notable results in producing their own Effective Microorganisms (EM) solution, increasing the production of compost and a high reduction of waste generation in the participating households (62%). Further to that, the Department of Environment (DOE) tried to motivate other local governments move towards environmental sustainability by promoting Kuching North's achievements.

However, there have been difficulties faced due to limited budget availability and lack of awareness among the local governments. To address these challenges, DOE will continue to conduct more roadshows/workshops/seminars/ to promote the Sustainable Cities-Environment Award which will promote and share City of Kuching North's successful practices to other local governments as well as enhance networking with the private sector and international organisations.

VIET NAM

The main objectives of Viet Nam's National ESC programme are the development of nationally appropriate ESC, enhancing awareness of ESC development and the development of an ESC legal framework. Recent developments at the national level have focused on reviewing the existing legal framework, researching and specifying the concept of ESC in Viet Nam as well as drafting the initial 24 criteria. The National Government has further organized the 1st National consultative workshop on ESC in Vietnam with 60 participants across relevant stakeholders. Currently a number of cities in Viet Nam have assessed the ESC model such as Cao Lanh city, Da Nang city, Ha Long city, Hoi An city and Thua Thien - Hue city. Local governments are concentrating on enhancing awareness of people about ESC through workshops and communication activities, especially focusing on schools and self environmental protection groups as well as practical projects. Nevertheless, in the process of developing ESC, Viet Nam has to face a number of challenges including weak participation and cooperation of relevant ministries and branches, a lack of a legal framework specifically for supporting and promoting the development of ESC and a limited awareness of environmental issues and ESC.

In the future, Viet Nam will focus on finalising and promulgating the ESC criteria, providing specific guidelines for ESC awards as well as revising and supplementing regulations related to environment in urban planning policies, towards the development legal frameworks for ESC in Vietnam. Viet Nam plans to continue cooperation with ASEAN - Japan ESC-relevant organisations and develop international collaboration to promote ESC. Viet Nam believes that potential collaboration areas are on the development of ESC criteria and legal framework, public awareness raising on ESC, promoting ESC through ESC Awards and establishing pilot ESC cities, starting with small and medium towns■



▲ *Hoi An city has been assessed to be the ESC model*

Greening Trade Imperative for Sustainable Development

▲ *Forestry is one area in which opportunities exist for greener trade*

Greening global trade is a vital step to achieving sustainable development, and developing countries are well positioned to help catalyze this transition, according to a new Report released by the United Nations Environment Programme (UNEP).

"In today's increasingly interconnected world, where trillions of dollars worth of goods and services are traded annually, greening global trade still presents challenges but also holds significant opportunities," said Achim Steiner, UN Under-Secretary General and UNEP Executive Director. "If we are to reverse the global decline in biodiversity, mitigate the release of greenhouse gases (GHG), halt the degradation of lands and protect our oceans, then it is an imperative that international trade becomes more sustainable and contributes to protecting that "natural capital" of economies in the developing world."

In the last two decades, trade has continued to expand, creating economic growth and progress towards eradicating poverty in developing countries. At the same time, however, the increasing volume of trade has put additional stress on natural resources, led to increases in GHG emissions, and contributed to social inequalities.

World Trade patterns show that developing countries, and particularly least developed countries, still depend heavily on natural resource based products and raw materials for their exports. To achieve long-term and sustainable economic development, however, there are significant and real opportunities for developing nations to diversify their economies and position themselves to benefit from the growing global demand for more green goods and services.

While still representing only a small percentage of the global market, trade in certified products and in environmental goods and services is on the rise in absolute terms. For example, the global market in low-carbon and energy efficient technologies, which include renewable energy supply products, is projected to nearly triple to US$ 2.2 trillion by 2020.

The Report, Green Economy and Trade - Trends, Challenges and Opportunities, finds that developing countries with abundant renewable resources are well-positioned to capitalize on the opportunities to increase their share in international markets for sustainable goods and services.

The Report analyzes six economic sectors - agriculture, fisheries, forests, manufacturing, renewable energy and tourism - where trade opportunities exist, and identifies measures, such as policy reforms and certification, that can help developing countries benefit from these markets.

Some of the trends highlighted in the Report illustrate this potential. For example:

• **Agriculture:** The global market for organic food and beverages is projected to grow to US$105 billion by 2015, compared to US$62.9 billion in 2011. For instance, the production of tea in line with sustainability standards has increased by 2000 percent between 2005 and 2009.

