



# Environment

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**Behaviour change in handling with the nature, building the advanced culture-environment towards sustainability**

**Focusing on implementing Law on Environmental Protection 2014, boosting inspection, supervision and handling environmental violation**

**Some main contents of Decree 19/2015/ND-CP on detail guidance of implementation of some articles of Law on Environmental Protection**

**Basic contents of Decision 73/2014/QĐ-TTg regulating the list of scrap allowed for import as manufacturing materials**

**Basic contents of Decree 03/2015/ND-CP on determining environmental damage**



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## MONRE's Annual Meeting with International Partners Focuses on sustainable development with foreign capital

The Annual Meeting with International Partners has been held by the Ministry of Natural Resources (MONRE) and Environment in Ha Noi lately. The Minister of MONRE Nguyen Minh Quang highly has appreciated active support of international partners to help the ministry realise its main tasks and the cooperation activities with overseas partners have covered all thematic areas. He also informed results and achievements of the Ministry last year and action plans this year. Moreover, the areas gained significant support from international partners including environment, climate change, land management, water resources, and meteorology - hydrology have been clarified.

In 2014, despite difficulties and challenges, the Natural Resources and Environment (NRE) sector has achieved many important results, has implemented effectively 5 main tasks such as developing, completing and implementing effectively policies and regulations on natural resources and environment, particularly the promulgation of the Land Law and the Law on Environmental Protection; the whole sector has boosted the supervision and inspection of all authorised sectors; and the administrative reform has been carried out in a more effective and decisive manner. In addition, great changes



▲ MONRE Minister Nguyen Minh Quang delivers a speech at the Meeting

have been witnessed in the state management of natural resources and environment in each thematic area within the mandate of MONRE including land, environment, water resources, marine and islands, meteorology - hydrology and climate change, geology and minerals, remote sensing, survey and mapping. Last but not least, international integration and cooperation has been promoted with bilateral and multilateral partners through new projects to be developed towards national ownership and Viet Nam's priorities.

In 2014, MONRE received valuable support and cooperation from multilateral and bilateral

partners, countries and international organizations in implementing including United Nations Development Program (UNDP), United Nations Environment Program (UNEP), Global Environment Facility (GEF), The World Bank (WB), European Union (EU)... and bilateral organizations such as Japan, Australia, Denmark, Korea, Canada, France and the Netherlands.

“Last year, understanding the importance of policy dialogue between MONRE and international partners, MONRE has received constructive supports from international partners in establishing a new comprehensive policy



▲ Ms. Pratibha Mehta, Resident Coordinator of the United Nations in Viet Nam



▲ Ms. Victoria Kwakwa, Director of the World Bank (WB) in Viet Nam

dialogue mechanism between MONRE and international partners with the objectives to ensure the update and timely sharing of information among partners in co-operation priorities and activities in the NRE sector”, the minister said.

“The 2015 objective of the NRE sector is to create a solid foundation for the successful implementation of the five-year plan 2016 - 2020, attempting by 2020 the NRE sector to develop towards modernisation and to have important contributions to the country sustainability,” he added.

With that orientation, in 2015 the whole sector will focus on developing and completing the legislation system, laws, strategies, planning on NRE, particularly focusing on some following contents and activities: finalizing and submitting to the Government the Law on Marine and Island Natural Resources and Environment, Law on Meteorology and Hydrology; finalizing and promulgating the guiding documents of the Law on Environmental Protection, the Land Law, Law on Water Resources, Minerals Law; cooperating with international partners to implement important cooperation projects in climate change, envi-

ronment, land, water resources, meteorology, hydrology, integrated marine and island management, geology-minerals, survey and mapping, remote sensing.

The minister emphasized that “Challenges for the NRE sector in 2015 are enormous. To achieve the set targets, leaders of MONRE have identified that while resources are limited, the support of the international community is vital. Therefore, MONRE looks forward to having precious supports, cooperation, experience exchanges from international individuals and organizations for our activities in 2015.”

At the Meeting, Ms. Pratibha Mehta, Resident Coordinator of the United Nations in Viet Nam said that the adoption of the Law on Environmental Protection by the National Assembly was a key milestone of 2014. MONRE played a leading role in the formulation of the law, which has introduced, for the 1<sup>st</sup> time, critical climate change aspects. Furthermore, the 2013 Land Law and its initial implementation at local level last year showed a significant reduction in number of steps and documentation requirements.

“Looking ahead, this year promises to be another eventful

year for Viet Nam and globally, including the 21<sup>th</sup> Conference of Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in Paris (France). It is a good occasion to celebrate Viet Nam’s remarkable success and MONRE’S outstanding contribution to addressing climate change. Viet Nam is among the first countries to have submitted its Biannual Update Report to the UNFCCC and prepared the Intended Nationally Determined Contributions on both mitigation and adaptation. Just weeks ago, the Government established Viet Nam Panel on Climate Change (VPCC) to serve as scientific body to observe and analyze vital trends in climate change,” she added.

Ms. Victoria Kwakwa, Director of the World Bank (WB) in Viet Nam said that in the past years, the WB had partnered with Viet Nam very actively in many areas of environmental resources, especially the issue of climate change in the Mekong Delta. The WB also pledged to continue co-operation with Viet Nam in the fight against climate change, and would continue to support more actively in the land management and other State management areas of the ministry.

While Chief Representative of JICA Viet Nam, Mr. Mori Mutsuya and Dutch Ambassador in Viet Nam, Nienke Trooster and other international partners committed to continuing to support Viet Nam generally and the Ministry particularly in combating with climate change, environmental protection and sustainable development.

**BB**

## International Day of Biodiversity 2015

# Biodiversity conservation for sustainable development

On 22 May 2015 in Ha Noi, the Viet Nam Environment Administration (VEA) in collaboration with the United Nation Development Program (UNDP) and CropLife Viet Nam organized the celebration of the International Day of Biodiversity 2015 with the topic “Biodiversity for Sustainable Development”.

Speaking at the celebration, Deputy Director General of VEA, Dr. Nguyen The Dong informed that Viet Nam is recognized as one of 16 countries having the most diverse biodiversity in the world, with about 7,500 species, 16,428 flora and algae species, 10,300 terrestrial species, 3,500 freshwater species and more than 11,000 marine species. Particularly, in recent 2 decades, many new flora and fauna species have been discovered, including rare and precious species and Orchidaceae family.

Aware of the importance of biodiversity, the Government of Viet Nam has actively participated in and implemented many international agreements and conventions on biodiversity such as Convention on Biological Diversity (CBD); Convention on Wetlands of International Importance (Ramsar); Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)...; Cartagena Protocol on Biodiversity; Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization; Inter-governmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES); Asia Protected Areas Partnership (APAP). At the same time, legal framework and legal documents have been promulgated including Guiding documents of the Law on Biodiversity, particularly, the Law on Biodiversity 2008. As a result, biodiversity conservation has gained some considerable achievements; some ecosystems have been rehabilitated; many new scientific-important species and genetic sources have been discovered and bred.

In the future, Viet Nam will focus on finalizing the legal system on biodiversity; promoting the enforcement of the Law on Biodiversity; promoting the implementation of the National Strategy on Biodiversity to 2020, Vision to 2030; strengthening and developing state management agencies on biodiversity conservation at central and local



▲ Deputy Director General of VEA Nguyen The Dong handed the awards to VACNE

levels; promoting socialization, and enhancing international cooperation on biodiversity conservation.

On this occasion, on behalf of the Minister of Natural Resources and Environment, Deputy Director General of VEA, Nguyen The Dong handed awards to the Vietnam Association for Conservation of Nature and Environment (VACNE) and some individuals of VACNE for the initiative of heritage tree conservation, contributing to biodiversity conservation.

In addition, there are some side event activities such as exhibition of heritage trees, publication of thematic materials on biodiversity and display of materials and publications on biodiversity, etc.

Within the celebration framework, the VEA collaborated with the Vietnam Administration of Forestry (Ministry of Agriculture and Rural Development) and

VACNE to organize a talk show on biodiversity conservation for sustainable development to discuss and agree on cooperative activities among management agencies and communities on biodiversity conservation. Accordingly, participants agreed that functional agencies need to collaborate towards enhancing the role of communities in policy making, particularly in studying solutions for biodiversity conservation; promoting communication and dissemination, awareness raising on biodiversity conservation and sustainable development to all stakeholders in the society; collaborating to develop the database, legal corridor, cooperation agreement among relevant stakeholders... to avoid overlaps and conflicts in strategies, laws, decrees on biodiversity conservation.

**Long Hoang**





# Focusing on implementing Law on Environmental Protection 2014, boosting inspection, supervision and handling environmental violation

**Prof. Dr. Bui Cach Tuyen**

*Deputy Minister*

*Cum Director General of Vietnam Environment Administration*

**Y**ear 2014 witnessed dynamic and big challenges to state management of environmental protection. Due to difficulties of the whole economy, limited business revenues and reducing individual incomes, investment in environmental protection was not paid due attention. Environmental expenditure did not meet with the requirement of yearly increasing as stated in Polit Bureau's Resolution 41/NQ-TW for implementing environmental protection projects.

However, thanks to traditional work culture and efforts by its leaders and staff members, Vietnam Environment Administration has proactively overcome difficulties and accomplished task programs. Environmental inspection and supervision were strengthened. Development and issuance of legal documents generally met deadlines. Pollution control, waste management and biodiversity made good progress. Some main achievements have been as follows:

First, year 2014 marked VEA's success in developing institutions and regulations on environmental protection. Law on Environmental Protection (LEP) was approved at the 7<sup>th</sup> session of the 23<sup>rd</sup> National Assembly and took effect on 1 Jan-

uary 2015. LEP 2014 comprises 20 chapters and 170 articles. Compared with LEP 2005, LEP 2014 defines more clearly roles and responsibilities of the Government, MONRE, relevant ministries and people's committees at all levels. In particular, it specifies responsibilities in leading development of legal documents; environmental protection inspection and supervision; legalizing new environmental policies and orientations; expanding and detailing some environmental protection issues; and addressing overlaps and conflicts with other laws to ensure consistency in legal systems. Other achievements include developing and completing decrees providing guidance on LEP implementation.

Second, environmental protection inspection and supervision were continually strengthened with focuses on the ministry's common objective in 2014 of "strengthening enforcement, boosting inspection and supervision of the whole sector". VEA organized 14 inspection teams to inspect 814 facilities, 6 inter-sector inspection teams to 52 facilities belonging to Decisions 64/2003/QD-TTg and 1788/QD-TTg; 4 supervision teams to 46 projects under Decision 58/2008/QD-TTg on

the management of budgets supporting handling serious polluting facilities. In addition, it was also conducted some sudden inspections. Punishments were made to 302 facilities and 42 serious polluters with the total fine of over 62 billion dong. Operation ceasing was instructed for 37 serious polluting entities.

The inspection and supervision have addressed complex violation cases, and requested the violators to pay fines, compensated for damages and take measures to restore environmental conditions. They also have helped identify and addressed shortcomings and obstacles in environmental mechanisms, policies and regulations. Strict measures to enforce the law have helped speed up the process of handling seriously polluting facilities.

Third, environmental objectives in socioeconomic development plan 2014 were met. The rate of completing treatment of seriously polluting facilities kept increasing. By the end of 2014, the rate reached 87.47% (384/439 facilities), exceeding the objective of 84% set by the National Assembly. The percentage of industrial parks and export processing zones installing waste treatment facili-

ties has increased. So far, 148 of 194 industrial parks have met this requirement, reaching 76.3% (7 more parks compared with year 2013); 19 industrial parks (10%) in the process of installing treatment plants. Only 13.7% of the parks operating before LEP 2005 has not had waste treatment plants.

Fourth, implementation of master plans for environmental protection in river basins made good progress in 2014. Water quality in rivers, canals and channels in some big urban areas of Ho Chi Minh, Bien Hoa (Dong Nai), Thu Dau Mot (Binh Duong) has increased. Mechanisms and policies of environmental protection in river basins have been upgraded from central to local levels. Regulations on environmental protection in river basins have been paid due attention by provinces. MONRE has established Environmental Protection Sub - Department in river basins of Cau, Nhue - Day and Dong Nai under VEA. It also submitted to Prime Minister for approving environmental protection planning by 2020 for Nhue - Day river basin.

Fifth, biodiversity has witnessed considerable progress in invasive alien species management; development and approval of national and local biodiversity planning; developing and submitting to government for approval of the joining Kuala Lumpur Protocol and Nagoya Protocol; organizing ceremony of recognizing Ramsar site of Con Dao; developing and submitting to Ramsar Secretariat two applications of Ramsar sites for U Minh Thuong NP and Lang Sen Wetland Protected Area.

Sixth, quality of Strategic Environmental Assessment (SEA) and Environmental Impact Assess-



▲ In 2015, environmental inspection and supervision will continue being focused

ment (EIA) reports has increased. In 2014, 14 SEA reports, 187 EIA reports and 37 detailed environmental protection plans were appraised. Supervision of the operation was made at 70 projects and certificates of accomplishments of environmental works were issued for 57 projects. Through SEA and EIA had appraised, most of the master plans were required to revise to meet sustainable development requirements. There were Projects required to increase environmental protection measures. Some projects were requested to suspend due to failing to meet with environmental requirements.

To review last year performance, environmental management has made positive progress thanks to great contribution by VEA staff members. 2015 is an important year, as it decides the accomplishments of objectives of the period 2011 - 2015 and is the first year of implementation of LEP 2014 and its guiding decrees. It is also the 3<sup>rd</sup> year of Party Central

Committee's Resolution 24-NQ/TW dated 3/6/2013 on proactively responding to climate change, strengthening natural resource management and environmental protection; Government's Resolution 35/NQ-CP dated 18/3/2013 on urgent environmental measures; National Strategy on Environmental Protection by 2020, vision by 2030. Therefore, VEA shall keep up with success and be determined to overcome challenges to achieve environmental objectives, focusing on implementing the LEP 2014, strengthening inspection and supervision and handling violations. Some main tasks are as follows:

The first task is to implement LEP; disseminate the contents of LEP and its associated decrees, issue guiding circulars; submit to Government for revising and add some new articles to Decree 179/2013/ND-CP dated 14/11/2013 on punishing administrative violations in environmental protection; coordinating with Ministry of Industry and Trade, Ministry





of Finance, Ministry of Public Affairs in developing and issuing an inter-ministerial circular on mechanism for inter-agency cooperation in controlling scarp importing activities; reviewing, updating and developing technical environmental regulations in compliance with the LEP and the Law on Standards and Technical Regulations.

The second task is to enhance inspections and supervisions of environmental compliance in economic zones, industrial zones, industrial clusters and craft villages, mineral resources mining and transporting; improve capacity, implement comprehensively and effectively pollution prevention and control measures; publicize environmental violations; strictly handle environmental violations; determinedly prevent environmental hot spots; speed up the process of handling seriously polluting enterprises by 2020, in particular with those who have missed deadlines; review and update lists of seriously polluting facilities; inspect and ensure usage effectiveness of state budgets for pollution remediation.

The third task is to cooperate with Ministry of Home Affairs in providing guidance for upgrading local environmental authorities; increasing administrative reforms in environmental protection, especially in permit issuance.

The fourth tasks is to continue implementing environmental protection programs and projects nationwide; enhance activities and increase roles of river basin environmental protection subdepartments; implement comprehensive measures for pollution

control and prevention; increase capacity in waste management; develop and submit to Prime Minister for approval a target program on pollution remediation and environmental improvement period 2016 - 2020.

The fifth task is to continue improving quality of appraisal of Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA), environmental deposit applications of mineral mining projects; at an early stage, focus on regulations of “one stop shop” in receiving, appraise and approve of applications; train for increasing capacity in SEA and EIA making and appraising; and increasing supervisions and verifications of completion of environmental works as requested in EIA appraisals.

The sixth task is to implement National Strategy on Biodiversity till 2020 and National Master Plan for Biodiversity; complete regulations managing on natural protected areas; develop mechanism for accessing to gene sources and benefit sharing; and issue pricing units for payment for environmental services.

The seventh task is to organize successfully big environmental events in 2015: The 4<sup>th</sup> National Environmental Congress and side events, The 13<sup>rd</sup> ASEAN Environmental Minister Official Meeting and The 5<sup>th</sup> East Asia Environmental Minister Meeting.

With comprehensive and successful implementation of the above mentioned measures, environmental protection will witness considerable progress, contributing to success of industrialization and modernization■

## Biodiversity, climate and forestry project got consent from Prime Minister

The Prime Minister has approved the “Integrating Biodiversity Conservation, Climate Resilience and Sustainable Forest Management in Trung Truong Son Landscapes” project with a total capital of 4.5 million USD, 3.8 million USD of which comes from the Global Environment Facilities’ official development assistance via the Asian Development Bank, and corresponding to remained capital from Viet Nam

The project is managed by the Ministry of Natural Resources and Environment with the central provinces of Quang Tri, Thua Thien Hue and Quang Nam chosen as the targeted beneficiaries of the project, scheduled to run from 2015 to 2018. There are 2 components which are to strengthen the planning and management of the biodiversity and forests in the protected areas and their buffer zones in the Trung Truong Son landscapes; and to implement landscape conservation measures at the community level in the protected areas and their surroundings, providing financial sustainability and reduced greenhouse gas emissions.

It is expected to strengthen the management and ecological integrity of the protected areas in the Trung Truong Son region of Viet Nam and ensure sustainable ecosystem services and climate resilience, bringing livelihood benefits to local communities and contributing to regional growth.



# Environmental Protection Inspection and Supervision: One year review

**Luong Duy Hanh, Hoang Van Vy**

*Department of Environmental Protection Supervision  
Vietnam Environment Administration*

Over the years, inspection and supervision have always been considered as the important tasks of Ministry of Natural Resources and Environment (MONRE), in parallel with developing regulations on natural resources and environment. For environmental protection, thanks to due attention and directives from MONRE and Viet Nam Environment Administration (VEA) leaders, annual inspection and supervision have been widely and comprehensively implemented and providing positive results. Consequently, awareness of enterprises and community on environmental protection has been increased.

In 2014, environmental inspection and supervision have been comprehensively implemented. While in previous years, inspection and supervision focused only on production, trade and services, in 2014, for the first time, VEA/MONRE conducted inspection and supervision in biodiversity sector. This helped review all management aspects by local governments and propose necessary actions to address shortcomings and increase efficiency and effectiveness of state management of environmental protection. The inspection and supervision not only targeted production, trade and service facilities but also involved reviewing task implementation of People's Committees of Provinces and Cities.