• **Fisheries and aquaculture:** Wild-capture fisheries already certified or in full assessment record annual catches of around 18 million metric tonnes of seafood. This represents about 17 percent of the annual global harvest of wild capture fisheries, and demand far outstrips supply. Furthermore, the total value of seafood that has been farmed according to certified sustainability standards is forecast to increase to US$1.25 billion by 2015, up from US$300 million in 2008.

• **Forestry:** As of early 2013, the total area of certified forest worldwide stands at close to 400 million hectares, amounting to approximately 10 percent of global forest resources. Sales of certified wood products are worth over US$20 billion per annum.

• **Manufacturing:** Many suppliers are greening their practices in order to secure their positions within international supply chains. This is illustrated, for example, by the 1,500 percent increase in global ISO 14001 certifications on environmental management between 1999 and 2009.

• **Renewable energy:** Since 1990, annual global growth in solar photovoltaic, wind and biofuel supply capacity has averaged 42, 25 and 15 percent respectively. In 2010, the investments in renewable energy supply reached US$211 billion, a five-fold increase from 2004, and more than half of these investments were in developing countries. Developing countries have significantly increased their exports of renewable energy equipment such as solar panels, wind turbines and solar water heaters, and expanded their potential to export electricity from renewable sources.

• **Tourism:** In developing countries, this industry's market share has increased from 30 percent in 1980 to 47 percent in 2011, and is expected to reach 57 percent by 2030. In 2012, for the first time, international tourism arrivals reached one billion per year. The fastest growing sub-sector in sustainable tourism is ecotourism, which focuses on nature-based activities. Many developing countries have a comparative advantage in ecotourism due to their natural environments, cultural heritage and possibilities for adventure holidays.

"Transitioning to a green economy can facilitate new trade opportunities, which in turn will help to make global trade more sustainable," said Mr Steiner. "At the same time, trade in environmental goods and services is clearly an area where many developing countries have a competitive advantage. With the right policies and price regimes in place, developing countries are well-positioned to help drive the global transition to a more sustainable economy."

The Report identifies several areas where public and private actions can support developing countries' efforts to access greener international markets. These include:

• Public investments in key economic infrastructure, technical assistance, targeted education and training programmes, and access to sustainable resources, such as electricity from renewable energy sources.

• Market-based instruments, such as the elimination of subsidies that encourage unsustainable production, consumption and trade, and pricing policies that take account of the true environmental and social costs of production and consumption.

• Regulatory frameworks that support green industries and incorporate sustainable development considerations in national development plans and export promotion strategies.

• Resource and energy-efficient production methods, so as to ensure long-term competitiveness in international markets.

• Regional and multilateral fora that can help to liberalize trade in environmental goods and services, remove environmentally harmful subsidies, and provide opportunities for collective action to address global environmental and social challenges.

Realizing sustainable trade opportunities can imply that suppliers have to comply with an increasing number of environmental and social requirements. In the lead-up to the United Nations Conference on Sustainable Development (Rio+20), several countries expressed concerns about such difficulties to access export markets due to complex regulatory regimes. Furthermore, achieving compliance can be expensive, especially for small and medium-sized enterprises.

For these reasons, public and private support is necessary to help businesses green their production and supply chains. In addition, regulatory cooperation, technical and financial assistance and capacity building, will be critical if developing countries are to harness new green trade opportunities.

UNEP, under the Green Economy and Trade Opportunities Project (GE-TOP), seeks to identify policies and measures to help developing countries overcome challenges and respond to export demand for sustainable goods and services.

Following this Report, which is the first key output under GE-TOP, UNEP is moving to the second phase of GE-TOP. In response to the calls made at Rio+20 for more action by the international community, UNEP will provide sector-specific assistance to developing countries through inclusive stakeholder processes to seize opportunities arising from the transition to a green economy. **Source UNEP**

Vietnam to apply green finance and green banking

On 25th June, Ministry of Finance, the State Bank of Vietnam and the macro-economic reform program of German Academy for International Cooperation (GIZ) organized a conference on "Introduction to green finance and green banking". These are the operations of professional skills of banks to encourage environmental activities and reduce carbon emissions.

Regarding Vietnam's side, the policy framework has been initially introduced, paving the way for the ministries, agencies, research institutes, universities to continue to contribute ideas, suggestions and planning of specific and long-term policies. These above issues are to encourage the financial institutions, banks and finance companies to implement green financial programs and green credit for the implementation of green growth strategies of the Government in the future.

Ass. Prof. Nguyen Kim Anh, Director of Department of Banking Staff Organization of the State Bank of Vietnam, emphasized: "For developing countries like Vietnam, the budget is still tight, the role of Green Finance and Green Banking are extremely important. It must be involved from the beginning of all the components of society, besides the tools of tax policy and fiscal policy"

On the workshop, representative of GIZ in Vietnam also committed to technically and financially support a part so that Vietnam can implement green finance and green banking, contributing to green growth strategy from present to 2020.

On October 12, 2012, Sacombank official received and became the first commercial bank in Vietnam to apply International Standard Environmental and Social Management System (ESMS) following the international standards by Dutch Price Waterhouse Coopers (PwC) giving consultancy to strengthen the management of environmental-social impact on activities of giving credit to customers. Accordingly, Sacombank offered programs to assess the environmental - social impact on loans from the appraisal stage to the whole usage of loans by customer. Also, Sacombank has issued a list of occupations not granted credit based on risk assessment to the environment and society.

New ESMS system of Sacombank is developed in compliance with international standards and in accordance with conditions in Vietnam by the introduction for application of the Equator Principles (a system of rules developed for the financial sector to identify and assess and manage environmental - social risks in the project funding transactions) and the IFC standards of implementation combined with environmental - social standards of Vietnam. This system consists of a set of standard documents on environmental - social policies and appraisal procedures on environmental - social impact assessment and a training program on deployment of the environmental - social management system the procedure on credit granting. Besides, Sacombank also set up the ESMS group to participate in the process of appraising the environmental - social impact in production and business activities of the borrowers in Sacombank.

With new ESMS system, Sacombank will achieve the following targets: managing risk arising from issues related to environment - society to avoid losses and minimize reputation risk, increase efficiency in business operation and increasing investment opportunities in environmental protection activities; undertaking the highest responsibilities to the environment and the surrounding community; become the first bank in Vietnam applying the ESMS standard system reaching international standards. In particular, through application of the ESMS system, it will facilitate Sacombank having access opportunities and attract unsecured foreign loans with low interests, since international financial institutions when offered capital sources for developing countries, always requires receiving businesses to secure the ESMS standards. Sacombank is now a joint-stock commercial banks eligible to access to the largest sources of foreign capital in Vietnam with a total investment value as of December 2012 of 2,100 billion (the trust funds) and 105 million USD (secondary funds) from institutions such as IFC, ADB, FMO, Proparco... **VNS**

GREENING THE BANKING SECTOR:

International experience and lessons for Vietnam

LE THI HUONG
Vietnam Academy of Science and Technology

At present, sustainable development is considered as the focal issue in economic growth in countries over the world in general and Vietnam in particular. Sustainable development requires greater responsibilities for the environment and society, but also provides new business opportunities. In banking, credit institutions can mitigate risks and capture new business opportunities in areas related to society and environment namely energy saving, renewable energy... by encouragement of businesses and customers of applying sustainable business practices. In fact, many governments around the world have issued policies on motivating banks to appropriately behave with risk management in environment and society. Since then, a number of new standards and rules in the banking sector have been compiled, developed to promote social responsibilities and transparency on the impact of bank activities on the environment and society.

SOME INTERNATIONAL EXPERIENCE

The United States of America is one of the first countries in the world issuing rules on environmental responsibilities not only to businesses causing pollution, but also to other relevant parties, which includes banks offering loans to Works and projects causing pollution by promulgating the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1980. Although this Act offered exemption of responsibilities for lenders (usually credit institutions), but in cases where lenders may involve at a certain level for the assurance of environmental and social safety of the Works and projects causing pollution, such lenders have to pay a considerable penalties.