Due to a large number of pro-

duction, trade and service facilities in the country, it was necessary to establish a clear set of criteria for selecting inspected facilities to ensure that the inspection and supervision covered major polluters in the sectors of chemicals, textiles, mechanics, brewery and beverage, mineral mining, hospitals and those belonging to a list of seriously polluting entities.

Although the organizational structure and operation of environmental inspection are in a transition period to follow Inspection Law 2010, thanks to timely and effective directives from MONRE and VEA leaders and efforts of the whole sector, environmental inspection and supervision have been conducted nationwide in 814 production, trade and service facilities and a dozen of NPs and natural protected areas. So far, 351 violators have been de-

tected and fined with the penalty of about 86 billion VND. Common violations include violating hazardous waste regulations (85%), exceeding discharge permits (55%); failing to comply or complying with the requirements of environmental impact assessment in incorrect way (52%); and failing to get certification of completing environmental protection works (90%). Among those violations, 14 cases were caught red handed when discharging into the environment and 38 facilities were ceased their operations.

Regarding environmental management performance, the inspection and supervision revealed that there existed shortcomings in regulation enforcement in localities. For example, in many localities, environmental expenditure failed to follow closely with the instructions in Circular 45/2010/TTLT-



▲ Supervision team visited Dong Nai Urban Environment Company





BTC-BTNMT. Appraisal quality of environmental impact assessment remained low with vague contents and failing to comply with guidance on appraising environmental impact assessment reports and environmental protection commitments. In addition, in some localities, waste generating registration certificates were improperly done with wrong coding and charged of failure to follow the guidance of MONRE's Circular 12/2011/TT-BTNMT.

In addition, the inspection also showed common violations by public service entities such as hospitals, urban environment companies and industrial zone infrastructure investing companies under industrial zone management boards. Many of these inspected entities failed to comply with environmental regulations despite several warning notices. Moreover, environmental regulations were not strictly enforced in many localities. For example, some local governments even asked for not penalizing the violators. This has led to low deterring effects and inaction for investment of environmental protection.

In close cooperation with Department of Natural Resources and Environment (DONRE) and People's Committees, inspection teams had opportunities to exchange experience and built capacity for local inspectors. During the inspection, guidance also was provided to the enterprises to help them correct their errors and comply with the regulations.

In addition, the inspection facilitated propaganda of environmental regulations by explaining in detail to facilities and local governments. In the meantime, inspection teams received feedback from the inspected facilities and local governments to report to competent authorities for revising and completing the regulations. Through inspection, many shortcomings in regulations were

identified. For example, the required period for extension of finishing environmental protection plans and environmental works reported to be infeasible. Also, it was found that operation permits of projects were issued even before certifications for environmental work completions were granted in many cases.

Apart from these mentioned above achievements, environmental supervision in 2014 revealed the following shortcomings.

First, inspection and supervision remain overlapped among environmental police and state management agencies at different levels, creating difficulties for enterprises. In some cases, an enterprise was subject to 12 inspection and supervision teams on environmental protection. In addition, inspection and supervision tasks appear passive. Law on Inspection maintained administrative requirements such as in advance notices and decisions for establishing inspection teams. This has prevented timely detection of violations, in particular waste discharging violations. Facilities often have sufficient time for covering their violations in responding to inspection teams.

Second, some environmental regulations lacked consistency and feasibility which result in implementation difficulties. For example, the LEP stipulated that hazardous waste generating facilities should need to register with provincial environmental authorities. However, the number of registrations differed a great deal from reality, leading to inaccurate statistics. Another example was that according to Circular 12/2011/TT-BTNMT, hazardous waste generating facilities should have a minimum number of waste transporting vehicles. This required the facilities to invest in buying the vehicles while the demand for transport was not high. In other cases, the facilities could hire or borrow vehicles which were registered

for hazardous waste transport to respond to inspection on an *ad hoc* basis.

Third, inspection and supervision of state management mandated on biodiversity have faced difficulties due to vague division of responsibilities between MONRE and Environment and Ministry of Agriculture and Rural Development (MARD). Article 33 of Biodiversity Law stipulates that "Protected Area Management Board, a competent authority for managing a protected area shall be responsible for reporting state of biodiversity of the protected area to relevant managing bodies. Therefore, the boards report regularly state of biodiversity of the protected area to MARD instead of to MONRE as stipulated at Point 2, Article 6, Law on Biodiversity.

Fourth, environmental violations by public service facilities mainly came from a lack of due attention from their owners and leaders, insufficient state budget for treating waste as well as marginalizing environmental protection with investment decisions. Therefore, in some cases, hundreds of millions VND was spent for investing in modern hospitals while no investment in waste treatment facilities has done.

To increase efficiency and effectiveness of inspection and supervision in coming periods, it is necessary to take the following measures:

Strengthening review, revision and completion of environmental legal documents and policies towards consistency, taking advantages of successful policies; removing inappropriate regulations based on thorough scientific studies to reduce burdens for enterprises while maintaining enforcement requirements;

Boosting socialization in environmental protection and waste treatment to maximize resources for environmental protection; encouraging community to supervise environmental compliance by pro-

duction, trade and service facilities to detect and handle violations in a timely manner;

Reviewing and revising Decree 179/2013/ND-CP on handling environmental violations in accordance with the LEP 2014, enhancing public disclosure of environmental violations in mass media to create pressure on enterprises to comply with environmental regulations;

Providing regular training on implementing the LEP 2014 and its guiding documents for management authorities and enterprises; enhancing environmental propaganda with various forms and contents to gradually increase public awareness on environmental protection;

Boosting inspection and supervision with focuses on radically addressing critical and urgent environmental issues; updating environmental regulations; guiding localities and enterprises to complete records and requirements; strictly handling environmental violations. In addition, it is necessary to strengthen and complete organizational structure on environmental protection at both national and local levels; in particular, assigning sector inspection mandates to sub-department of Environmental Protection, increasing staff numbers to meet future requirements;

To increase effectiveness and facilitate contribution of inspection to management work, in addition to completing legal frameworks and increasing proactiveness and flexibility of inspection, it is necessary to recruit capable and dedicated inspectors. With leadership of MONRE, VEA and internal/external support agencies and cooperators, inspection and supervision will further develop and achieve better results, contributing to environmental protection in modernization and industrialization and sustainable development■

## Results of Master Plan for Environmental Protection of Nhue - Day River Basin period 2013 - 2014 and orientations for period 2015 - 2016

**Nguyen Thuong Hien**, *Deputy Director*

**Tran Thi Le Anh, Nguyen Thai Quang**

*Office of Nhue Day River Basin's Environmental Protection Commission, Vietnam Environment Administration*

Nhue - Day River Basin plays an important role in socio-economic development of the country, in particular of Red River Delta. Nhue - Day River Basin has an area of 7,665 km<sup>2</sup>, accounting for 10% of the whole Red River Basin. It covers five provinces/cities of Hoa Binh, Ha Noi, Ha Nam, Nam Dinh and Ninh Binh. In recent years, socioeconomic development activities in Nhue - Day River Basin have been taking place rapidly, bringing about considerable economic results, contributing to increasing people living standards and creating numerous jobs. However, economic development has also been associated with pollution, in particular increasing water pollution, reducing water flows and creating negative impact on human health. To address this problem, on 29 April 2008, Prime Minister approved "Master Plan for Environmental Protection of Nhue - Day River Basin by 2020" at Decision 57/2008/QD-TTg (herein after referred to as Master Plan) to streamline environmental protection into socioeconomic objectives of Nhue - Day River Basin.

### 1. Water River quality in Nhue - Day river basin in 2014

*Water quality of Nhue River:*

In upstream areas (intersection point with Hong River), water remains fairly clean. From South Tu Liem point to To Lich point, water is being polluted. BOD<sub>5</sub> and COD parameters exceed QCVN 08:2008/BTNMT type A1 for multiple times. Coliform and N-NH<sub>4</sub> exceed QCVN 08:2008/BTNMT type B1. The main pollution cause is untreated domestic wastewater from North and South Tu Liem Districts and Ha Dong District, and industrial wastewater from production facilities, Tu Liem industrial cluster and Phu Do craft village.

After receiving wastewater from To Lich River, Nhue River water becomes quite polluted. It can be noted that wastewater discharged into To Lich River (the main wastewater receiving body of downtown districts of Ha Noi) is the main cause of Nhue River pollution (especially from Cau To point downward).

From the To Lich receiving point to downstream point where Nhue River interacts with Day River, water pollution in





Nhue River tends to decrease, due to its self cleaning capacity and a measure of bumping water of To Lich River into Red River via Yen So lagoon systems.

**Water quality trend in Day River:** Water in Day River starts to have organic pollution. COD parameters have exceeded QCVN 08:2008/BT-NMT type A1. In most of monitoring stations, N-NH<sub>4</sub> and Coliform exceed QCVN 08:2008/BTNMT type B1. In downstream areas, water pollution tends to decrease. In Phu Ly (Ha Nam) area, the pollution remains in some parts of the river at

different levels.

**Downstream of Day River (from Kim Son - Ninh Binh to Day estuary):** Because the water in this part has been diluted and cleaned due to self cleaning capacity of the river, the river water quality is better than in other parts. In monitoring points of Gian Khau, Do Muoi and Cua Day, TSS exceeds QCVN 08:2008/BTNMT type B1.

## 2. Results of implementing master plan for environmental protection in Nhue - Day river period 2013 - 2014

To provide a legal framework for

implementing the master plan, some regulations have been developed and submitted to Prime Minister and competent authorities for approval. These include a regulation on environmental information and database sharing mechanism in Nhue - Day River Basin in a portal webpage in Decision 02/QD-UBSND dated 5/3/2013; a target program on pollution remediation and environmental promotion period 2012 - 2015 in Decision 1206/QD-TTg; and an implementation plan for the master plan by 2020 in Decision 1435/QD-TTg dated 18/8/2014. In the mean-

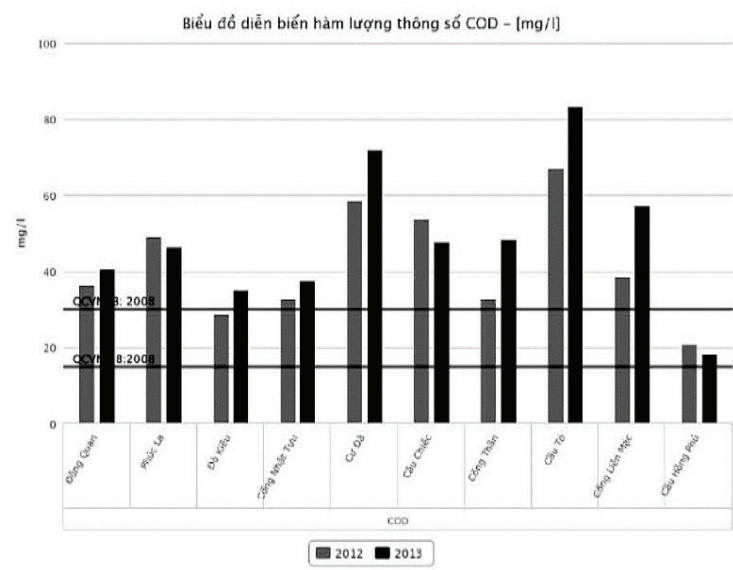


Figure 1. COD trend in Nhue River

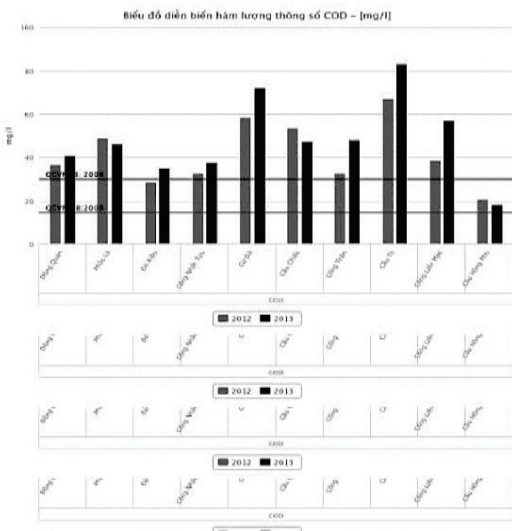


Figure 2. BOD<sub>5</sub> trend in Nhue River

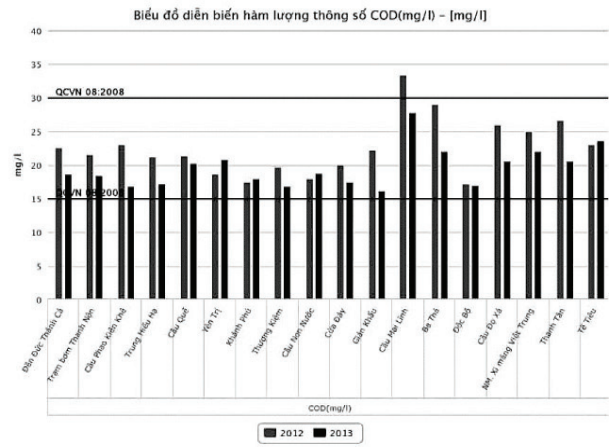


Figure 3. COD trend in Day River

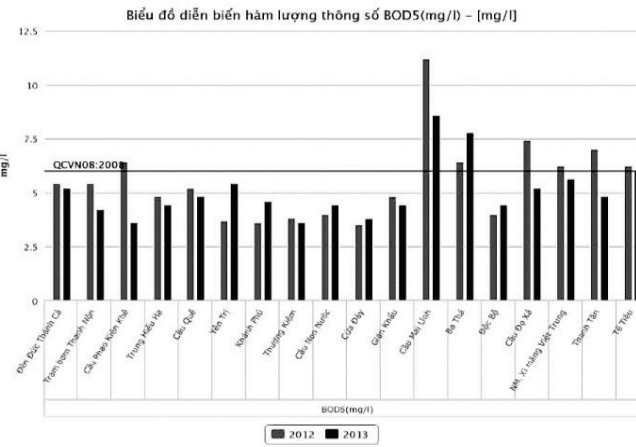


Figure 4. BOD<sub>5</sub> trend in Day River

Source: VEA



▲ The 6<sup>th</sup> meeting of the 2<sup>nd</sup> term of Nhue - Day River Basin Environmental Protection Commission in Ha Nam in November, 2014

time, in provinces and cities within the river basin, 34 legal documents on mechanisms, policies and directions have been issued to provide directions for environmental protection in general and environmental protection in Nhue - Day River Basin in particular.

Law on Environmental Protection (LEP) 2014 was approved by the National Assembly on 23 June 2014. In addition, draft Decree on waste and scarp management highlights the importance of the task of environmental protection of river water and water river pollution prevention and control. It also stipulates that water discharge shall comply with carrying capacity of the receiving water body and discharge permits; and that all water discharging sources shall be investigated. Responsibilities of competent authorities related to water environment protection in river basins provide solid foundation for success of the master plan for environmental protection in Nhue - Day River Basin.

In addition, Nhue - Day River Basin Environmental Protection Commission has supervised the implementation of the master plan and surveyed Ngoc Hoi Industrial Cluster (Ha Noi), An Thinh Real Estate and Minh Duc Production and Trade Private company (Hoa Binh),

Ninh Binh Fertilizer One Member Limited Company and Thanh Nam Wastewater Treatment Plant (Ninh Binh), Dong Van 2 Industrial Zone and Mavin Company (Ha Nam), and Hoa Xa Industrial Park (Nam Dinh).

In the period 2013 - 2014, Ministry of Natural Resources and Environment (MONRE) focused on inspection and supervision in 68 production, trade and service facilities discharging into Nhue - Day River Basin with the total fine of over 6.7 billion VND. In particular, Department of Environmental Police, Ministry of Public Security detected and investigated many violations in Nhue - Day River Basin, of which 91 violation cases were fined for up to 2.5 million VND in total.

Localities in the river basin have completed the treatment of 38 of 43

seriously polluting facilities as regulated in Decision 64/2003/QD-TTg. In particular, Ha Noi has finished the treatment of the seriously polluting facilities in its territory

Regarding inter-regional tasks and projects, MONRE has directed VEA to implement the project "Environmental zoning for managing and improving water quality in Nhue - Day River". MONRE has worked with Ha Noi Department of Natural Resources and Environment (DONRE) to develop two automatic surface water monitoring stations in Nhue - Day at the site of Cau To, Ta Thanh Oai and Phung Chau, Chuong My (Ha Noi). These 2 stations are in a pilot phase. A demonstration project of a wastewater treatment plant for Nhue River with a capacity of 400 m<sup>3</sup>/day in Phu Ha, Phu Thu, South Tu Liem is in a construction phase. In the meantime, under the national target program on pollution remediation and environmental promotion period 2012 - 2015, considerable resources have been allocated for addressing hot spots in Ha Nam, Nam Dinh, Ninh Binh with the total budget in 2014 of 58.4 billion VND.

In addition, Ministry of Construction has developed planning for drainage and wastewater treatment for residential areas and industrial zones in Nhue - Day River

**Table 1. Results of dealing with seriously polluting facilities in provinces and cities in Nhue - Day River Basin by 2014**

Province/ City	UNDER DECISION 64/2003/QD-TTg		UNDER DECISION 1788		NEW SERIOUS POLLUTERS	
	Number of facilities handled	Total	Number of facilities handled	Total	Number of facilities handled	Total
Hoa Binh	1	2				25
Ha Noi	23	23	0	3		3
Ha Nam	2	4	2	7		
Nam Dinh	4	6	15	16		
Ninh Binh	8	8	1	2		3





Basin by 2030. This planning was approved by Prime Minister in Decision 681/QĐ-TTg dated on 3/5/2013. Ministry of Agriculture and Rural Development has worked with the provinces in Nhue - Day River to implement reforestation and protection, contract for forest protection of 117,808 ha, develop Ngoai Do 2 pumping station to ease flooding for 9,000 ha, implement Tich River water receiving project, and conduct draining project of Day River and develop Yen Nghia pumping station period 1.

On the other hand, the provinces and cities in Nhue - Day River have implemented over 100 environmental protection projects, infrastructure works and management models such as: reforestation in upstream areas in Hoa Binh Province, environmental remediation in craft villages in Ha Nam, Ninh Binh and Ha Noi, hospital waste treatment in Nhue - Day River Basin, solidwaste treatment using modern technology in Ha Noi, encouraging households to use microbiological products for domestic wastewater pretreatment, and establishing corridors for protecting irrigation works in Nhue River in Ha Noi to better manage land, dykes and construction works



▲ Supervision team inspected An Thinh Company, Hoa Binh

and to prevent river bank invasion. These are indeed considerable progress in protecting the water environment of the river basin.