In 1990, the Fleet Factors Financial Group was judged by the US Court on compensation to environment by its investment and directly associated to a project causing pollution. This is a classic case of the U.S. financial sector, regardless of several arguments, still made credit institutions then having to seriously take into account the environmental risks in offering loans. Besides, the strict regulations of CERCLA for compensation to environment also made indirect impacts to banks since environmental compensation might make the project owner losing the ability to repay banks. The International Institute for Sustainable Development (IISD) quoted the results of an investigation by the American Bankers Association that after the Fleet Factors case, 63% of banks in the United States have refused to fund the projects where considered as suffering environmental risks and 46% of the banks decided stop funding for a number of industries frequently causing environmental polluting.

In 2007, China implemented the "Green Credit Policy" to encourage banks to provide credits for projects causing less pollution and environ-

mentally friendly style, using renewable energy. However, it took nearly 5 years for China since the start of the policy until developing a relatively detailed guidelines to implement this policy (2/2012). Earlier, a number of independent studies on the implementation of this policy did not highly evaluate its efficiency for practical activities in Chinese banks. One of the biggest difficulties on implementing this policy in China is the lack of a reliable assessing system on industries and business causing environmental pollution as a basis for banks on classification of projects, especially when many industries causing pollution are also the highly profitable industries in many localities. According to this study, number of businesses causing environmental pollution listed in the black list (impossible to have bank loans until they improved the pollution status) are too small compared to businesses fined by the Ministry of Environmental Protection of China due to pollution (38 compared with 8,000 in 2007). This is the biggest challenge, could also become the reason for banks to delay and avoid credit cuts to industries, businesses that caused pollution and impacted people's life but brought more profits to businesses and banks.

Besides legislative responsibilities as mentioned above, there are several other non-state efforts to promote accountability of the banking sector to the environment and society. Among them are the United Nations Environment Programme Finance Initiative (UNEPFI), the United Nations Global Compact (UN Global Compact), Principles for Responsible Investment of the United Nations and the United Nations Equator Principles (EP), Carbon Principles, Climate Principles, ISO 26000, other initiatives and projects. Of which EP is the standard principle developed and committed to follow up by financial institutions. In 2002, the International Finance Corporation (IFC) and 9 international banks had a meeting in London to discuss the responsibilities of banks to financial development and decided on developing a standard criteria on implementing responsibilities to the environment and society based on the available IFC standards. EP was officially launched in 2003 and now 77 financial institutions has participated such commitment. EP was first amended in 2006 and is currently under the second amendment. The draft of the second amendment is being put up for public comment. Currently, EP is considered as the voluntary standard criteria as the best guideline to financial investors. Some countries do not have a common policy as "Green Credit" but commercial banks for various reasons can voluntarily commit to follow up this standard criteria.

VIETNAM'S PATH

Green Credit indicated credits that banks issued to projects which have no risk or for the purpose of environmental, social protection. In fact, a number of international financial institutions operating in Vietnam such as the World Bank (WB), International Finance Corporation (IFC), the Asian Development Bank (ADB) have set standard criteria on environment, society where their partners and projects receiving their loans or sponsors must follow. Besides, there are 3 Vietnam commercial banks having environmental and social risk management systems, of which 2 banks using the IFC standard (Techcombank, Vietinbank), a bank (Sacombank) with reference to such standards, but also developed its own policies. Recently, IFC has cooperated with the State Bank of Vietnam (SBV) to conduct a practical survey on environmental and social risk management over 54 credit institutions operating in Vietnam. IFC's survey focused on key issues such as awareness, understanding of credit institutions on social environmental issues, the development of policies and procedures on environmental and social risk management; Compare environmental and social risk management activities in Vietnam with the international practices; barriers and factors on motivating implementing of environmental and social risk management; recommendations to relevant state agencies and authorities...

According to the survey results, 89% of banks surveyed did not know any guidelines or criteria on environmental and social risk management in the financial sector. 93% also said that banks should have guidance on this issue. However, foreign banks operating in Vietnam, said that SBV should only give standard rather than detailed rules on how to since a number of foreign banks had their own rules and rating procedure. The changes on following a new procedure will cause many problems. Meanwhile, the Vietnam Banks expressed an interest to have a detailed guide.

Currently, there is no applicable legal document providing guidance for banks to consider risks on environment and social security before granting credits. The highest legal document stipulating on activities to secure environmental safety is the Laws on Environmental Protection (LEP) with a key principle as "environment protection in harmony with economic development" and "environmental protection is the cause of the whole society, the rights and responsibilities of government agencies, organizations, families and individuals. "However, the LEP only focuses on clarification of the responsibilities by major manufacturing sectors, trading and service sectors (Articles 35-49), but doest not clarity the responsibilities by the financial and banking sector. Penalties for pollution treatment in the LEP as well as in the Criminal Code - environmental crimes Section - only applies to organizations and individuals directly causing pollution. This has led to the problem that credit officers hardly focused on the assessment of environmental and social risks in appraisal for credits. According to a unpublished research report by MA Nguyen Hong Anh under the Human and Nature Center performed on 19 largest commercial banks in Vietnam now, most credit officers just check in loan applications to see whether the environmental impact assessment report has been approved or not, some officers checked the discharge technology and migration plan (if any) of the projects/programs, but mostly based on the experience of evaluators, not having bank specific rule on this matter.

Thus, it can be seen that banks could fully contribute to mitigate the environmental and social risks by not lending loans to projects causing pollution or causing adversely impact to environment and people's lives. On the other hand, the tight control rightly from the credit appraisal also encourages businesses aiming at cleaner and safer production■

CONSERVING NATURAL AND CULTURAL VALUES FOR SUSTAINABLE DEVELOPMENT IN MEKONG DELTA REGION

The Forum, entitled “Conserving Natural and Cultural Values for Sustainable Development in the Mekong Delta Region”, was organized jointly by the Ministry of Natural Resources and Environment, the World Wide Fund for Nature (WWF), Sweden’s Stockholm University and the Ca Mau Provincial People’s Committee.

Under the guidance of the South West Steering Committee, the Ministry of Natural Resources and Environment and the close cooperation between WWF-Vietnam, Vietnam's Man and Biosphere Committees and People's Committee of the provinces in the Mekong Delta, the Forum has become an important annual event in the Mekong Delta which aims to widely share information about conservation of nature and traditional culture and propose active solutions for the sustainable development of the Mekong Delta under the orientation of the government and provinces.

With the theme of "Maintaining ecosystem services in Mekong River Delta," the forum attracted more than 200 locals and international experts, scientists and managers.

The forum was organized within the framework of the Project "Integrating ecosystem-based adaptation to climate change approach into the biodiversity planning and conservation

in Vietnam" funded by SIDA, Vietnam Environment Administration (the Ministry of Natural Resources and Environment) and the WWF - Vietnam. At the Forum, participants shared results from recent research on hydrology and sediment transport in the Mekong river and its delta, and challenge hydropower development in the Mekong basin poses to the ecosystems of the delta and people who depend on them. They also paid attention to ecosystem services in the Mekong Delta and their role in responding to climate change. **Monre**

TOURISM DEVELOPMENT ASSOCIATED WITH ENVIRONMENTAL PROTECTION

A model of tourism development associated with environmental protection has been deployed in Ban Lac, Mai Chau, Hoa Binh Province since last year. A tour which is so-called "to pay money to collect rubbish" is attracting a lot of foreign tourists. Accordingly, once a week on Saturday morning, tourists will spend 40 - 45 minutes to clean up and clean environment around their campfire before moving to other places in their journey.

Tourists are willing and happy to pay money to take part in this tour. It is very significant for them to spend a little time in the journey to protect the environment. It is similar to their thanks to the nature bringing about beautiful scenery as well as an interesting holiday.

Recently, during Ha Long Week, more than 120 volunteers from 25 countries around the world have gathered in Ha Long Bay for garbage collection. This is part of the campaign to call for younger generation’s awareness of environmental protection. From those stories in Ha Long Bay and Ban Lac, foreign tourists visiting Vietnam are more conscious in protecting and preserving the environment as well as tourism landscape. **VTA**

SUSTAINABLE MANAGEMENT OF BAC LIEU BIRD SANCTUARY

Bac Lieu Bird Sanctuary is one of the areas listed in the list of wetlands in Asia. The bird sanctuary has a diversified and rich ecosystem and is recognized as the National Nature Reserve. It has 181 species of vascular plants of which 23 species represent for mangrove forest, 16 species represent for mangrove forest of Mekong Delta. It also is a source of organic nutrients including nitrogen, phosphorus for aquatic life in the canals in the bird sanctuary. The natural mangrove ecosystem and wild landscapes are attractive for tourism development in the region.