Pollution source inventories in Nhue - Day River Basin have been implemented at both central and local levels in 2013 - 2014.

*At a central level:* within a framework of the project “Developing environmental database and information systems of Nhue - Day River Basin”, VEA was working with localities to update inventories of discharging sources in the river basin. According to the survey, by November 2014, the estimated number of discharging sources was 1,942, of which 1,639 were from production and trade facilities, 28 from indus-

trial zones and clusters, 132 from hospitals and 143 from craft villages.

*In Ha Nam:* Updated discharging source inventories showed 23 units with a total water discharge volume of 3,789.2 m<sup>3</sup>/day.

*In Hoa Binh:* Project “Survey and evaluating environmental state of Nhue - Day River in Hoa Binh, developing environmental protection action plan for 2012 - 2020” was conducted. There were up to 56/150 facilities with total discharge volume of about 2,500 m<sup>3</sup>/day.

*In Nam Dinh:* A discharging source inventory was conducted for the whole province.

*In Ninh Binh:* The total discharge industrial wastewater volume in four industrial zones was

**Table 2. Allocation of state budget for environmental expenditure for provinces/cities in Nhue - Day River Basin period 2013 - 2014**

*Unit: million VND*

No	Locality	Year 2013		Year 2014		Earmarked Central Budget for supporting localities	
		Amount allocated by Ministry of Finance	Amount allocated by People's Council	Amount allocated by Ministry of Finance	Amount allocated by People's Council	Year 2013	Year 2014
1	Ha Noi	1,255,940	2,231,280	1,127,550	1,808,988		
2	Ha Nam	46,150	48,301	46,150	49,483	24,784	10,000
3	Nam Dinh	134,000	134,000	135,340	135,340	29,131	1,000
4	Hoa Binh	35,780		36,140	59,524		4,000
5	Ninh Binh	48,400	73,645	48,400	80,856		2,500
	<b>Total</b>	<b>1,520,270</b>	<b>2,487,226</b>	<b>1,393,580</b>	<b>2,134,191</b>	<b>53,915</b>	<b>17,500</b>

10,150 m<sup>3</sup>/day. Domestic wastewater discharge is 58,540 m<sup>3</sup> per day (21,367,100 m<sup>3</sup>/year). Medical wastewater of 577,612 m<sup>3</sup>/year is fairly well treated.

*In Ha Noi:* Waste discharging source inventories have been conducted in Nhue - Day Rivers.

In general, inventories of pollution sources to Nhue and Day Rivers have been implemented. However, this is not on an annual basis, mainly due to limited state budgets. In addition, methodology for inventories and database development varies from province to province, creating difficulties in establishing a comprehensive inventory for the whole river basin.

### **3. Implementation plan for master plan for environmental protection in Nhue - Day river basin period 2015 - 2016**

In the 3<sup>rd</sup> term, period 2015 - 2016, Environmental Protection for Nhue - Day River Basin Commission and ministries, sectors and People's Committees of provinces and cities in the river basin shall focus on taking the following measures.

#### ***At a central level***

*MONRE:* Establish Sub-department of Environmental Protection for Nhue - Day River Basin in compliance with Prime Minister's Decision 25/2014/QĐ-TTg, develop plans for managing and treating waste in Nhue - Day River Basins, and promote and supervise the compliance of regulations on environmental information and database sharing and management in a webpage portal by Decision 02/QĐ-UBND.

*Ministry of Construction:* Direct the implementation of a master plan for drainage and municipal and industrial wastewater treatment in Nhue - Day River Basin by 2030 at regulated in Decision 681/QĐ-TTg dated 3/5/2013, and speed up the submission to Prime Minister for approving a master

plan for solid waste treatment for localities in Nhue - Day River Basin by 2030.

*Ministry of Finance, Ministry of Planning and Investment:* Provide detailed financial guidance and develop mechanism for giving priorities to technical infrastructure investment projects, and issue policies to facilitate enterprises to access soft loans for waste treatment.

*Ministry of Industry and Trade:* Continue issuing regulations and policies for supporting enterprises in applying ISO 14001 to achieve objectives of the master plan.

*Ministry of Agriculture and Rural Development:* Coordinate with People's Committees of Provinces and Cities in the river basin to develop investment projects as regulated in Decision 937/QĐ-TTg dated 1/1/2009 on planning for water

draining for Nhue River.

*Ministry of Science and Technology:* Introduce environmental technology which is suitable with Vietnamese conditions, including domestic and imported technologies for solid waste and wastewater treatment.

#### ***At a local level***

*People's Committee of Provinces and Cities:* Direct the review of progress and results of programs and projects which have been approved by provinces/cities to implement the master plan for environmental protection in Nhue - Day River Basin and propose new programs/projects; identify and prioritize the treatment of serious polluters; review and update pollution source inventories; and develop a list of environmental hot spots■

## **Rural environment protection in the period of 2010 - 2020**



The Circular No. 55/2014/TT-BNNPTNT dated 31/12/2014 which guides the implementation of some environmental protection activities under the National Target Program on New Rural Development over period 2010 - 2020 officially takes effect from 20 February 2015.

The Circular underlies environmental protection activities such as construction and/or upgradation of water drainage systems, waste water treatment; construction of concentrated locations for solid waste collection and treatment; renovation and upgradation of cemeteries; upgradation and construction of ecological ponds or lakes, and green tree planting.

As of the Circular, people's committees at all levels shall be responsible for implement the circular with concrete activities as such to provide space, climate regulation, beautiful landscape, and environmental hygiene.



## Solid waste treatment in Nhue- Day basin through 2030

Prime Minister Nguyen Tan Dung has approved a plan to treat solid waste in the Nhue-Day river basin through 2030 with the total budget of VND 7.6 trillion (nearly US\$ 362 million). There are 18 treatment plants upgraded or built, covering the entire Nhue-Day River basin in the northern provinces of Ha Nam (2 plants), Hoa Binh (2 plants), Nam Dinh (5 plants) and Ha Noi (9 plants) city, with a total area of 7,665 m<sup>2</sup>.km.

In addition, it has been proposed to develop systems for the basin with collection and treatment facilities in residential areas and industrial zones.

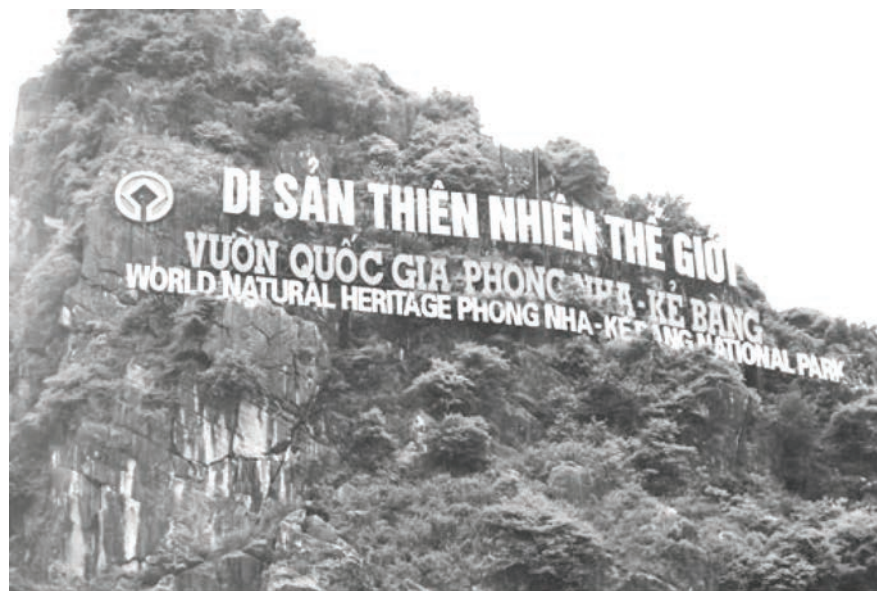
## Viet Nam participation in the Persistent Organic Pollutants monitoring project

The regional project “Environmental Monitoring of Persistent Organic Pollutants (POPs) in East Asia Countries” sponsored by the United Nations Development Program (UNDP) and the Global Environment Fund (GEF) has been approved by the Prime Minister. The Ministry of Natural Resources and Environment to finalize and sign the project’s document with the donors, as well as to implement the project according to the regulation.

The project includes 5 components: Developing implementation schedule; inventorying new POPs; updating and inventorying old POPs; evaluating capacity in POP management; determining prioritized projects/programs in accordance with Viet Nam situation.

The project aims to fulfill Viet Nam’s obligations to the Stockholm Convention on POPs; update and submit the National Action Plan on the Stockholm Convention to the Prime Minister and the Conference of the Parties to approve the Stockholm Convention Secretariat.

## Master development plan for Phong Nha - Ke Bang National Park until 2030



The Prime Minister has approved a master development plan for Phong Nha - Ke Bang NP, Quang Binh until 2030.

It focuses on both preserving the heritage and promoting its values to turn it into the most attracting eco-tourist region in the Asia Pacific, stimulating socio-economic development of Quang Binh province and the northern central region. The NP is expected to welcome around 650,000 tourists, including 55,000 international visitors with the development of Festival-focussed tours and luxury tourism service centers. Landscape and tourism urban areas will be set up in the Phong Nha tourism urban area, supplying luxury urban services and developing the NP’s tourism for a population of 13,000 - 18,000 people by 2020 and 15,000 - 20,000 people by 2030.

Besides, the heritage’s feature and integrity will be preserved in close association with efforts to conserve Laos’ Hin Nammo ecological region and Truong Son Range’s ecological system. A biological diverse corridor, which links with the NP and other natural regions in the central region, will be established and controlled along basin of the Son, Ranh and Nhat Le Rivers. Also, The NP’s tourism will be developed in combination with other tourism centers in Quang Binh province and central provinces in the tourist route “Central Heritage Road”.

Moreover, Activities of handicraft production, mining, business and population development will be controlled in the buffer zone, particularly at the Thuong Trach and Cha Lo border gates and along the banks of the Son River

VEM

# Basic contents of Decree 03/2015/ND-CP on determining environmental damage

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## 1. Decree's rationale

It is evident that environmental violations have not only affected human health and properties of individuals and organizations but also caused serious environmental damage.

On 3 December 2010, the Government of Viet Nam issued Decree 113/2010/ND-CP on determining environmental damages. This Decree specifies responsibilities for requesting environmental damages and determining damages, providing important legal bases for requesting environmental compensation for natural environment, contributing to local funds for restoring and improving environmental conditions, mitigating negative impact on workers and peopling living near polluted areas.

After 4 years of implementation, Decree 113/2010/ND-CP has remained suitable. However, to comply with Law on Promulgating Regulations, Decree 113/2010/ND-CP needs to be replaced by a new decree with Law on Environmental Protection as a legal basis. Therefore, on 6 January 2015, the Government issued Decree 03/2015/ND-CP on determining environmental damages. The Decree takes effect from 1 March 2015.

## 2. Basic contents of Decree 03/2015/ND-CP

Basically, Decree 03/2015/ND-CP has inherited Decree 113/2010/ND-CP. It has 5 chapters, 15 articles and 4 annexes on responsibilities

for requesting for environmental compensation and determining environmental damages. The Decree stipulates requirements for data collection and evidence to determine environmental damages in the following cases: water environment for conservation, recreation, daily life and production is polluted and seriously polluted; ecosystems belonging and not belonging to natural protected areas are degraded; and endangered species protected by the law are dead or injured.

The Decree excludes the following cases: natural disasters, force majeure, circumstances directed by competent authorities and other cases as regulated by law.

Determining damages and compensation for human health, life, property and legal benefits of organizations and individuals as results of pollution and environmental degradation are regulated under Civil Law.

### *Responsibilities for requesting environmental compensation and damage determination*

Decree regulates that MONRE and people's committees at different levels shall be responsible for requesting for natural environment compensation. More specifically, communal people's committees shall be responsible for requesting for environmental damages under their jurisdiction. In this case, communal people's committees shall propose district people's committee to collect and appraise data and evi-

dence to determine damage due to pollution and environmental degradation. District people's committees shall be responsible for requesting compensation for pollution and environmental degradation in 2 and above 2 communes. Provincial people's committees shall be responsible for requesting compensation for pollution and environmental degradation in 2 and above 2 districts and towns. MONRE shall be responsible for requesting compensation for pollution and environmental degradation in 2 and above 2 provinces and central cities.

The Decree regulates agencies responsible for collecting and verifying data and evidence for determining environmental damages. More specifically, district people's committees responsible for collecting and verifying data and evidence for environmental damage within their jurisdiction. Provincial people's committees shall be responsible for collecting and verifying data and evidence for determining environmental damage within their jurisdiction requesting compensation for pollution and environmental degradation in 2 and above 2 districts and towns. MONRE shall be responsible for collecting and verifying data and evidence for determining environmental damage in more than 2 provinces and central cities.

### *Data and evidence for determining environmental damage*

The Decree specifies the following types of data and evidence of de-



termining environmental damages

Data and evidence of determining organizations and individuals causing pollution and environmental degradation include waste sources and activities causing environmental accidents, directly impacting the environment or related to polluted or degraded areas. Basic information on organizations and individuals related to polluted and degraded areas includes operation and product types, technology, material input, production processes, waste, discharging points, waste treatment measures, environmental monitoring and data processing and data and evidence related to polluted and degraded areas.

Data and evidence of determining environmental damages in water and soil pollution cases include areas, volumes and weight of polluted water and soil; types of pollutants and pollutant concentrations in water and soil; decisions, permits and competent authority documents on use or use planning of environmental components in polluted and degraded areas.

Data and evidence of determining environmental damage for degraded ecosystems include areas of degraded ecosystems, levels of degradation, decisions and documents of competent authorities on levels of conservation of the natural ecosystems.

Data and evidence of determining environmental damages related to dead or injured endangered species include types of species, the number of injured or dead species, decisions and documents of competent authorities on the endangered species.

The Decree also specifies that data and evidence could be in the forms of pictures, digital tapes, monitored and analyzed data, remote sensing, GIS and other types. Data and evidence of determining envi-



▲ *Decree on determining environmental damage is a legal basis for calculating, determining and requesting for compensation for natural environment damage*

ronmental damage shall be collected and estimated at the time pollution and degradation happen at the maximum level or at the time pollution and degradation are detected.

The Decree stipulates procedures for collecting and verifying data and evidence of determining environmental damage. It specifies structure of data and evidence appraisal council. The council shall have no less than 30% of its members who are environmental specialists, or administrative managers; representatives of local governments where data and evidence are collected; representatives of community and other stakeholders.

*Calculating damages and determining responsibilities of compensating for environmental damages*

Environmental damages are calculated based on costs for dealing with pollution, degradation and restoring the polluted environment to achieve environmental technical regulations for water and soil environment; costs to restore ecosystems and endangered species to original or equivalent conditions. Determining environmental damages is based on data and evidence collected and

following regulations appraised in the Decree. Environmental damages in a geographical area are a sum of damages of each environmental component in that area.

The Decree also stipulates principles for determining environmental damages. More specifically, the following principles shall be followed: pollution and degradation are determined in a geographical area due to waste sources or encroaching actions that occur in that area or do not occur in that area but have impact on that area; the existence of scientific based on relationships between pollutants originating from waste sources or encroaching action and degraded conditions; determining organizations and individuals causing pollution and degradation shall be in a timely and fair manner.

Organizations and individuals causing pollution and environmental degradation shall compensate for all damages and pay for the expenses of determining damages and follow procedures of requesting for damages of the agencies that have advanced the payment as regulated at Point 2 Article 9 of the Decree.

When more than 2 organizations and individuals cause pollution and environmental degradation, environmental damage liabilities, payment for fees of determining damages and procedures for requesting environmental compensation of each organization and individual shall be determined based on their pollution shares.

Organizations and individuals who comply with environmental regulations, have proper waste treatment systems and prove that they do not cause pollution and environmental degradation shall not be liable for environmental damages and related fees.

The Decree stipulates that after being deducted for fees of environmental damage determination and procedures, payment for environmental damages shall be used for pollution remediation and environmental restoration in polluted areas.

### 3. Conclusion

It is necessary to issue a decree on determining environmental damages. The Decree provides a legal basis for calculating and determining environmental damage and request for environmental compensation. To enforce this Decree, however, MONRE will need to develop specific guidance on procedures for environmental compensation; requesting records for environmental compensation, criteria of selecting monitoring organizations and their responsibilities in collecting data and evidence, costs for determining damages and procedures, cost units of pollution treatment for an area, volume of weight of polluted water and soil, cost units for rescuing and caring for an injured endangered species, and procedures and protocols for proving that concerned organizations and individuals not causing pollution■

## Upcoming Events

### The 4<sup>th</sup> National Environmental Conference

The 4<sup>th</sup> National Environmental Conference recently approved by the Ministry of Natural Resources and Environment takes place in September 2015 with the participation of about 800 participants both in domestic and international. Vietnam Environment Administration will be in charge in coordination of all activities of the 4<sup>th</sup> National Environmental Conference and its related events, with main contents including plenary session, thematic workshops and other important events.

On this occasion, the implementation of environmental protection in the period 2010 - 2015 and the orient of that in the period 2016 - 2020 will



be reviewed and evaluated. In order to highlight this issue, the Conference will create a forum among Ministries, Sectors, Provincial authorities, International organizations, Social-political organizations, domestic and international scientists. The forum is opportunity for the participants to share experiences and take actions on environmental protection, to propagandize and implement effectively the Law on Environmental Protection 2014.

### The 13<sup>rd</sup> ASEAN Ministerial Meeting on Environment in Viet Nam

The 13<sup>rd</sup> ASEAN Ministerial Meeting on Environment (AMME 13) takes place in Ha Noi at the 3<sup>rd</sup> and 4<sup>th</sup> weeks of October 2015, with the participation of Japan, China, South Korea, New Zealand, Australia, India, etc.

It is expected that the meeting will discuss on issues related to nature and biodiversity conservation, environmentally sustainable city, inter-regional smoke pollution, sustainable production and consumption, environmental education, multilateral convention on environment, etc.

According to Deputy Minister of Natural Resources and Environment Bui Cach Tuyen, the Meeting is a very important event

with ASEAN countries in general and with Viet Nam in particular, due to its contribution to reinforcement of ASEAN community. The successful organization of this event will accelerate role and position of Viet Nam in the region, as well as in the world.

AMME is organized every 3-years under the mechanism of ASEAN environmental cooperation of member countries. The Meeting aims to review implementation of environmental cooperation agreements in the region, as well as discuss new cooperation programs and propose recommendations and solutions in order to enhance the ASEAN's cooperation activities in the future.