To boost the sustainable management of the sanctuary, Bac Lieu People's Committee in collaboration with GIZ (German International Cooperation) organized a seminar on "Sustainable Management of Bac Lieu Bird Sanctuary". Dr Vu Ngoc Long, Head of the Southern Institute of Ecology, stressed the need to map out a plan on land use and management while preventing the encroachment of the sanctuary's core zone for industrialization and modernization. **Monre**

Ca Mau Cape National Park - The World's 2088th Ramsar Site

The Ca Mau Cape National Park is about 120 km Southwest of Ca Mau city. In addition to cultural and historical values and beautiful nature, Ca Mau Cape has unique landscape, environment, natural resources and biodiversity. The typical characteristic of Ca Mau Cape is the alluvial zone ecology, coastal mangrove, breeding areas and habitat of aquatic species in the Gulf of Thailand, the stopover and habitat of many rare migratory bird species in the world. Recently, Ca Mau Cape National Park has been recognized as the 2088th Ramsar site in the world and the 5th Ramsar site in Vietnam.

Located in Dat Mui commune, Ngoc Hien district, Ca Mau Cape National Park plays an important role in conservation and sustainable use of wetlands in Vietnam and in the world. Ca Mau Cape National Park has the natural area of 41,862 ha, of which the terrestrial area is 15,262 ha; the coastal area is 26,000 ha. Terrestrial functional areas consist of strictly protected zone of 12,203 ha; ecological restoration zone of 2,859 ha; service and administration zone of 200 ha. Marine functional area is to mainly conserve marine species and coastal ecosystem, maintain and study the geomorphology process and natural ecosystem. The National Park has a buffer zone of 8,194 ha, located in Dat Mui, Vien An and Dat Moi communes.

▲ *Mycteria leucocephala habituated in wetlands of Ca Mau Cape National Park*

TYPICAL BIODIVERSITY VALUES

The typical biodiversity of the National Park is the mangrove flora and fauna. This is the natural mangrove ecosystem of high values on biodiversity, natural landscape and environment and of high importance in coastal protection, wind prevention, anti-erosion wave prevention and soil stabilization during the soil formation towards the East Sea. This is one of the most important areas stated in the National Plan on Biodiversity, where studies on coastal water birds of Vietnam and the Asia - Pacific are conducted; this area creates the unique ecosystem both of estuary and coastal ecosystems of Vietnam with typical characteristics of the mangrove fauna and flora.

Twenty two mangrove flora have been discovered, dominating by Rhizophora apiculata, Avicennia alba, A. officinalis, A. marina, Kandelia candel from natural mixed regeneration forests mixtures of Rhizophora apiculata, Bruguiera species and Avicennia forest. Avicennia tree is a pioneer species invading to the sea with special root systems to stabilize the alluvial soils, to prevent erosion and form coastal protection forests. In addition to Rhizophora apiculata, vegetation of Ca Mau Cape National Park consists of Bruguiera, Aegiceras comiculatum, Sonneratia, palm, ferns, vine trees... According to scientists, the mangrove forest system is considered to be the second most diverse in the world, following the Amazon mangrove in South America.

The fauna consists of 13 mammal species from 9 families. Some species are in IUCN Red Book such as: Macaca Fascicularis, Trachypithecus germaini, Trachypithecus Cristatus and many species are in Vietnam Red Book: the bird class consists of 74 species of 23 families, some rare species are Egretta eulophotes, Numeniusmadagascariensis, Limnodromus semipalmatus, Pelecanus philippensis, Mycteria leucocephala, Egretta gularis and Threskiornis melanocephalus, bird population in the mangrove forest is characterized with Orthotomus ruficeps, Zosterops palpebrosa and Rhipidura javanica; reptiles with 17 species in 9 families; many reptiles in Ca Mau Cape National Park are listed in Vietnam and international Red Book. There are 5 amphibian species of 3 families; 14 prawn species; 175 fish species of 116 order and 77 families; 133 plankton fauna and flora. Fauna species are diverse in terms of species composition and big population size.

In particular, the terrestrial area of Ca Mau Cape National Park expands continuously naturally; annually the Ca Mau Cape invades to

▲ *Honey bee craft village, one of ecotourism types attract tourists*

the ocean tens of meters by the sediments from rivers, springs and canals with the support of the root systems of costal Avicennia spp. and Rhizophora apiculata forests. With valuable characteristics on biodiversity and rare soil conditions, Ca Mau Cape National Park has been recognized as the world Ramsar site. This is the 5th Ramsar site of Vietnam, following Xuan Thuy National Park (Nam Dinh), Bau Sau of Cat Tien National Park (Dong Nai), Ba Be Lake (Bac Can) and Tram Chim National Park (Dong Thap).