# Some main contents of Decree 19/2015/ND-CP on detail guidance of implementation of some articles of Law on Environmental Protection

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**O**n 14 February 2015, the Government issued Decree 19/2015/ND-CP providing detailed guidance on implementation of some articles of Law on Environmental Protection (LEP) (herein after referred to as Decree 19/2015/ND-CP) with 9 chapters, 57 articles and 5 annexes.

## **1. Contents of rehabilitating, restoring and deposit for environmental rehabilitation and restoration in mineral mining activities**

Environmental rehabilitation and restoration and payment deposit for environmental rehabilitation and restoration in mineral mining activities is an important element of the LEP to conserve mineral resources of the country. They are stipulated in 7 articles, from Article 4 to 10. According to these articles, all individuals and organizations involved in mining shall prepare measures for environmental rehabilitation and restoration and deposit payment for environmental rehabilitation and restoration. These measures shall be taken right during the mining processes. For new mining investment projects, these measures shall be developed and appraised before mining permits are issued. Existing projects which fail to have these measures in

place shall be subject to administrative penalties and requested to submit their measures to competent authorities for appraisal before 31 December 2016. Projects with approved rehabilitation and restoration measures but failing to implement these measures within 24 months after receiving approvals shall have to resubmit for new appraisals.

To be consistent with mineral regulations, the Decree details authorities for appraising and approving the measures and updated measures as follows. Ministry of Natural Resources and Environment (MONRE) shall implement appraisal and approval of the measures/updated measures for projects of which mining permits are issued by MONRE. Provincial People's Committees (PPC) shall implement appraisal and approvals of the measures/updated measures for projects whose mining permits are issued by PPC.

Deposit for environmental rehabilitation and restoration has been implemented for the last seven years (since 2008). Regulations on this aspect have been updated to increase feasibility and ensure the objectives of using the deposit effectively. A proper process of deposit payment includes regulated amounts of deposit,

payment mechanisms, interest rates and handling the deposit and interest in case enterprises go bankrupt.

The Decree also stipulates verification of environmental rehabilitation and restoration programs completion. The verification can be for the whole program or for each completed part of the program. To ensure consistency with mining regulations and simplifying administrative procedures, the Decree also stipulates the process of verifying the updated measures during the completion of the mining works. The decision for closing a mine includes verification of completion of updated measures. This decision can be used as verification for completion of updated measures.

The difference between Decree 19/2015/ND-CP and previous regulations (Decision 18/2013/QD-TTg) is that the former one stipulates a transition period for appraisals by provincial people's committees on verification of updated measures completion. More specifically, individuals and organizations who have paid deposit before Decision 71/2008/QD-TTg took effects but whose measures of environmental rehabilitation and restoration are not in line with the LEP 2014 and the Decree shall

need to redo and resubmit for approval before 31 December 2016.

## **2. Soil pollution control**

Soil pollution control is a new content regulated in Article 61, the LEP 2014 and specified in Articles 11-14 of Decree 19/2015/ND-CP. The contents comprise identification, inventory, assessment and control of soil pollution risks; soil pollution control in production, trade and service facilities; soil remediation in public sites, war-time contaminated sites, pesticide stockpiles and other hazardous substances, and responsibilities of relevant authorities.

Control of soil pollution hazards shall begin from prevention and mitigation of environmental impact from source. Once pollution signs appear, close supervision and timely treatment shall be carried. MONRE shall lead and cooperate with other ministries and localities to review and submit to Prime Minister for issuing lists of production, trade and service facilities having potential soil pollution which need close supervision; and to provide guidance on inventory, evaluation and identification of prevention and control measures for soil pollution hazards.

Production, trade and service facilities shall take measures for soil pollution control. Facilities having high soil pollution risks are waste treatment facilities, mining, and facilities using chemicals which are subject to discharge monitoring listed by MONRE as regulated in Point 2, Article 121 LEP. These facilities shall conduct regular soil monitoring and report to environmental authorities, assess soil environment quality for each type of soil with verification from competent

authorities on soil types of residential and commercial purposes, and inform land users when converting land use purposes.

To protect rights of land users and ensure appropriate use of clean land, the Decree stipulates that when transferring land use rights, receivers shall have rights to request transferring parties to provide information on soil environment in the given land.

To clarify responsibilities between state, organizations and individuals in contaminated site remediation, Decree 19/2015/ND-CP identifies the contaminated sites which are subject to state responsibilities. In this case, provincial people's committees shall develop plans for remediation and submit to MONRE for appraisal and approval. When individuals and organizations want to remediate the contaminated sites and use for another purposes, they shall prepare plans for environmental remediation to submit to provincial people's committee for appraisal, approval and verification of completion of remediation before using the land. Information on soil environment in war-time chemical contaminated sites, pesticide stockpile and other toxic chemicals shall be shared with relevant organizations and individuals.

To control soil pollution, the Decree specifies management mandates of MONRE, Ministry of Defense, Ministry of Public Affairs and provincial people's committees.

## **3. Environmental protection in traditional craft villages**

Environmental regulations on traditional craft villages are stipulated in the LEP 2005. However, in which, distinction is not made between facilities needing promoted and other ordinary produc-

tion, trade and service facilities in traditional craft villages, and between traditional craft villages needing promoted and those are merely sites for production, trade and services. Therefore, implementation of policies for promoting traditional craft villages faced difficulties.

Environmental protection in traditional craft villages is regulated in Articles 15 - 21 with clear division of management and control of sectors and traditional craft villages receiving promotion. A list of facilities receiving promotion in traditional craft village is in Annex 1 of the Decree shall be revised and updated to reflect appropriate changes in different periods. Traditional craft villages receiving promotion are those with more than 20% facilities belonging to the list in Annex 1. Those facilities in the list have fewer legal responsibilities than ordinary ones. Traditional craft villages receiving promotion are eligible for investment fund from state budget for building environmental protection works and receive financial support, human resource development, product promotion and other types of support.

The Decree also stipulates traditional craft village management responsibilities of people's committees at different levels and of MONRE and reporting mechanisms.

## **4. Environmental protection in importing and dismantling used ships**

The Decree has Articles 22 - 24 stipulating environmental protection requirements for used ship dismantling and importing facilities, and responsibilities of management authorities.





Used ship dismantling facilities shall make environmental impact assessment reports and submit to MONRE for appraisal and approval. They shall apply environmental management standards TCVN ISO 14001, have adequate human, technological and financial capacity, and make an environmental protection plan for each dismantled ship to submit to MONRE for approval.

For imported ships, they shall need certificates of compliance with national environmental technical regulations issued by a competent organization.

In environmental protection of ship dismantling activities, MONRE shall be responsible for supervising and guiding implementation and appointing verifying organizations. Ministry of Transport and relevant ministries shall cooperate with MONRE in enforcing environmental regulations. Within their mandates, provincial people's committees shall supervise and monitor environmental compliance in ship dismantling activities.

### **5. Verifying environmental management systems**

Verifying environmental management systems is a new regulation stipulated at Point 3, Article 68 LEP and detailed in Articles 25 - 30.

Production, trade and service facilities generating a large amount of waste and posing high environmental risks shall be subject to verification of environmental management systems. They are in Annex 2 of the Decree. This list has 19 types of facilities which have scale and nature similar to those under MONRE's approval for EIA. The list shall be reviewed and updated periodically.

Facilities having effective certificates of TCVN ISO 14001 shall not need verification of environmental management systems but they shall send reports to competent authorities (MONRE, Ministry of Defense, and Ministry of Public Securities) on their compliance with environmental management systems.

Existing facilities shall be responsible for implementing verification in a 12 month period, from 1/4/2015 to 1/4/2016. New facilities shall have verification within 12 - 24 months since starting their operations.

Verification of environmental management systems shall be valid in 5 years and issued by Ministry of Defense and Ministry of Public Securities for facilities under these ministries' management. MONRE issues verification for other facilities.

### **6. Insurance of environmental damage liabilities**

To specify Point 3, Article 167 LEP 2014, the Decree stipulates that organizations and individuals having production, trade and services with high environmental damage risks shall buy insurance of environmental damage liabilities or establish contingent funds. These facilities include those with oil and gas related operation; chemical, petroleum production and trade; using special ships for transporting crude oil and other dangerous goods in Viet Namese ports and seas; and storing, transporting and treating hazardous waste. The organizations and individuals shall be specified in a list of environmental damage liability insurance issued by MONRE with close cooperation with Ministry of Finance and other ministries. The establish-

ment of contingent funds shall be regulated by Ministry of Finance.

### **7. Dealing with seriously polluting facilities**

Regulations on dealing with seriously polluting facilities are developed to legalize Prime Minister's Decision 64/2003/QD-TTg. This is stipulated in Article 104 of the LEP and specified in Articles from 33 to 36 in the Decree. These articles specify principles and bases for identifying seriously polluting facilities; lists of seriously polluting facilities and pollution treatment measures; procedures and protocols of issuing lists of seriously polluting facilities; and publicizing seriously polluting facilities and pollution treatment measures.

Seriously polluting facilities shall be identified based on national environmental technical regulations and levels of pollution, following criteria of seriously polluting facilities issued by MONRE.

After being fined, except in case of being ceased operation, seriously polluting facilities shall be put in the list and imposed pollution treatment measures with deadlines. The pollution treatment measures include relocation, rehabilitation, upgrading or developing new waste treatment systems and restoring environmental conditions.

### **8. Preferential treatment and support for environmental protection**

The regulations include principles for preferential treatment and support; subjects of preferential treatment and support; support for infrastructure investment; preferential land for relocated seriously polluting facilities; favor in funding mobilization; pref-

erential treatment of export and import tax, income tax, value added tax; price subsidy of environmental protection services and products; product consumption; product advertisement support; waste segregation at source and environmental prizes.

The Decree has a new content on public procurement of environmentally friendly products. Article 47 Decree 19/2015/ND-CP stipulates that heads of organization using state budget shall be responsible for public procurement of environmentally friendly products having Viet Nam Green Labels issued by MONRE, recycled products having competent authority verification; certified biogas and diesel, bio coal, wind power, solar power, geo power, tide power and other renewable power. This regulation is aimed at promoting cleaner production and production and consumption of environmentally friendly goods. For its implementation, Ministry of Finance shall lead and cooperate with MONRE in developing regulations on public procurement of environmentally friendly products.

#### **9. Community participation in environmental protection**

To promote roles of community in environmental protection, the LEP 2014 has Article 146 stipulating community's rights and obligations. These are specified in 5 articles, Articles 50 - 54 on representatives of community, providing information for community, consultation with and supervision by community, evaluation of enterprises' environmental performance, and development of community based environmental protection models to provide legal bases for promoting commu-

nity participation in environmental protection.

In these regulations, community shall have rights to select organizations or individuals as its representatives in public meetings. Environmental authorities and production, trade and service facilities shall be responsible for providing community with environmental information at least once a year. Based on the supplied information, community or its representatives shall evaluate environmental performance of production, trade and services. Community shall have rights to be consulted with about environmental policies during development of legal documents and environmental indicators. Community shall have rights in monitoring public investment in environmental protection in compliance with public investment regulations. Community is encouraged in developing and implementing community based environmental and natural resource management, sustainable development, wise use and conservation of natural resources and climate change responses.

To support community in having its rights and obligations, the Decree stipulates that state authorities shall be responsible for providing environmental information for community, consult with community when making decision on environmental policies and regulations, receiving and processing community feedback, guiding and issuing policies of encouraging community participation, wise use and conservation of natural resources and sustainable production and consumption models■

## **Boosting the green credit growth in Viet Nam**

The Directive 03 on boosting the green credit growth (GCG) and the social and environmental risks management in the credit issuance issued by the State Bank of Viet Nam (SBV) takes effect from 24 March 2015.

Accordingly, SBV will review, regulate and finalize the credit mechanism in order to meet the green growth (GG) goals; mobilize financial resources to provide credits for projects, production and trade programs which are friendly with environment and society, contribute to support enterprises to implement the GG goals, towards the sustainable development.

Futhermore, SBV will propose and implement solutions to enhance GCG following the orientation and targets of the approved National Strategy on Green Growth; guide credit unions to develop and implement the social and environmental risks management system. SBV's branches in provinces and cities will propose solutions to manage risks in credit issuance, and to promote GCG in accordance with locally practical conditions.

Based on the approved National Strategy on Green Growth and programs, plans of Ministries, Sectors, and People's Committee of provinces and cities, credit unions will have to perform actively the green credit programs and policies, in order to accelerate gradually the green credit rate out of the credit structure of that union.

**VEM**



# Basic contents of Decision 73/2014/QĐ-TTg regulating the list of scrap allowed for import as manufacturing materials

**Nguyen Duc Hung**, *Deputy Director*  
*Pollution Control Department*  
*Vietnam Environment Administration*



▲ The LEP 2014 regulates in detail organizations and individuals importing scraps and responsibility for imported scrap bonding

## Basis for promulgation of the decision

The Law on Environmental Protection (LEP) 2014 takes effective from 1 January 2015 with Article 76 regulating environmental protection in importing of scraps. Accordingly, organizations and individuals importing scraps must meet the requirements regulated in clause 2, Article 76 and the imported scraps must meet regulations of clause 1 Article 76 on the list of scraps allowed for import promulgated by the Prime Minister and must meet the national environmental technical regulations promulgated by the Ministry of Natural Resources and Environment (MONRE). Based on this, the Prime Minister approved Decision No. 1338/QĐ-TTg dated 11/8/2014 assigning agencies to be responsible for drafting guiding documents of the laws enacted by the National Assembly Tenure XIII at the 7<sup>th</sup> meeting. Of which, MONRE

takes lead and collaborates with other ministries, sectors and localities to develop the draft Prime Minister's Decision on the list of scraps allowed for import.

Regarding environmental protection and management of scrap trade and import, the LEP 2005 and guiding documents play positive roles in state management of environmental protection and ensuring the implementation of legal regulations on environmental protection of these activities. However, one of the arising difficulties is environmental protection regulation application on the buying and selling scraps to manufacturing enterprises and enterprises in the free tax zone compared to other enterprises.

On the other hand, the industrialization and urbanization process of the country have increased the demand of manufacturing materials and promoted the manufacturing and

recycling technologies; the import demand of scraps into Viet Nam has increased in recent years in terms of numbers and types. Accordingly, environmental risks from the import of scraps have also increased. The LEP 2014 is enacted with detailed regulations on the requirements of organizations and individuals in scrap import and responsibility of imported scrap bonding, which are reflected in the Decree on waste management and scrap prepared by MONRE. At the same time, the LEP 2014 also regulates the mandate of the Prime Minister in promulgating the list of scraps allowed for import and assigns MONRE to develop the national environmental technical regulations on imported scraps.

As a result, the promulgation of Decision No. 73/2014/QĐ-TTg dated 19/12/2014 by the Prime Minister regulating the List of scraps are allowed for import to be used as manufacturing materials is necessary meeting the economic development demand and environmental protection.

## Basic content of the decision

Decision No. 73/2014/QĐ-TTg dated 19/12/2014 by the Prime Minister regulating the List of scraps allowed for import as manufacturing materials consists of 5 Articles and 1 Annex:

- Article 1 regulates the List of scraps allowed for import as manufacturing materials.

- Article 2 regulates 36 scraps allowed for import to be used directly for domestic production and do not apply for temporary re-export activities, transshipment and transit of scraps in the territory of Viet Nam.

## LIST OF SCRAPS ALLOWED FOR IMPORT AS MANUFACTURING MATERIALS

(According to Decision 73/2014/QĐ-TTg dated 19/12/2014 by the Prime Minister)

No.	Scraps	HS code
1	Plaster	2520 10 00
2	Small particle slag (sand slag) from iron or steel metallurgy industry.	2618 00 00
3	Mixed chemical elements used in electronics in plate, thin layer or similar types.	3818 00 00
4	Scraps and pieces of plastics from polymer ethylene (PE): porous type, non-hard.	3915 10 10
5	Scraps and pieces of plastics from polymer ethylene (PE): Other type.	3915 10 90
6	Scraps and pieces of plastics from polymer styrene (PS): porous type, non-hard.	3915 20 10
7	Scraps and pieces of plastics from polymer styrene (PS): Other type.	3915 20 90
8	Scraps and pieces of plastics from polymer vinyl chloride (PVC): porous type, non-hard.	3915 30 10
9	Scraps and pieces of plastics from polymer vinyl chloride (PVC): Other type.	3915 30 90
10	Scraps and pieces of plastics from other types.	3915 90 00
11	Discarded paper or cardboard (scrap and pieces): kraft paper or kraft cardboard or undyed cardboard.	4707 10 00
12	Discarded paper or cardboard (scrap and pieces): other paper or cardboard made mostly from paper pulp collected from the chemical process that are white dye, undyed fully.	4707 20 00
13	Discarded paper or cardboard (scrap and pieces): other paper or cardboard made mostly from paper pulp collected from the mechanical process (e.g, paper for newspaper, magazine or similar publications).	4707 30 00
14	Discarded paper or cardboard (scrap and pieces): other type, including unclassified scraps and pieces.	4707 90 00
15	Silk scrap (including cocoon unsuitable for silk reeling, scrap fiber and recycled fiber).	5003 00 00
16	Glass piece and glass scrap and other pieces: glass in block.	7001 00 00
17	Scrap and pieces of cast iron.	7204 10 00
18	Scrap and pieces of alloy steel: stainless steel.	7204 21 00
19	Scrap and pieces of alloy steel: other type (different from stainless steel).	7204 29 00
20	Scrap and pieces of iron or tin coated steel.	7204 30 00
21	Scrap and pieces of iron or steel: hobbed, planed, chop, scale and bavia iron shavings, not press into blocks or in package, bar, cluster.	7204 41 00
22	Scraps and other pieces of iron or steel: other type.	7204 49 00
23	Re-melt foundry pig (iron, steel, cast iron) scrap.	7204 50 00
24	Copper scrap and pieces	7404 00 00
25	Nickel scrap and pieces.	7503 00 00
26	Aluminum scrap and pieces.	7602 00 00
27	Zinc scrap and pieces.	7902 00 00
28	Tin scrap and pieces.	8002 00 00
29	Wolfram scrap and pieces.	8101 97 00
30	Molybdenum scrap and pieces.	8102 97 00
31	Magnesium scrap and pieces.	8104 20 00
32	Titanium scrap and pieces.	8108 30 00
33	Zirconium scrap and pieces.	8109 30 00
34	Antimony scrap and pieces.	8110 20 00
35	Manganese scrap and pieces.	8111 00 00
36	Chromium scrap and pieces.	8112 22 00

Note: HS code and scrap names in this list are used according to Circular No. 164/2013/TT-BTC dated 15/11/2013 by the Ministry of Finance promulgating the Table of preferential import and export tax for goods that are subject to taxation.

- Article 3 regulates the responsibilities of MONRE in leading and collaborating with other relevant ministries and sectors to develop and promulgate the national environmental technical regulations for 36 scraps allowed for import to be used as manufacturing materials.

- Article 4 regulates on the effectiveness of the Decision from 5 February 2015.

- Article 5 regulates on responsibilities of MORNE in guiding, supervising and monitoring the implementation of this Decision.

- The Annex of this Decision is the List of 36 scraps allowed for import used as manufacturing materials and goods import code (HS) according to the regulations of the Ministry of Finance promulgating the Table of preferential export tax and import tax for the list of goods that are subject to taxation.

### Conclusion

To ensure the limitation of environmental risks in scrap import activities, MONRE requests the Prime Minister to assign MONRE in collaboration with the Ministry of Industry and Trade, Ministry of Finance to regularly review, study and report to the Prime Minister for other scraps that have economic values in recycling, reusing and cause less negative impacts on the environment.

Together with the promulgation of this Decision, the system of regulations on environmental protection in scrap import has established and there has been a significant difference compared the regulations of the LEP 2005, in order to enhance the effectiveness and efficiency of environmental protection and management in scrap import and create favorable conditions for manufacturing demands of enterprises. In addition, the regulation relating to environmental protection in scrap import according to the LEP 2014 is appropriate with international regulations and conventions that Viet Nam is a party to, particularly the regulation effectively supports the implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal■



# Environment protection from harmful toxic chemicals

Lately, a conference on the prevention of, and speedy response to the release of harmful toxic chemicals has been held in Nha Trang city, Khanh Hoa province.

Attending the Meeting, Deputy Minister of the Ministry of Natural Resources and Environment, Bui Cach Tuyen, stressed the importance of environmental protection in the context of rapid socio-economic development. He also noted that organisations and enterprises had not paid enough attention to prevent such incidents, leading to significant setbacks in the nation's socio-economic development. Further, there are other factors, such as limited human and financial resources and lack of co-operation among agencies, also hindering the effectiveness of efforts towards environment protection.

The Deputy Minister pointed out that agencies should step up efforts to co-operate and monitor organisations and enterprises to improve environmental awareness and build eco-friendly business models, especially after the implementation of the nation's Law on Environmental Protection coming into effect on 1 January 2015.

Mr. Bui Cach Tuyen affirmed: "The Government is in the process of framing policies and mechanisms to improve the effectiveness and feasibility of practices aimed at preventing and acting in case of environmental incidents".

Furthermore, Head of Khanh Hoa Province's Environment Administration Nguyen Thi Nguyet Ha said that the growing econo-



my of the province, which was a result of increased industrial and tourism activities, indicated that effective prevention, mitigation and resolution of environmental incidents was a top priority for Khanh Hoa.

Faced with the growing threat of environmental mishaps, the province has boosted efforts towards improving the preparedness of agencies and forces to prevent, react to and resolve possible environmental incidents.

Moreover, legal experts and business representatives from Unilever and DuPont also shared their experience in dealing with such incidents

and contributed to the discussion at the conference such as the Uni Raya Glory ship from Singapore sank near the province's Van Phong Bay (in 2002) spilling more than 120 tonnes of oil and other toxins, or unidentified oil slicks appeared near the province's Cam Ranh Bay and other locations (in 2007) or oil slicks spotted near the location where 2 vessels collided, identified as Phuc Xuan 68 and Nam Vy 69 (in 2014).

The province has mobilised its local police, border patrol forces and residents to ensure quick response to incidents. Parties that cause such occurrences will be held responsible and fined accordingly, according to local officials.

**DH**

## Viet Nam participation in the Persistent Organic Pollutants monitoring project

The regional project "Environmental Monitoring of Persistent Organic Pollutants (POPs) in East Asia Countries" sponsored by the United Nations Development Program (UNDP) and the Global Environment Fund (GEF) has been approved by the Prime Minister. The Ministry of Natural Resources and Environment to finalize and sign the

project's document with the donors, as well as to implement the project according to the regulation.

The project includes 5 components: Developing implementation schedule; inventorying new POPs; updating and inventorying old POPs; evaluating capacity in POP management; determining prioritized projects/programs in accordance with Viet

Nam situation.

The project aims to fulfill Viet Nam's obligations to the Stockholm Convention on POPs; update and submit the National Action Plan on the Stockholm Convention to the Prime Minister and the Conference of the Parties to approve the Stockholm Convention Secretariat.

# Regulations on operation conditions of Environmental Monitoring Services

**Nguyen Van Thuy - Nguyen Thi Nguyet Anh**

*Center for Environmental Monitoring*

*Vietnam Environment Administration*

The Law on Environmental Protection (LEP) 2014 was endorsed on 23 June 2014 at the 7<sup>th</sup> meeting of the National Assembly Tenure XIII, and takes effective from 1 January 2015, replaces the LEP 2005. Accordingly, the review, revision, modification or the replacement of guiding documents for LEP 2005 are also comprehensively carried out.

The Decree No. 27/2013/ND-CP dated 29/3/2013 by the Government regulating the operation conditions of environmental monitoring services, takes effective from 5 June 2013 to specifically regulate Clause 3, Article 95 LEP 2005. This Decree regulates operation conditions of environmental monitoring services; profiles and procedures on granting, extension, revision, renewal, temporarily suspension, withdrawal and cancellation of the certificate recognizing the competence for environmental monitoring service operation. The appraisal and certification of organizations that are competent for implementing environmental monitoring service activities shall be implemented based on conditions regulated at Article 9, Article 10 of The Decree No. 27/2013/ND-CP.

After one year of the Decree No. 27/2013/ND-CP implemen-

tation, this guiding document has been operationalized. In general, the quality of environmental monitoring activities has been improved and implemented systematically and orderly.

However, to implement the regulations of the Law on promulgation of legal documents 2008 regarding the constitutionality, legality and consistency of legal documents in the environmental legal system, based on regulations of the LEP 2014, the development of the Decree regulating conditions of organizations implementing environmental monitoring service activities according to Article 126, LEP 2014, replacing The Decree No. 27/2013/ND-CP has been implemented by the Ministry of Natural Resources and Environment (MONRE). On 31 December 2014, the Prime Minister issued the Decree No. 127/2014/ND-CP by the Government regulating conditions of organizations implementing environmental monitoring service (hereafter referred to as the Decree). The Decree takes effective from 15 February 2015.

Basically, the Decree inherits almost all contents of the Decree No. 27/2013/ND-CP because the contents of which are still appropriate with relevant regulations, particularly Clause 1, Article

126, LEP 2014 is the same with Clause 3, Article 95, LEP 2005. Therefore, the structure and contents of the new Decree are not different, except regulations on “Forbidden behavior” at Article 4 of the Decree No. 27/2013/ND-CP are no longer exist in Decree No. 127/2014/ND-CP to be constitutional as regulated at Clause 2, Article 14, Constitution 2013.

This Decree applies to state management agencies on environment, organizations implementing environmental monitoring services in the territory of the Socialist Republic of Viet Nam. Of which, organizations implementing environmental monitoring services include: enterprises established according to the Enterprise Law; organizations implementing science and technology activities established according to the Law on Science and Technology; environmental state non-profit organizations that are established and performed according to the Decree No. 55/2012/ND-CP dated 28/6/2012 by the Government regulating the establishment, re-organization and termination of state organizations. However, State organizations that implement environmental monitoring activities assigned by state management agencies and supported



by state budget are not subject to this Decree.

According to the Decree, organizations that implement environmental monitoring service activities (including onsite monitoring activities and environmental analysis activity) must have the certificate recognizing competent conditions for implementing environmental monitoring service activities. The certificate is granted to organizations required following conditions: having the establishment decision or the certificate recognizing science and technology operation or the certificate of business registration or the certificate of investment that is granted by authorized agencies, listing environmental monitoring activity; having adequate human resources, qualifications, equipments and facilities for implementing environmental monitoring. These are specifically regulated in Article 8 and 9 of the Decree.

The effective duration of the certificate is 36 months from the granted date and can be multiply renewed; each renewal is not more than 36 months. MONRE is the authority for granting, renewing, revising, re-granting, temporarily suspending and withdrawing the certificate.

The Decree also regulates procedures and processes on granting, extension, revision, temporary suspension, withdrawal and cancellation of the certificate and provides organizations with sample requesting certification.

Organizations implementing environmental monitoring service activity have to take procedures to ask for the certificate recognizing competent conditions



▲ *Environmental monitoring service activities contribute to improve the quality of environmental monitoring, and make appropriate with the orientation of environmental socialization*

for environmental monitoring service, pay fees for appraisal, granting, extension, revision and renewal of the certificate as regulated.

The Decree also regulates temporary suspension, withdrawal and cancellation of the certificate. Accordingly, the certificate is temporarily suspended in following circumstances: organizations participating in environmental monitoring activities do not comply with the scope and areas stated in the certificate; organizations using the certificate for inadequate purposes; organizations do not follow regulations on certification; organizations do not implement or inadequately implement technical regulations on environmental monitoring procedures and methods as regulated by MONRE, do not maintain the quality assurance and quality control program in environmental monitoring. If organizations are banned from operation, or declared bankruptcy, dissolutions, separation, dismantling or if organizations

do not meet one of those conditions regulated at Article 8 and Article 9 of the Decree; neither adequately implement technical regulations on environmental monitoring nor implement and maintain the quality assurance and quality control program will have their certificate withdrawn and cancelled.

With the promulgation of Decree No. 27/2013/ND-CP and the Decree No.127/2014/ND-CP, currently, regulations on conditions of organizations implementing environmental monitoring service activities, environmental monitoring in general and environmental monitoring service activities in particular have clear changes; significantly contribute to improve the quality of environmental monitoring activities, to create a healthy competitive market, to support considerably and effectively for environmental protection, and to be appropriate with the socialization orientation of environmental monitoring services■



## Waste water treatment plant expansion in Ho Chi Minh City

The Ho Chi Minh (HCM) City Urban Civil Works Construction Investment Management Authority has started work on a package to improve HCM City's urban and domestic sanitation by expanding the daily capacity of a large-scale Binh Hung sewage treatment facility from 141,000 to 469,000 m<sup>3</sup>, with the loan fund of VND 2.8 trillion (US\$ 131.5 million) from the Japanese government carried out within 54 months. The expanded treatment facility is scheduled for operation in August 2019.

The package belongs to the 2<sup>nd</sup> phase of a project to rehabilitate the HCM City water environment in a basin area of 2,150 ha along Tau Hu, Ben Nghe, Doi and Te canals in Districts 4, 5, 6, 8, 10 and 11, of which contract was awarded to a 3-company consortium represented by POSCO Engineering & Construction, Ltd., a major South Korean construction company, Hitachi, and OTV, a subsidiary of Veolia Water Solutions & Technologies, a French environmental services group, and Hitachi.

The expanded capacity would be sufficient to meet waste water treatment needs of about 1.4 million people, and would make the plant one of the largest sewage treatment facilities in Southeast Asia.

Kunizo Sakai, president & CEO of Hitachi's Infrastructure Systems Company, said plans are currently underway for future sewage infrastructure development projects in Viet Nam, seeking to contribute to maintaining and improving the water environment in Viet Nam.

Currently, HCM City has only 2 operational waste water treatment facilities, including the first stage of the Binh Hung plant and Binh Hung Hoa facility with a daily processing capacity of 30,000 m<sup>3</sup>.

According to the HCM City Steering Centre of Urban Flood Control Programme, the city will start work on the 1<sup>st</sup> phase of Nhieu Loc - Thi Nghe waste water treatment plant this year. Costing some US\$ 478 million, the project has a designed capacity of 480,000 m<sup>3</sup> per day.

Treated waste water now accounts for a low 13.2 % of the total amount of waste water discharged in the city. The city is calling for investment in 12 plants to treat 3 million m<sup>3</sup> of waste water per day.



PD

## Investment in environment and sanitation improvement in HCM City



The State Bank of Viet Nam and the World Bank (WB) lately have signed agreements for a total US\$ 450 million in loans and credits to help Ho Chi Minh (HCM) City improve the environment and sanitation.

The total project costs US\$ 495 million, US\$ 250 million of which will be financed through a loan from the International Bank for Reconstruction and Development (IBRD) and a US\$ 200 million credit through the International Development Association (IDA). HCM City will provide US\$ 45 million from its own resources for the project.

It is expected to improve the environment by treating waste water, strengthen institutional capacity to manage sanitation and waste water services, and increase public awareness on the benefits of improved sanitation practices.

WB's Country Director Victoria Kwakwa highly valued the experience of the city in launching infrastructure projects, revealing that the WB will enhance cooperation with the City to carry out other key projects. Currently, the WB is financing 4 big projects in the City, worth more than US\$ 600 million to upgrade the urban transport system and improve the environment, said SBV Governor Nguyen Van Binh.

PT



## More waste treatment plants come into operation in Ha Noi 2015

There are, currently, 9 enterprises collecting and processing household waste in the charging of treating around 5,400 tonnes of waste discharged each day in Ha Noi. Most of the waste is treated by using different methods such as burying and burning the waste.

Next time, several waste treatment plants in Ha Noi's outlying districts of Dan Phuong, Phu Xuyen, My Duc, Ba Vi and Soc Son are expected to come into play this year. The 73 ha Nam Son waste treatment complex (phase II) in Soc Son district is one of those

According to Vice Chairman of the municipal People's Committee Vu Hong Khanh, the city will discharge an estimated 8,500 tonnes of solid waste a day by 2020 and 11,300 tonnes daily by 2030.

To treat the waste, the city authorities have zoned off areas as part of solid waste treatment plans towards 2030. Under the planning approved by Prime Minister Nguyen Tan Dung, Ha Noi will have 17 waste treatment plants by 2030, including 8 expanded units and 9 new plants.

## Building green hospital in Viet Nam

Ho Chi Minh (HCM) City Energy Conservation Center and Mitsubishi Corporation (Japan) have coordinated to carry out the project building a green hospital in Viet Nam towards improving energy efficiency and the environment. Performed under Joint Credit Mechanism, it is implemented from 2014 to 2016. The project will initially pilot green hospital at People's Hospital 115 in HCM city and Viet Duc hospital. Accordingly, nearly 500 high efficiency inverter air conditioning, 2 energy management systems and 10 sets of waste heat ventilation have been installed in Hospital 115. Viet Duc Hospital has installed 526 air conditions, 8 cabinets of energy management systems and 6 sets of ventilation and 6 reversible fans.

Based on feasibility study of the Centre and Mitsubishi Corporation, the project will help People's Hospital 115 save 498,715 kWh and reduce emissions of 310 tons of CO<sub>2</sub> per year. Similarly, the Viet Duc Hospital will save 830,261 kWh and reduce 518 tons of CO<sub>2</sub> emissions a year.

## Call for investment in lake environment improvement



The People's Committee of Ha Noi has just assigned the relevant agencies to work with the International Cooperation Agency of Japan (JICA) to propose transferring surplus funds from the water supply and drainage project aiming at environment improvement (project 2) to lake renovation ensuring environmental sustainability and makes a call for investment in renovating lakes.

Accordingly, the Ha Noi People's Committee directed the departments, local authorities to determine the status of the lakes under construction in progress or done in order to adjust plans accordingly and allow investors to continue to implement. It is also necessary to check the current status of the lake management, resolutely handle violations of occupation of the area around the lakes, polluting lakes, etc.

## Environment protection for health facilities through international cooperation

The Joint Circular 48/BYT-BTNMT between Ministry of Health (MOH) and Ministry of Natural Resources and Environment (MONRE) on the mission of the national management collaboration on the environment protection for health facilities includes developing, proposing, and implementing the international cooperation projects on environment protection related to health sector; exchanging experience and organizing





oversea study tours on the environment protection in this sector.

As stated in the Circular, MONRE takes the lead and collaborates with MOH to develop and propose the international cooperation projects on environment protection in health sector while MOH is responsible for collaborating with MONRE to implement these projects.

## New waste water treatment plant built in Binh Duong

A US\$ 318.5 million wastewater treatment plant has constructed in southern Binh Duong province, which will benefit over 400,000 local residents.

It is part of a chain projects to improve the water environment in the South of Binh Duong with capacity of 54,000 m<sup>3</sup> of wastewater treated per day, and a total investment of 6.8 trillion VND (318.5 million USD) allocated to three phases.

With capacity of 17,000 m<sup>3</sup>/day, the phase of the project will be implemented in Thuan An commune, costing 2.3 trillion VND, 85 % of which comes from Japan's Official Development Assistance (ODA) funds and the remaining from the Binh Duong Water Supply Sewerage Environment Co., Ltd.

During the phase, a 200 km network of pipes, mainly in residential areas around Ba Bo Canal, will be built.

According to Vice Chairman of the provincial People's Committee Tran Thanh Liem, the water environment improving project in the South of Binh Duong is important and beneficial to the locality in the long term.

The province has put its first urban waste water treatment plant into operation in Thu Dau Mot city with a capacity of 17,650 m<sup>3</sup> per day since May 2013.



## Japanese firm plans to spend US\$ 80 million on waste treatment in HCM City



Representatives from Hitachi Zosen introduced the projects during a meeting with the city leaders on May 22, saying one of them will burn waste to generate electricity and collect methane gas for fertilizer.

They said they can start working on the power-generating project next year. The US\$ 70 million facility can burn 600 tonnes of waste a day.

Ho Chi Minh City government has supported the idea but has not decided on the location and the kind of waste to be treated at the plant.

The company said it will spend around US\$ 5 million on another project to treat waste at the wholesale market Binh Dien in the city. It plans to treat around 50 tonnes a day and collect bio gas in the process.

As for the third project, it has prepared equipment to be installed in the city this September to treat 500 kg of food waste a day, storing it to collect bio gas and fertilizer. The project is expected to cost around US\$ 2 million.

Taiyo Miyagi, director in charge of global promotion trade at Hitachi Zosen, said the company has spent four years studying the volumes and components of waste in the city.

It has learned that there's a very good chance it could turn the waste into energy, he said.

The company said it has developed 477 waste treatment plants around the world.

It also supplies equipment for a plant in Ha Noi, which is going to operate next year, aiming to incinerate 75 tonnes of garbage a day for power generation.

Power-generating incinerators are a popular waste treatment method in developed countries, but not in Viet Nam, where solid waste has not been classified. The country also cannot afford the costs yet.