POTENTIAL ECO-TOURISM DEVELOPMENT

With the natural geography strength as the South pole of the country and the Melaleuca ecosystems and coastal mangrove forests, Ca Mau has the potential to develop eco-tourisms having typical characteristics of the Mekong River delta. According to statistics, in 2008, Ca Mau welcomed 670,000 visitors (of which 16,000 are international visitors), the revenue was 170 billion VND; by 2012, it was 800,000 visitors (170,000 international visitors), revenue was 215 billion VND.

Ca Mau attracts tourists by "key" tourist destination areas, which are Ca Mau National Park and U Minh Ha National Park with unique ecosystems. This is a potential tourist site. Tour destination sites such as Ca Mau floating market, Hon Da Bac tourist site, city bird garden, Cai Nam bird garden… are attractions to tourists. In addition, there are 18 historical cultural relics, 9 national ranking relics which are favorable conditions for organizing cultural tourism, historical relics tour, spiritual tourism, cultural festival tourism, community tourism in combination with domestic activities of local communities so the tourists can experience, visit and discover… Currently these types are the dominating trends in tourism development in the region and in the world.

Being recognized as the world Ramsar site, Ca Mau Cape National Park has confirmed its stance in the international integration and sustainable development. The objective of the National Park is to conserve, in the long-term, the ecological standards of international and regional importance based on scientific, economic and social solutions to protect the Cape wetland ecosystems in the natural changing process. The National Park is also to serve for eco-tourism and recreation and international cooperation, to develop and pilot models on conservation and sustainable usage of mangrove resources, to promote the value and economic function of the wetland ecosystem; at the same time, to promote the role in environmental protection, erosion prevention, promotion of the coastal alluvial, protection of lives and production of local people in the inland areas, protection of habitat of fisherman in the coastal areas, creation of the sustainable development in the coastal areas; biodiversity conservation at mangrove ecosystems, habitat of coastal species, migratory water birds, nutrient provision for aquatic species, support production activities in coastal areas. Consequently, the living conditions of local communities are improved and the awareness of local people on values of forests and wetland ecosystem and methods on sustainable uses of wetland resources are enhanced■

VIETNAM ENVIRONMENT ADMINISTRATION

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FUNCTIONS AND MANDATES

The Centre for Environmental Monitoring (CEM) is a subsidiary body under the Vietnam Environment Administration (VEA) which was established pursuant to the Decision No. 132/2008/QĐ-TTg of Prime Minister regulating the functions, mandates, responsibilities and organization of VEA. CEM is responsible to organize and implement the national environmental monitoring, to act as the coordinator for the national environmental monitoring network, to apply information technology in environmental monitoring, to manage and assess environmental monitoring data and to prepare state of the environment reports; to be a coordinator of national environmental monitoring network.

SUBSIDIARY DIVISIONS:

- Administration Office
- Division of Environmental Monitoring
- Calibration Laboratory for Environmental Monitoring Instrument
- Environmental Laboratory (including the Dioxin Laboratory)
- Division of Database and Information System

MAIN ACTIVITIES

ENVIRONMENTAL MONITORING

- To be a focal point in directing and providing guidance of environmental monitoring activities nationwide.
- Develop and conduct the national environmental monitoring programs of river basins, key economic regions, trans-boundary environment.
- Provide guidance and examine the local agencies, enterprises, industrial zones on conducting environmental monitoring programs, complying to the technical regulations, quality assurance and quality control (QA/QC); applying regulatory economic - technical norms and unit price in environmental monitoring.
- Maintain and improve the quality management system for environmental monitoring activities, testing at fields in accordance with ISO/IEC 17025:2005. The Division of Environmental Monitoring was recognized to conform with the requirements of ISO/IEC 17025:2005 for monitoring and testing 16 parameters of air and water at field.
- Operate the automatic and continuous monitoring stations of water and air.
- Appraise the qualifications of the agencies providing the environmental monitoring services.

- Research and develop technologies, methods of environmental monitoring.
- Provide the testing, consultancy, training services, technology transfer, etc in the field of environment.