## E-waste recycling programme in Viet Nam

The Viet Nam Recycling Platform on 6 April 2015 launched the Viet Nam Recycles programme to collect and recycle used, end-of-life and broken electronic equipments in Viet Nam for free with the platform established by American technology giants Hewlett-Packard and Apple.

According to the Institute for Environmental Science and Technology, the amount of e-waste in Viet Nam has been increasing due to the development of technology and high demands made on electronic equipments. However, the people have limited awareness of e-waste.

“This is a meaningful programme for Vietnam” Deputy Director of the Vietnam Environment Administration Hoang Duong Tung said. “There have been several waste recycling programmes held in the past few years, but generally, they have been small in scale and were carried out for a short period. People are not fully aware of e-waste, and financial resources are limited for building a standardised



▲ The amount of e-waste in Viet Nam has been increasing

e-waste recycling system. More importantly, there is a lack of long-term commitment towards environment-friendly projects.”

“Therefore, we highly appreciate the initiative of the Viet Nam Recycling Platform and the sustainable values the organisation aims to create for a better environment in Viet Nam. We believe positive results from the programme will bring positive change for the Vietnamese environment,” he said.

The programme helps manufacturers and customers to follow regulations on collecting and recycling of waste, which

were issued by the Prime Minister on 9 August 2013, and took effect from 1 January 2015. It also aims to raise the responsibilities of manufacturers for collecting and recycling end-of-life electronic products and electrical household appliances. The electronic waste will be recycled in an environment-friendly way to ensure that maximum resources are collected after the recycling.

Since the end of January 2015, the programme has been providing free e-waste collection and recycling services to governmental agencies, organisations and enterprises in Ha Noi and Ho Chi Minh City where the people are offered free services as July■

## Using advanced, environment-friendly technologies as a priority in Dong Nai

The province’s Department of Planning and Investment said, target set for attraction of foreign direct investment in Dong Nai in 2015 was US\$ 900 million, with US\$ 400 million for newly investment and US\$ 500 million for extended investment.

According to Dong Nai oriented industrial development to 2020, the province will seek investment in production projects with high-tech, without pollution and using less labor. Therefore, the prov-

ince makes a call for investment which can ensure the criteria for using advanced and environment-friendly technologies.

The province also creates the conditions for investors not to wasting their time in waiting for clean surfaces. The province has planned clearly for the regions of different industries to maintain harmony between investment capital and human resources instead.



# 1.3 trillion VND earned from firms for forest services



▲ *Nghe An's implementation on payments for environmental services*

Viet Nam hopes to collect a total of VND 1.3 trillion (US\$ 60.4 million) from a programme titled Payments for Forest Environmental Services (PFES) in 2015. The amount charged by water-suppliers, hydro-power companies and tourist agencies is similar to that of last year, said Deputy director of Viet Nam Forest and Protection Fund, Pham Hong Luong at a meeting in late March to discuss payments for

environmental services. On average, each household earns VND 1.8 million (US\$ 83.6) per year from PFES.

37 of the country's 63 provinces have established a forest-protection fund to look after nearly 6 million ha of trees. The programme was set up to provide incentives for individuals and communities to protect forests by compensating them for any costs incurred.

4 years after setting up, PFES had created positive changes in forest management. It not only altered awareness about protecting and developing forests, but provided a way to help eradicate hunger and poverty in mountainous areas.

However, the workshop was told that many problems existed in forest environmental services. Due to that environmental services regulates the water cycle, soil formation and forest growth to absorb carbon from the atmosphere and protect biodiversity Government agencies were often slow at doing things, leading to delays in PFES payments.

Director of the southern Lam Dong Province's Forest Protection and Development Fund, Vo Dinh Tho said, a fixed payment of VND 492,000 (US\$ 22) was paid to a forest owner for each ha looked after each year. He also suggested that the Ministry of Agriculture and Rural Development and relevant agencies work out ways to solve any difficulties.

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## Da Nang acts for a green city

Da Nang has received a number of international and domestic awards for its efforts, including the ASEAN Environmentally Sustainable City in 2011, the Asia Pacific Economic Cooperation Low-Carbon Emission City in 2012 and one of APEC 20 Green-Clean-Beautiful Cities in 2013, and membership of the Rockefeller 100 Resilient Cities Programme in 2014.

In recent years, the "green-clean-beautiful Sunday" campaign has become a tradition in Da Nang, where locals voluntarily contribute their time to keep their neighbourhood clean with a wide range of activities organized to collect thousands of tons of garbage, dredge channels and canals, plant thousands of trees and care for parterres and grassland. The central city of Da Nang has devised a number of concrete measures to bring a fresh, green and







## Lam Dong unveils its go - green plan



▲ Priority will be given for allocating forest areas to ethnic and poor households without land and local communities to protect

More than 596,600 ha has been zoned off for forests in a total area of 977,219 ha in Lam Dong. The forests play an important role in protecting the environment and regulating water resources from rivers, springs, lakes in the province and the rest of the region.

Lately, Lam Dong Province People's Committee unveiled a plan for the "Reduction of greenhouse gas emissions

through efforts to reduce deforestation and forest degradation, sustainable management of forest resources, conservation and enhancement of forest carbon stocks" implemented through 2020 with the cost around VND 1.75 trillion (US\$ 83 million).

Its main targets are to increase the province's forest cover and reduce CO<sub>2</sub> emissions by 2 million tonnes a

year, equal to 27% of the emissions by the forestry sector; from then, improve the livelihoods of families living near forests to reduce their exploitation of the forests; besides, provide companies with financial and technical assistance to manage the forests.

To achieve the targets, Tay Nguyen (Central Highlands) province will adjust the zoning of 3 types of forests – special use, protective and production, further limit switching of special use and protective forests to other purposes. In addition, the province will replant forests and afforest barren lands and lands where commercial plants had been grown.

This year, for instance, Dam Rong, Lam Ha, Lac Duong and Da Hoai districts will grow 260 ha of forest on barren land. As planned, the province will plant an average of 1,070 ha of forests a year on barren lands in the period of 2016 - 2020.

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unique look to the city and attract a greater number of tourists.

In 2008, the municipal People's Committee approved an action plan to make Da Nang an environmentally-friendly city, aiming to develop standards for land, water and atmosphere quality by 2020 in a bid to ensure safe and healthy conditions for local residents, investors and tourists.

Under the project, more than 90% of the urgent local environmental issues have been addressed and publicity campaigns have been

launched to raise community awareness on the practical and long-term benefits of green development.

Green space-oriented facilities have been built across the city and along local beaches, such as new urban zones, resorts and office buildings, ultimately contributing to raising local living quality and tourist volume.

Between 2013 and 2014, dozens of practical and effective activities were conducted under a project on tree development implemented by the municipal Department of Construction.

Deputy Director of the Department Le Tung Lam said social resource plays a key role in activities to improve living conditions and create public green landscapes. It is also necessary to incite the active participation of all level authorities and residents alike in the work; expand public campaigns such as "tree planting festival" and "a green-clean-beautiful Sunday", among others; and strengthen public supervision of relevant policies and regulations.

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# Global Green Energy Investments in 2014

## Current status of green energy investments in the world

Global renewable energy investment was strongly in 2014, registering a solid 17% increase with the total investment to 270 billion USD compared with 232 billion USD invested in 2013. As a result, 103 GW of generating capacity added around the world that equals the energy of all 158 nuclear power plant reactors in the USA made 2014 the best year ever for newly installed capacity, according to the UNEP's 9<sup>th</sup> annual "Global Trends in Renewable Energy Investments" report.

Major expansion of solar installations in China and Japan and record investments in offshore wind projects in Europe accounted for 92% of overall investment in renewable power and fuels. Investment in solar jumped 25% to 149.6 billion USD, the 2<sup>nd</sup> highest figure ever, while wind investment increased 11% to a record 99.5 billion USD. In 2014, some 49 GW of wind capacity and 46 GW of solar PV capacity were added worldwide, both records. Therein, China saw by far the biggest renewable energy investments last year - a record 83.3 billion USD, up 39% from 2013. The US was 2<sup>nd</sup> at 38.3 billion USD, up 7% on the year (though this is below its all-time high reached in 2011). The 3<sup>rd</sup> came Japan, at 35.7 billion USD, 10% higher than in 2013 and its biggest total ever.

The dominant feature of the solar sector was unprecedented expansion in China and Asia. Be-

tween them, the 2 Asian giants invested 74.9 billion USD in solar in 2014, around half the world's total.

In China, utility-scale projects of more than 1MW made up about 3/4 of the solar investment of 40 billion USD, which was a 45% increase on the previous year. In Japan, on the other hand, investment was dominated by small scale projects of less than 1 MW, which accounted for 81% of a total solar investment of 34.8 billion USD, a 13% increase on 2013.

A boom in European offshore wind development resulted in 7.1 billion USD - plus projects reaching "final investment decision" stage in 2014. Among these, the 3.8 billion USD 600MW Gemini installation off the coast of the Netherlands was the largest non-hydro renewable energy plant to get the go-ahead anywhere in the world.

Offshore wind projects worth 18.6 billion USD were financed globally in 2014. This was 148% higher than the previous year and 45% higher than the next highest year, 2010. Most of this total - 16.2 billion USD was in Europe and China accounting for the remaining 2.4 billion USD.

Other renewable energy sources did not perform so well by comparison. Biofuels fell 8% to 5.1 billion, biomass and waste-to-energy dropped 10% to 8.4 billion and small hydro was down 17% to 4.5 billion USD. Only geothermal

*The 2014 global investment of 270 billion USD in renewables followed investments of 232 billion USD (2013), 256 billion USD (2012), 279 billion USD (2011), 237 billion USD (2010), 178 billion USD (2009), 182 billion USD (2008), 154 billion USD (2007), 112 billion USD (2006), 73 billion USD (2005) and 45 billion USD (2004) - an 11 year total of 2.02 trillion USD (unadjusted for inflation)*

buckled the trend with a 27% increase to 2.7 billion USD.

Another reason comes from the continuing sharp decline of technology costs - particularly in solar, as well as in wind. It proves that every dollar invested in renewable energy bought significantly more generating capacity in 2014.

UN Under Secretary General and Executive Director of UNEP, Achim Steiner said "Once again in 2014, renewables made up nearly half of the net power capacity added worldwide. These climate-friendly energy technologies are now an indispensable component of the global energy mix and their importance will only increase as markets mature, technology prices continue to fall and the need to rein in carbon emissions becomes ever more urgent."

A salient feature of the 2014 result was the rapid expansion of renewables into new markets in developing countries, where investments jumped 36% to 131.3 billion. China with 83.3 billion USD, Brazil



▲ *Offshore wind projects in Europe*

(7.6 billion USD), India (7.4 billion USD) and South Africa (5.5 billion USD) were all in the top 10 investing countries, while more than 1 billion was invested in Indonesia, Chile, Mexico, Kenya and Turkey.

In contrast, the total renewables investment in developed economies rose only 3% to 138.9 billion USD. Even accounting for the booming offshore wind sector, investments in Europe hardly changed at 57.5 billion USD.

#### **In spite of revolution, challenges continue**

2014 was a remarkable year for renewables after 2 years of shrinkage, however, multiple challenges remain in the form of policy uncertainty, structural issues in the electricity system - even in the very nature of wind and solar generation, with their dependence on breeze and sunlight.

Another challenge was, at the 1<sup>st</sup> sight, the impact of the 50% - plus collapse in the oil price in the 2<sup>nd</sup> half of last year. According to Udo Steffens, President of the Frankfurt School of Finance and Management, however, the oil price is only

likely to dampen investor confidence in parts of the sector, such as solar in oil-exporting countries, and biofuels in most parts of the world.

Of greater concern is the erosion of investor confidence caused by increasing uncertainty surrounding government support policies for renewables.

Michael Liebreich, Chairman of the Advisory Board for Bloomberg New Energy Finance noted that "Europe was the 1<sup>st</sup> mover in clean energy, but it is still in a process of restructuring those early support mechanisms. In the UK and Germany, we are seeing a move away from feed-in tariffs and green certificates, towards reverse auctions and subsidy caps, aimed at capping the cost of the transition to consumers. While, there is almost a no-go area for investors in Southern Europe due to retroactive policy changes, most recently those affecting solar farms in Italy. Despite uncertainty over the future of the Production Tax Credit for wind in the US, costs are now so low that the sector is more insulated than in the past. Meanwhile the rooftop solar sector

is becoming unstoppable."

There are also structural challenges in the electricity system as grids and utilities in many countries struggle to cope with the increasing penetration of wind and solar in the generation mix. Coping with 25% or more variable generation is more difficult for grids and utilities than managing a 5% proportion.

Therefore, Governments have often struggled to produce policy measures that keep up with the advance of renewable power and its knock-on effect on the rest of the electricity system.

2014 was a year of outstanding year of strong investment in renewable energy with investment rallying strongly. If these positive investment trends are to continue, major electricity market reforms will be needed of the sort that Germany is now attempting with its Energiewende energy transition. The structural challenges needing overcome are not simple ones, but are the sort that have only arisen from the success of renewables.

**HT (UNEP Source)**



# Strengthening Capacity and Institutional Reform for Green Growth and Sustainable Development in Viet Nam



Viet Nam is among a growing number of developing countries looking to spur investment in green innovation and improve the efficiency of natural resources use, while simultaneously improving the resilience of the whole country as well as the poor and vulnerable to the impacts of climate change.

Strengthening Capacity and Institutional Reform for Green Growth and Sustainable Development in Viet Nam, known as the CIGG project, is to support capacity building and policy development for the effective implementation of Viet Nam's national green growth strategy and achievement of sustainable development goals. Assistance will be provided at the national and provincial levels to integrate green growth and low-carbon development into sectoral and

provincial Green Growth action plans.

"We are expected to take a leadership role in green growth. This new initiative will further our ambitions in green investment and help us to integrate new policy directions for greener growth in Viet Nam into the next 5 year Socio-Economic Development Plan" noted Vice-Minister of the Ministry of Planning and Investment (MPI) Nguyen The Phuong, in his opening speech.

UNDP Resident Representative in Viet Nam, Ms. Pratibha Mehta stressed that, "taking action on climate change makes good business sense. Green investment is good investment. It will be forward-looking countries, companies, and investors leading the transition to greener economies and reaping the most reward".

"This project will assist Viet Nam in a number of critical green growth-related areas," said U.S. Ambassador to Viet Nam Ted Osius. "It will strengthen the capacity for the Ministries of Planning and Investment, Finance, and Transportation, as well as provinces to effectively implement and monitor the Viet Nam Green Growth Strategy and Action Plan. The project will help develop policies for promoting investment in green growth development and improve access to green growth financing for Viet Nam."

MPI will review the country's investment policy framework and work with the Ministry of Finance to assess fiscal tools to identify gaps and potential for reforms that will accelerate Viet Nam's transition to a greener economy. Together with the Ministry of Transportation, MPI will review incentives for investment in energy-efficient transportation networks. By focusing on removing barriers to green growth, the initiative is expected to support new public-private partnerships to take advantage of new green investment opportunities.

Through this partnership with UNDP and the US Government, MPI will work with other ministries, provinces, business, research institutes and development partners to meet the implementation targets in the national Green Growth Strategy.

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# Viet Nam - Korea cooperation in strengthening technical and institutional capacity on environment management system



▲ Mr. Jung Gun Young, Director of Viet Nam - Korea Environmental Cooperation Center (VKECC)

***On 13 April 2015, the Ministry of Natural Resources and Environment has awarded the Medal for Environment Achievement to Mr. Jung Gun Young, Director of Viet Nam - Korea Environmental Cooperation Center (VKECC) for contribution on construction and development of the natural resources and environment sector in the period of 2010 - 2015. On this occasion, Viet Nam Environment Magazine (VEM) had a conversation with Mr. Jung Gun Young on the relationship of sustainable development and friendly cooperation between Viet Nam and Korea.***

***\* Firstly, congratulation to you for being awarded with the MONRE Minister's Medal. Could you please share with us some contributions provided to promote the cooperation between the 2 countries in the fields of environment recently.***

**Mr. Jung Gun Young:** As you know, Viet Nam - Korea Environmental Cooperation Center (VKECC) is an initiative funded by Korea Ministry of Environment (KMoE) in 2006 to promote environmental business cooperation between the 2 countries. At the beginning VKECC was run by Korea Environmental Association, a Korean non-governmental organization. In 2011, to expand the scope of its activities and supports provided to relevant stakeholders, the operation of VKECC was transferred to Korea Environmental Industry & Technology Industry (KEITI), a governmental body belonging to KMoE. VKECC is here to provide supports upon the request of relevant Korean

and Vietnamese stakeholders for the strengthening of bilaterally environmental cooperation between the 2 Governments and building up a strong environmental business network to promote environmental investment between the 2 countries. Appointed as the VKECC's Director cum Chief Representative of KEITI in Viet Nam since early 2012, I always try my best to explore every chance and opportunity to fulfill my duties in Viet Nam.

***\*Being a focal point representing for the mutual cooperation between the 2 countries in the fields of environment, what are the key activities implemented by VKECC to explore the potential trade and cooperation in the environmental fields between the 2 countries?***

**Mr. Jung Gun Young:** With the focuses on strengthening bilateral cooperation in environmental fields and creation of cooperation networks between enterprises of the 2 countries, VKECC has offered

many services and supports to both Korean and Vietnamese institutions, companies and experts since its establishment and operation in Viet Nam. Aiming at the promotion of Korean environmental technologies in Viet Nam market, until now, KMoE has provided the non-refundable fund of approximate 3 million USD through KEITI for Korean and Vietnamese institutions and enterprises to implement 12 projects in Viet Nam in the environment related to water supply, wastewater management, pollution control, clean and renewable energy, etc. As evaluated by Vietnamese beneficiaries, these projects have contributed to solve their environmental problems and improve environmental services at local level. On the other hand, the performance of these projects also helped to confirm that Korean environmental technologies are suitable and affordable to Viet Nam's context, as well as to prove Korean companies' capacity and proficiency in the

fields of environmental technologies. Besides, KMoE has also actively supported on the exchange of environmental knowledge, experiences and experts to help Viet Nam in the strengthening of its institutional and technical capacity serving for environmental governance such as the revision of Viet Nam Law on Environment Protection (2013 - 2014), the development of Viet Nam's Master Plan on Green Growth (2013 - 2015), offering scholarship program to Vietnamese officials in various line ministries of Viet Nam for their master degree study in famous universities in Republic of Korea, etc.