ENVIRONMENTAL EXPERIMENT AND ANALYSIS

- Act as the national environmental reference laboratory. Providing guidelines and conducting the investigations on complying with the procedures, technical guidelines, QA/QC and regulatory norms on environmental analysis;
- The Environmental Laboratory is equipped with advanced equipment providing accurate analysis results. The laboratory officers are well trained and required to take periodic skills evaluation to ensure the high accuracy results for analyzing samples of water, soil and sediment, biota, etc. The quality management system was affirmed to conform the requirements of ISO/IEC 17025:2005, to be granted VILAS 430.
- Conduct annually environmental inter-laboratory tests in accordance with the technical procedures of ISO/IEC 17043:2010. To participate in assessing and recognizing the agencies qualifying for providing environmental analysis.
- Provide services of analysis, assessment, consultancy for develop quality management system; environmental technology; laboratory equipment, etc
- Participate in international cooperation of technology and sciences and training activities.

VIETNAM ENVIRONMENT ADMINISTRATION

CENTER FOR ENVIRONMENT MONITORING

DATA ANALYZING, PROCESSING AND ENVIRONMENTAL REPORTING

- Act as the national coordinator in consistently managing environmental monitoring data. To take main responsibility in developing, managing and exploiting databases as well as information systems on environmental monitoring;
- Develop, manage and exploit environmental information systems, Geographic Information System (GIS), and environmental databases. To take main responsibility for developing and providing technical guidelines on collecting, managing and exploiting national environmental indicators and statistics;
- Prepare and provide guidelines on preparing national/ministerial/ sectoral/local State of the Environment Reports; thematic reports on various environmental issues.

ENVIRONMENTAL MONITORING EQUIPMENT CALIBRATION

- Implement, provide guidance and supervise the compliance to the regulations on testing and calibrating the environmental monitoring equipment; the certification procedures for the qualified equipment, environmental monitoring devices.
- Calibration Laboratory for Environmental Monitoring Instrument is equipped with advanced equipment with high accuracy to calibrate the automatic air monitoring stations for the parameters of SO_2, CO, NO-NO_2, O_3, THC, BTEX, etc, the automatic water monitoring stations for the parameters of pH, DO, EC, TDS, ORP, etc and the semi-automatic equipment such as portable meter for air, portable meter for water, multi-parameter water meter.
- The modern equipped mobile car specializing for equipment calibration is ready to serve at place upon request providing the best service of calibration, time ensuring and cost effective.
- Calibration Laboratory for Environmental Monitoring Instrument applies the quality management system in accordance with the requirements of ISO/IEC 17025:2005 and was granted VILAS 575 on the field of measurement-calibration for 10 accredited calibrations. Annually, the Laboratory continues to maintain and expand the VILAS accredited measurand/calibrated equipment.

INTERNATIONAL COOPERATION

To be the implementing agencies of the following projects:

- Disclosure of environmental information to the public (funded by World Bank): 2001 - 2002.
- Environmental Information and Reporting (funded by the Danish International Development Agency): 2004 - 2006.
- Project "Registration of contaminated sites in Vietnam"(Germany).
- Clean Air for Smaller Cities in Asean Region.

SERVICES, CONSULTANCY AND TRAINING SUPPLIER

- Supply consultancy and training services on environmental monitoring, environmental analysis, calibration of equipment; implement and apply IT in environmental monitoring and process environmental monitoring data;
- Provide services on environmental monitoring, calibration of environmental monitoring equipment, environmental analysis, establishment of environmental information systems, GIS, environmental databases.

INFORMATION TECHNOLOGY DEVELOPMENT AND APPLICATION

- Act as the coordinator of the National Environmental Monitoring network as regards data and information and be responsible for establishing IT infrastructure for the network;
- Develop databases and software for management and exploitation of environmental monitoring data;
- Apply remote sensing technology, telecommunication and information technology in environmental monitoring. Establish and develop Tele-monitoring system and software to be applied in environmental monitoring;

DIOXIN LABORATORY

- Project for Establishment of Dioxin Laboratory funded by The Bill and Melinda Gates and Atlantic Philanthropies Foundations.
- The project's objective is to improve the capacity to analyze polychlorinated dioxins and furans as well as other persistent organic pollutants (POPs) in Vietnam.