***\*South Korea is a developed country now, could you please share with us some good Korean experiences which are valuable to the environment management activities in Viet Nam currently?***

**Mr. Jung Gun Young:** As Viet Nam, South Korea had been facing many environmental challenges when it was experiencing at the time being a low middle income country in 1980s. However, recognized that environment protection would be a peremptory necessity to ensure the country sustainable development, Korean Government had conclusively applied comprehensive reforms in terms of environmental policy framework and administration system to deal with environmental issues. The establishment of General Department of Environment under direct management of Prime Minister Office in 1990 upgraded to become KMoE in 1994 had showed a strong political will of Korean Government to boost its efforts allocated for the improvement of the country environment. The application of polluter pay principle in every sector of the economy and social development process, and the encouragement of private sectors to participate in environmental protection initiatives and activities has also played a key



▲ *The workshop introducing new Korean environmental technologies held by VKECC in Ha Noi*

role to help Korean government in mobilizing necessary resources required for the improvement of the country's environment conditions. Thanks to these proper policies, KMoE has gained significant achievements over 3 last decades to contribute in making South Korea from a low middle income country facing with many environmental problems in early 1980s to become one of G20 member with sound environmental management administration system. Viet Nam is now experiencing the socio-economic development process to reach goal of making the country to become an industrialized country in 2030. I am quite sure that the exchange of Korean experiences under the programs implemented by VKECC will contribute in the Vietnamese Government efforts to solve environmental challenges and to improve Viet Nam environmental conditions for its sustainable development.

***\*Could you please share the difficulties and the advantages you are facing during your working time in Viet Nam?***

**Mr. Jung Gun Young:** I think, Viet Nam has many similarities with South Korea in many aspects from daily family life to business culture. I really respect the way Vietnamese people show their kindness and considerateness to their partners, colleagues and fam-

ily members, for example, the way you show your sincere thanks and respects to the ancestors, seniors, teachers and the way Vietnamese parents devote their life for their children bright future. All these are very similar to our Korean culture. This helps me a lot in understanding of Vietnamese working culture in order to facilitate my work performance here. However, I am also facing with many difficulties in learning Vietnamese policy framework and legislation system in various fields to provide proper consultations and advices to Korean companies as it is complicated with too much administrative procedures and not very stable.

***\* Do you have any proposal or suggestion for strengthening environmental cooperation activities between the 2 countries in the future?***

**Mr Jung Gun Young:** Viet Nam and Korea has now maintained strategic partnership and we have just signed FTA in early May, 2015. Accordingly, the economic development of both 2 countries will be surely contributed a lot. It also an ideal opportunity for strengthening mutual cooperation between the 2 countries in the fields of environment to improve environmental conditions in Viet Nam and South Korea, as well as global environment. Viet Nam has many advantages, especially its energet-





▲ Authorized by Ministry of Natural Resources and Environment's Leadership, Deputy Director General of Vietnam Environment Administration, Nguyen The Dong awarded the Medal for Environment Achievement to Mr. Jung Gun Young

ic and young population, and high potential to join leading group in ASEAN, even in the world. Deeply

understanding each other and promoting cooperation programs based on win-win principle will help to

strengthen the environmental cooperative activities between Viet Nam and South Korea. Two Governments are now maintaining the organization of annual Environment Ministerial Meeting in order to yearly review cooperation achievements and to exchange new cooperation concepts and ideas regularly. Under this modality, I am quite sure that there will be many fruitful outcomes born in near future. Finally, I would like to say that Viet Nam is my second home country. I therefore will do my best to contribute to my two hometown's continuous development.

**P. Tuyen**

## Quang Tri: Development of environmental protection models

The project "Development of environmental protection models" in Quang Tri has been implemented under the Trieu Phong development program sponsored by the Korea International Cooperation Agency (KOICA) and the Korea Exchange Bank (KEB) since May 2014, with its total cost of US\$ 200,000. It constructs 3 pilots: solid waste collection, biogas, and energy saving stove in 4 communes, Trieu Thuong, Trieu Tai, Trieu Son, and Trieu Trach (Trieu Phong district, Quang Tri).

There are currently 20 hamlets of these communes that have constructed dumping places and established waste collection teams. Also, 160 households in selected 24 communes have applied the biogas model which was combined with swine breeding. This model can be able to deal with one of the agricultural wastes and re-use wastewater for irrigation purpose.

Based on these initial successes, KOICA and KEB have decided to issue additional sponsor worth US\$ 400,000 for the phase III. The project will be extended until 30 February 2016 and be supplemented with 2 communes, Trieu Trung and Trieu An with total 8,114 households in 6 communes and 47,200 residents expected to benefit from the project.

## Environment improvement and tourism promotion for Son Doong cave



Lately, Consulate General of Viet Nam in Perth, Australia has coordinated with the Augusta Margaret River Tourism Association, Regional Development Australia South West Committee celebrated an exchange to establish a symbiotic relationship between tourist caves in the Phong Nha - Ke Bang NP and Augusta Margaret River Tourism Association.

It is the first cooperative agreement to promote cave geological tourism in the world, in order to improve cave management, disseminated information about the 2

sites at the international level and implement projects which brings about joint benefits.

There is a good sign for the Son Doong cave, which is located in the caves system of Phong Nha - Ke Bang, Quang Binh province. Earlier, the Prime Minister has approved the plan to build the Phong Nha - Ke Bang to 2030. Accordingly, define clear objectives is to preserve the status quo and the integrity of the world's natural heritage of Phong Nha - Ke Bang NP in conjunction with the ecological conservation of Hin Namno in Laos and ecological population in Truong Son Range.

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## Strengthening cooperation in environment protection of river basins

*Recently, Viet Nam has received the attentions and supports of many agencies, organizations and governments, especially Japan's in controlling and improving the quality of water environment. In the period of 2010 - 2013, Japanese Government has supported Viet Nam in technical implementation of the "Project for Strengthening Capacity of Water Environmental Management in Viet Nam" and there have been some encouraging results initially achieved. Based on achievements obtained in Phase I, Japan will continue to support Viet Nam to proceed with project Phase II (2015 - 2018). Currently, the Vietnam Environment Administration (VEA) (Ministry of Natural Resources and Environment) is cooperating with the Japan International Cooperation Agency (JICA) on planning project's execution in 6 provinces belonging to Cau and Dong Nai river basins. Vietnam Environment Administration Magazine had an interview with Mr. Ichiro Adachi, JICA's expert in Viet Nam on this issue.*

*\* Sir, what activities of the project shall be focused in the current situation of Viet Nam?*

**Mr. Ichiro Adachi:** This project's main activities consist of 2 matters. One is to develop legal documents related to the river basin environmental management in Viet

Nam. Another is to conduct pilot projects in target river basin areas. We understand that in Viet Nam, institutionalization is very important for advancing political issue. For advancing water environmental management in Viet Nam, the view point of "river basin" is set as main concept. In the

project, one model coordination mechanism will be considered and developed. And this model will be set as legal document such as circular for expanding. For developing more functional and effective institutionalization, conducting pilot projects on target river basin area is designed. Main activity of pilot projects is to study actual water quality situation by the scientific method. JICA project can support and contribute to Department of Natural Resources and Environment's activity in the province.

*\* What solutions do you think Viet Nam should adopt to promote water environmental protection in river basin, especially Cau River basin and Dong Nai River Basin*



▲ Seminar "Preparatory state for implementing project Strengthening the capacity of water environment management in river basin"





### Mr. Ichiro

**Adachi:** Based on the Japanese case, I want to emphasize one matter, as well as the most important point. People (including “government”, “enterprise” and “citizen”, etc.) should be really interested in “environment protection of river basins”. In Japan, as you know, in the 1960s and 1970s, a lot of river and river basin areas were polluted by discharges of industrial and domestic water. And, people have not paid as much as attention to the rivers. In the big cities, a lot of rivers and canals were reclaimed, for example, to roads). At first, the pollution control was priority matter, but in the 1990s of the 20<sup>th</sup> century, based on the concept of “the environment and the development”, the river protection policy was being gradually changed. Therefore, the distance between human and rivers has been considered. Accordingly, waste water plant constructions and environmental monitoring service activities are also very important, however, implementation of these contents entails vast expenses. I think that “concerns” and “needs” are very important matters.

**Thu Hang**

## Operation Game Change cracks down on wildlife crime

The Operation Game Change (OGC) programme was launched in Ha Noi on 3 March 2014, calling for joint efforts from the entire community to counteract wildlife crime.

The event was attended by representatives from the Ministry of Agriculture and Rural Development, the Ministry of Natural Resources and Environment (MONRE), the US, African and UK Embassies, as well as Vietnamese and foreign scientists.

Deputy Minister of MONRE Bui Cach Tuyen stated that, the Law on Biodiversity Protection, which was adopted in 2008, is a clear guideline for the role of the Vietnamese Government in preserving flora and fauna, especially those facing extinction. As part of efforts to realise the national strategy on conserving biodiversity until 2030, Viet Nam is paying greater attention to combat wildlife trafficking.

Funded by the US State Department and the US Agency for International Development, the OGC aims to reduce the trafficking and consumption of endangered animals in Asia, including Viet Nam.

Press Officer at the US Embassy in Ha Noi Lisa Wishman said that the cooperation between the US and Viet Nam in implementing the OGC is a part of activities to celebrate the 20<sup>th</sup> anniversary of normalising bilateral relations between the 2 nations. It also aims to form an alliance to end wild animal trafficking, especially rhino horns, while raising public awareness of wildlife protection and reducing demand for wildlife products.



Currently, increasing demand for wildlife products is a main contributing factor to wildlife trafficking. According to the International Union for Conservation of Nature, more than 20,000 elephants were killed in Africa between 2012 and 2013 for their ivory.

Data from the World Wildlife Fund reveals the trading value of wildlife in the black market could be up to 19 billion USD each year.

Authorities and scientists at the event stressed out the importance of completing legal frameworks and enhancing law enforcement capacity in combating wildlife trafficking, as well as communications and education on wildlife protection and improving the livelihoods in communities surrounding wildlife areas.

The OGC will be implemented across the nation with the engagement of various agencies and sectors, including private enterprises. A film-making contest is also scheduled to be launched this year.

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## Ha Long: Japanese ODA fund for water improvement



The Prime Minister has approved the contents of Japanese ODA loan agreement and financial mechanisms for the project of improving water environment in Ha Long City. Accordingly, the Deputy Minister of Finance Truong Chi Trung on behalf of Vietnamese Government to sign on this loan agreement with Japan. While, the Ministry of Foreign Affairs completed the authorization procedure following the regulations and the Ministry of Justice issued legal opinions on the loan after signing.

## Japan supports Viet Nam in environmental projects

Minister of Planning and Investment Bui Quang Vinh, and Japanese Ambassador in Viet Nam Hiroshi Fukada, on behalf of the 2 Governments signed the diplomatic notes which exchange ODA loans from Japanese Government to Vietnam for fiscal 2014. Accordingly, Japanese Government will provide the Vietnam ODA loans of 7 major projects, worth more than 112 billion yen.

There are 3 projects on natural resources and environment including the project on construction of water supply systems stage II in Nhon Trach; Project on drainage and wastewater treatment in Ha Long City and Support Program to Respond to Climate Change (5<sup>th</sup> cycle).

## Can Tho: Preparation of organic waste treatment system

Vice Chairman of Can Tho People's Committee has worked with Mikuniya company - a Japanese firm producing organic waste treatment system. It is expected to run a trial in Can Tho city. During the operation, the company will run a JICA-funded small - scale treatment system in Can Tho in 6 months with a capacity of 15 tone per day. After the trial, the company will open a factory in the industrial zone to assemble and sell this system in Viet Nam market.

At the meeting, Vice Chairman Dao Anh Dung said the city will create favorable conditions, as well as incentives for the company to invest the organic waste treatment plant in the city. However, the firm is required to coordinate with relevant agencies of the cities to survey the installation location and determine the waste sources in the city.

## Bac Giang: Investment in solid waste treatment

Bac Giang People's Committee recently issued Decision No. 344/QĐ-TTg on the investment in constructing treatment system of hazardous medical solid waste in cluster 2 (Luc Ngan district), Bac Giang province. Accordingly, the investor is Bac Giang Department of Health. The investment location is the Luc Ngan General Hospital in Bac Giang Province. The objective is to dispose hazardous medical waste arising from medical facilities in the area of Cluster 2 including Luc Ngan General Hospital, Son Dong General Hospital, Luc Nam General Hospital, health centers and over 80 health stations under 3 districts: Luc Ngan, Son Dong, Luc Nam.

The project has a treatment capacity of 150 kg of solid waste per day. The total investment of the project is VND 8,785 million, mainly the cost of equipment (VND 7,028 billion) funded by the loan from the World Bank (VND 8,012 million) and reciprocal capital of Bac Giang Province (VND 773 million).

The contents of the project including equipment rooms, concrete tanks to isolate solid waste; procure and install equipments of disinfection and mill, buy dedicated trucks.



## Hue: 520,000 EUR invested in waste water treatment

Thua Thien - Hue has inaugurated the innovation project of Thuy Phuong leachate treatment pond (Huong Thuy town) with a total investment of 520,000 EUR, of which 350,000 EUR funded by the Greater Paris Wastewater Treatment Authority - France (SIAAP), that is implemented for 2 years (2013 - 2014) with categories consisting of a pond for aeration (2,000 m<sup>2</sup>), a pond for deposition (558 m<sup>2</sup>), a plant filter tank (840 m<sup>2</sup>) and supporting items such as roads, a pump station, a main pump station, a circulating pump station, a fence, a lighting system, trees and lawns. The buildings are equipped with 4 aeration machines in the aeration pond. Once completed, the project has contributed to dealing with pollution at Thuy Phuong landfill, enhancing the quality of life of local residents.

Accordingly, SIAAP Vice President Jacques Jean Paul Maritin and Chairman of Hue City People's Committee Nguyen Van Thanh signed an agreement for co-operation in the period of 2015 - 2017. Under the deal, SIAAP will support Hue City to carry out the wastewater treatment project in the Hue Citadel in 2015, mainly concentrated in Ngu Ha River at a cost of 100,000 EUR; and the fund will be about 150,000 EUR/year for the remaining years.

## Ho Chi Minh City: US\$ 450 million to improve the environment

As stated by Ho Chi Minh (HCM) City Environment Hygiene Project Management Board, World Bank has agreed to provide a loan of US\$ 450 million for HCM city to deploy Phase II of Nhieu Loc - Thi Nghe Canal clean-up project.

The phase II of the project with a total capital of US\$ 200 million has been done to significantly reduce flooding and pollution for 1.2 million people in District 1, 3, 10, Phu Nhuan, Tan Binh, Binh Thanh and Go Vap. However, it had been implemented too slowly causing difficulties for local residents' life and travel because of many reasons, mainly due to the limited ability of contractors.

Nhieu Loc - Thi Nghe clean-up is one of the first and biggest environmental improvement projects in the city, playing significant role to improve the living environment for citizens.

## The Wildlife Crime Tech Challenge

The Wildlife Crime Tech Challenge to reward innovative science and technology solutions combating wildlife trafficking in Viet Nam has been launched by the US Agency for International Development (USAID)

This global competition will award 4 prizes of up to US\$ 500,000 for innovative science and technology solutions to fight this increasingly serious crime, corresponding to 4 issues in the fight against wildlife trafficking consisting of detecting transit routes, strengthening forensic evidence and intelligence, reducing consumer demand, and tackling corruption.

Viet Nam is ranked as the 16<sup>th</sup> most biodiversity-rich countries in the world, however, it is also a major hub for wildlife trafficking, supplying domestic and international markets with a variety of live animals, animal parts and medicinal plants. Viet Nam serves as both a major demand country and a key transit hub for rhino horn and elephant ivory, and other endangered species.

USAID has been working closely with Vietnamese government, civil society, and international actors to tackle wildlife trafficking, including through its Regional Response to Endangered Species Trafficking (ARREST) program, which works to reduce consumer demand for wildlife products, and strengthen law enforcement, regional cooperation, and anti-trafficking networks.

"There has been a sharp increase in the illegal wildlife trade in recent years, and there is growing consensus that traditional models of conservation are insufficient to protect biodiversity and preserve ecosystems. By harnessing the power of science and technology, we hope this initiative hopes to overcome key barriers in the fight against wildlife trafficking" said USAID Viet Nam Mission Director Joakim Parker.

Following the selection of winners, the Challenge Team intends to create a community among innovators, users, and the public that will collaborate on further innovation and dissemination of the results.

Wildlife trafficking has emerged as one of USAID's highest priorities, as poaching continues to undermine conservation achievements, economic prospects, and security, and the US\$ 10 - 20 billion annual illegal trade in elephant ivory, rhino horn and other wildlife parts is financing criminal syndicates and terrorist groups.

**VEM**



# Behaviour change in handling with the nature, building the advanced culture-environment towards sustainability

**Dr. Nguyen Ngoc Sinh**

*Vietnam Association for Conservation of Nature and Environment*

## **1. Change in handling with the nature - current culture - environment**

The concept of culture - environment is the combination of two concepts culture and environment. There are hundreds of different definitions of culture and environment. Therefore, the author will not focus on the “academic” definition of that.

In recent found definitions of the culture concept, there are meanings of material culture and non-material culture; therefore, culture - environment also consists of material culture - environment and non-material culture - environment. Key points in culture - environment definition consist of knowledge, moral norms; consequently, human beings can develop and modify their behaviours and reactions in the relationship with the nature and the surrounding environment. Concepts, knowledge and norms are accumulated, inherited and finalized in practice along the history of social human development, which are specified spatially and temporally, illustrated through lifestyles and behaviours to the nature.

As a basic content of culture - environment, the awareness on the nature plays a very impor-

tant and critical role in affecting our conduct on the environment. If the environment is infinite, unlimited exploitation will be harmless. However, the fact shows that the environment is finite, the Earth is fragile, gain - loss should always be put into consideration. Human beings must be aware of, although it is a whole process on limits of the Earth, the systematic and constituent manner of the environment and their impacts. We must assess and recognize trends and changes of the environment, forecast the carrying capacity of natural resources in daily lives. Moreover, we must be aware of moral relationships between human and the nature, impacts of lifestyles, our behaviours to the nature.

To develop an advanced and modern culture - environment on the basis of inheriting positive cultural aspects of the traditional cultural values in the past, of being internal resources for the construction and protection of the country in the upcoming time, it is necessary to have basic and strategic changes from the concept and the awareness of behaviour to the nature and the environment, which are appropriate with new moral norms - environment ethics in a society that is environmentally friendly and considers green and

sustainable development to be one of desired targets.

## **2. Development of an advanced culture - environment - towards sustainable development in Viet Nam**

*Appraise the role of environmental ethics - ideological foundation of the advanced culture - environment in the society*

Environment ethics is one of the new emerged issues, probably in the same time with the formation of sustainable development concept. According to many scientists of the Vietnam Academy of Social Sciences in recent years, there are different trends explaining environmental ethics such as biologism, ecologism, deep ecology... Common features of these trends are considered environmental ethics as a new ethic which is higher than the traditional humankind ethics. On the contrary, the social-ecologism trend only considers environmental ethics as a special case of traditional ethics in the current context.

Environment ethic is an aspect of the common ethic, illustrating and implementing human ethics, in the relationship between humans and the nature. To illustrate this spirit, in June 1997, the Seoul Declaration on environmental eth-





ics was published, marking important advances on environmental protection awareness after the Rio Summit on environment and development in 1992. The declaration identifies the interdependence between human and nature in a system.

The Seoul Declaration sets principles of environmental ethics, including the principle of creating a spiritual culture as a requirement of the proper balance between materialistic pursuits and the need for spiritual fulfilment, in order to embrace life more fully. The second principle is achieving environmental equity among nations, ethnic groups, current and future generations of humankind. The third principle is greening science and technology. Finally, important and basic principle of environmental ethic is sharing responsibilities in environmental protection in interacting with the nature and among nations, sectors and social groups... The implementation of this principle is a very important ruler of environmental ethic. In practice, the implementation of international conventions, protocols, global environment issues or similar issues, the most difficult aspect is the division of responsibilities of stakeholders. The reduction of greenhouse gases known as the implementation of the 3<sup>rd</sup> objective of the Convention on Biological Diversity (access to genetic resources, fair and equitable sharing) has been stuck and thorough settlement has not been identified.

It is not difficult to list evidence of violations at international as well as national scope, including Viet Nam on the violation of en-

vironmental ethic norms in culture - environment. The strict compliance of legal documents on environmental protection of organizations, enterprises, communities is limited. In addressing conflicts on the environment, responses that lack culture -

environment are often seen. The situation is similar to that of in other countries; developed countries find the way to “export” pollution to other less ones, such as the toxic dismantling of old ship to South and South-

## Nearly 1,000 Viet Nam trees recognized as national heritage

Vietnam Heritage Trees present in most localities across the country, from the nation’s northern frontier Ha Giang province, the highest peak Fansipan, to the southernmost Con Dao, from the Central Highlands to the Spratly Archipelago. Many of which are rare and endemic plants with extremely high ages such as 2,000-year-old vatica trees at Thien Co Temple in Phu Tho’s Viet Tri city and the ‘*Do quyen canh tho*’ (*Rhododendron basilicum*) near the peak of the 3,143 m Fansipan Mountain at Hoang Lien NP - the only endemic plant which exists in Viet Nam.

At present, nearly 1,000 trees of 70 different plant species across the nation have been recognized as Vietnam Heritage Trees.

Since the schemes inception in March 2010, the VACNE has received thousands of documents for the approval and recognition of Vietnam Heritage Trees. The event has spread widely and become a mass movement with an enthusiastic response from the community, stimulating the fine tradition of Vietnamese people in planting trees and protecting forest land, as well as practically contributing to biodiversity conservation.



▲ The event of Vietnam heritage tree launched by VACNE attracted the participation of local communities

east Asian countries. Particularly, America has a strong economy but is the only country by now that has not adopted the Convention on Biological Diversity, or signed the Kyoto Protocol on climate change.

According to the Resolution No. 24-NQ/TW dated 3/6/2013 on proactively responding to climate change, enhancing natural resources management and environmental protection, in recent years, responses to nature have been put into consideration, changed and achieved some initial important results, although there are still weaknesses and limitations. Major objective causes of these weaknesses and limitations are inappropriate and inconsistent awareness and vision, and the undermined importance of sustainable development. Therefore, the Resolution has proposed some main solutions which are “Enhance, renew the propaganda, education, awareness raising, awareness formation to actively respond to climate change, to save natural resources and protect the environment”. Importantly, the Resolution refers to the notion of “form cultural institutions, environment ethics in the society”, which are being discussed here.

Originated from current situation and basic principles of environmental ethics according to the Seoul Declaration, many authors have proposed basic principles for environmental ethics in Viet Nam. Together with the regulations, principles and norms will be gradually developed; the environmental ethics will soon become the norms aiming at by individuals, communities, organizations, sectors, professions, regions, and countries and even broader. This

is the basic and long-term method and pathway to be the foundation for the deep change of culture - environment from unsustainable development to sustainable development. This is an important ignition to develop a sustainable development society.

*Urgently develop a sustainable development society - a condition to ensure the advanced culture - environment.*

Respect and consideration of livings of the communities are the first principles to develop a sustainable development society. This is also an ethic principle to human lifestyles. It is necessary to share benefits and expenses equitably and fairly in natural resources exploitation and usages and environmental protection of the Earth among communities and individuals between current and future generations.

The principle of biodiversity protection of the Earth is the next basic principle to develop a sustainable development society. All ecosystems in the Earth are combined to form the biosphere and the nursing system for human lives. The United Nations has proclaimed 2011 - 2020 as the decade of biodiversity with a clear message on systematic and dependent relations of livings on the Earth.

An important principle to develop a sustainable development society is to change human attitude and behaviour. In the past and even now, many people do not know how to live sustainably. Poverty forces people to find all ways to survive such as deforestation for shifting agriculture, wildlife hunting... which cause negative impacts on the ecological envi-

ronment, degrade land areas, and natural resources. In high-income countries, the demand of natural resources use increases and is higher than the carrying capacity of the nature, causing significant impacts on the communities. Therefore, we must change our attitude and behaviour to combat the problem.

Finally, it is necessary to refer to the principle “Communities self-manage their environment”. Environment is the common house, not only for any individual or community. Therefore, saving the Earth and developing a sustainable life depend on beliefs and contributions of each individual. When people self-organise their sustainable lifestyle in the community, they will have a strong vitality despite their community is rich or poor, urban or rural.

At the global scale, Stockholm Declaration at the United Nations Conference on “Human Environment” in 1972 and Rio declaration at the Summit “Environment and Development” in 1992 have proposed principles responding to the environment.

To develop a sustainable development society, Viet Nam needs to be based on above basic principles. In practice, Viet Nam recognizes and develops a sustainable development society, including culture - environment which is confirmed in Directive 36-CT/TW dated 25/6/1998 and Resolution 41-NQ/TW dated 15/11/2004 by the Politburo on enhancing environmental protection in the industrialization and urbanization. Consequently, the Prime Minister approved Decision 153/2004/QĐ-TTg dated 17/8/2004 on orientations of the



sustainable development strategy in Viet Nam (Agenda 21 of Viet Nam).

Accordingly, Decision 153/2004/TTg introduced 8 principles of sustainable development of Viet Nam including many important aspects of culture - environment such as ensuring "all areas: economics, society and environment all benefit", "to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs", "sustainable development is the task of the Party, authorities, ministries, sectors and localities; of agencies, enterprises, social organizations, communities and all citizens", etc. Therefore, the orientation of sustainable development in Viet Nam is also the orientation to bring the advanced culture - environment to become the practical in society of Viet Nam. On the other hand, the advanced culture - environment contributes to convert the society towards sustainable development.

### **3. Support for advanced culture - environment activities and behaviour being established in the society**

The national Strategy on Green Growth to 2020, vision to 2030 promulgated in 2012 identifies: Viet Nam follows the environmentally friendly growth model, reducing of greenhouse gas emission, increasing solar energy use, renewable energy, greening production, greening lifestyle and promoting sustainable development. To 2020, Viet Nam aims to reduce 8 - 10% of greenhouse gas emission compared to that of 2010; energy reduction in GDP

is 1 - 1.5% each year, greenhouse gas emission reduction in energy activities of 10 - 20% compared to the normal development plans. The Strategy considers the implementation of the orientation of "clean industrialization", using natural resources in an effective and saving manner, developing "clean industry", "green agriculture", environmentally friendly, aiming to 42 - 45% values of high technology products, green technology in GDP.

To be appropriate with the strategy, many behaviours having environmental ethics contents of the advanced culture - environment are being applied by enterprises, communities, sectors, localities, such as Go Green by Toyota Motor Viet Nam (TMV) launched by the VEA and the Ministry of Education and Training. Initial period of the Go Green aims to: educate to enhance awareness and then change behaviour to environmental issues. In addition, the Go Green aims to promote the youth to take actions on the environment through practical activities. The ecological hand connection together with the green generation is the campaign launched by the Green Generation network of Ha Noi to celebrate the International Year of Biodiversity - 2010, 1000 years of Thang Long - Ha Noi and the International Day of Climate Action - 350 movements. There are many other movements such as: "Earth Hour", "Moving planet", "Action month for green school", "White roof - green wall", Clean the world... all celebrating environment and climate change events to propose actions having environmental ethics which apply to each

specific object and community.

In 2010, on the occasion of 1000 - year anniversary of Hoa Lu - Thang Long - Ha Noi and at the start of the United Nation Decade on Biodiversity, the Vietnam Association for Conservation of Nature and Environment (VACNE) has initiated to launch the event "Conservation of Vietnam Heritage tree". Recognized heritage tree has become a symbol for the longevity and wonderful adaptation with the natural environment, creating a peaceful and harmonious environment between human beings and the universe, maintaining the love for the nature and the environment. The event has been highly evaluated by authorities and foreign and domestic mass media, being considered as a typical cultural characteristic of our country, a feature of Viet Nam's advanced culture - environment.

In order to contribute to develop an advanced culture - environment of Viet Nam, making culture - environment become an important motivation in the country development, the author would like to propose three solutions, namely: Pay attention to environmental ethics on the basis of current viewpoints according to the Seoul Declaration on environmental ethics; Actively develop the society towards sustainable development orientation as approved by the Government; Develop, nurture; Finalize and expand behaviours and responses having environmental ethics existing in the society ■



# Establishment of a wildlife park in Ninh Binh

**Le Thi Huong**

*Vietnam Academy of Science and Technology*

The Government of Viet Nam and other countries in the world have committed to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Viet Nam recognizes the importance of biodiversity conservation and development and pays attention to forest protection and development as well as environmental protection which are the prerequisites for the sustainable economic development in the future. Almost all countries in the world have established wildlife parks to combine conservation with education on environmental protection for the society through visit, study, research and eco-tourism.

On 29 January 2015, the Prime Minister approved the Master Plan on establishment of the national wildlife park in Ninh Binh. Of which, the national wildlife park will be established in Ky Phu and Phu Long communes, Nho Quan district, Ninh Binh province with the area of 1,155.43 ha. The total investment is about 7,368 billion VND, of which, the socialized capital is about 5,247 billion VND (71.2%); state budget is about 2,121 billion VND (28.8%).

General objectives of the Master Plan are to conserve, rescue, develop and store genetic resources of wildlife, particularly of endangered, rare and precious wildlife; to promote scientific



▲ Wildlife Fauna Park in Ninh Binh is established in the core zone of the Cuc Phuong National Park

study, training and environmental education in combination with eco-tourism; to create jobs, to increase the income contributing to reduce poverty sustainably for local people, and to promote the socio-economic development.

Specific objectives of the Master Plan are to conserve, rescue and develop approximate 3,000 individuals belonging to 250 fauna species; to breed wildlife species in the semi-natural environment; to create sites and to support scientific studies; to train domestic and international students on conservation and development of wildlife;

to develop ecotourism, entertainment and recreation activities, environmental education and natural resources; to attract about 5 million tourists per year, contributing to increase the state budget.

The national wildlife park establishment project consists of some main areas: ecological green tree area; wild fauna area; wild fauna species development and care area; service center area; entertainment and recreation area; resettlement, office and staff housing areas.

Of which, the wild fauna area will be the focus of the project with the area of more than 400

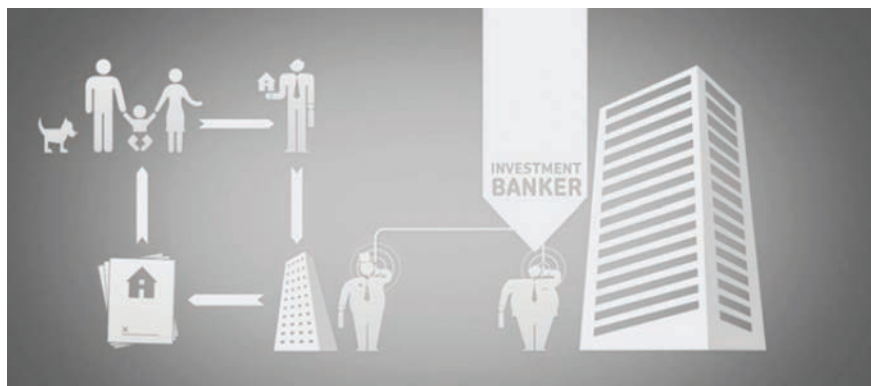


ha and is organized in different typical regional landscape models in the world such as African desert, southern American tribes and Asian tropical forest. The landscape axis linked with functional areas will consist of artificial ponds and mountains creating a special habitat of Ninh Binh. At the same time, the service area will be distributed into small units along the landscape axis which is one of the focuses in the whole area; the transport axis leading to the wild fauna area stems from the central square making the area attractive. To complement the quiet and wild landscape of the wild fauna area is the thematic entertainment area. Recreation and entertaining works are lively and exciting.

For the project management and operation, the provincial People's Committee issued Decision No. 551/QĐ-UBND dated 31/7/2013 to establish the Management Board of the Ninh Binh national wildlife park (Management board) within the Department of Agriculture and Rural Development. By the end of 2014, the Management board was stabilized in terms of organization and operation and achieved some results such as publishing the establishment plan of the national wildlife park to different organizations and individuals; finishing the demarcation as planned; finalizing the master plan; signing the memorandum of understanding with the Four Paws organization (German) on investment construction, maintenance of a bear rescue center; implementing the infrastructure project of Asian beasts, etc.

The project is invested in 3 phases, the phase I during 2012 - 2015; the phase II during 2016 - 2020 and the phase III from 2020 to 2025, with the whole project is put into operation and exploitation■

## Green Finance is Growing in China



▲ *Green finance will accelerate the transition toward a sustainable economy and improve the financial system in China*

Over the past 30 years, China has developed rapidly to become the world's second largest economy. However, development has often caused extensive damage to the quality of air, water and soil in the country. Therefore, "Transforming from a resource- and pollution-intensive economy to a green economy is now a strategic priority for China," said Zhang Chenghui, Director General of the DRC's Financial Research Institute and a co-author of the Synthesis Report. "Success depends on the development of green industries and the transformation and reduces the importance of many traditional industries."

According to the "Greening China's Financial System" written by financial and environmental experts from around the world, China's coal consumption fell by more than 2% last year, signaling that might be the most important fossil peak in modern times. Clean energy invest-

ment jumped 32% in 2014 to a record 89.5 billion USD, as compared a meager 1% growth across Europe.

"Green finance" has risen up Chinese policy agenda. In 2007, the China Banking Regulatory Commission established its Green Credit Guidelines as an innovative attempt to raise awareness and action on the environment.

"China has made a forceful commitment to achieving a greener economy," said Mark Halle, IISD's Director of strategy and co-author of the report. "In terms of innovative policies, China is often ahead of the pack."

However, as in many countries, obstacles still remain to a nationwide adoption of green finance in China, such as inconsistent policies, higher upfront costs and slower returns for green development projects, and divergent interests between central and local governments, as well as between government and market institutions.

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## Growing threats of organized crime



▲ *Black rhinos are critically endangered by poaching*

Once an emerging threat, wildlife and forest crime today has transformed into one of the largest transnational organized criminal activities, alongside drug trafficking, arms, and trafficking in human beings. Beyond immediate environmental impacts, the illegal trade in natural resources is depriving developing economies of billions of dollars in lost revenues.

United Nations Secretary General Ban Ki-moon highlighted in his statement on the day that: “Illegal wildlife trade undermines the rule of law and threatens national security; it degrades ecosystems and is a major obstacle to the efforts of rural communities and indigenous peoples striving to sustainably manage their natural resources. Combatting this crime is not only essential for conservation efforts and sustainable development, it will contribute to achieving peace and security in troubled regions where conflicts are fuelled by these illegal activities.”

The number of elephants killed in Africa annually is in the range of

20,000 - 25,000/year out of a population of 420,000 - 650,000. According to recent data from the Proceedings of the National Academy of Sciences, as many as 100,000 were killed in a 3-year period of 2010 - 2012. For forest elephants, the population declined by an estimated 62% during 2002 - 2011. Poached African ivory may represent an end-user street value in Asia of US\$ 165 - US\$ 188 million of raw ivory, in addition to ivory from Asian sources.

According to the recent reports by CITES, overall elephant poaching rates remained virtually unchanged in 2014 compared to 2013, and still exceed natural elephant population growth rates, meaning a continued decline in elephant numbers overall is likely. In 2014 alone, 1,215 rhinos were poached in South Africa, translating to 1 rhino killed every 8 hours. Approximately 94% of rhino poaching takes place in South Africa, which has the largest remaining populations. The involvement of organized syndicates has seen poaching rise from less

than 20 (in 2007) to over 1,000 in South Africa (in 2013), and rhino horn poached in 2014 is valued at an estimated US\$ 63 to US\$ 192 million.

The illicit traffic in live great apes is an increasingly serious threat to chimpanzees, gorillas, and bonobos in Africa and orangutans in Asia, with seizures averaging 1.3/week since 2014. Many more great apes die during capture and captivity than ever enter the illicit traffic; it is estimated that a minimum of 220 chimpanzees, 106 orangutans, 33 bonobos, and 15 gorillas have been lost from the wild over the last 14 months, reported The Great Apes Survival Partnership (GRASP)

The Spix's macaw is also one of the most endangered species on the planet with only 80 Spix's macaws in the world, mainly live in Spain, German and Qatar. An other endangered animal is Pangolins, known as 'scaly anteaters' among the world's most trafficked mammals, with over 1 million individuals taken from the wild in the past decade.





## Africa: Wildlife crime threat to tourism development

The illegal trade in precious timber such as rosewood is lucrative as well, well organized, transnational and involves corruption. Substantial volumes of CITES-listed rosewood are smuggled from Madagascar, Southeast Asia and Central America. Between 2011 - 2014, more than 4,800 tonnes of illegal Rosewood that originated from Madagascar were seized by authorities in various countries in Eastern Africa and Asia. In December 2014, Hong Kong Customs made a seizure of 92 tonnes of non-declared “Honduras rosewood” arriving from Guatemala via Mexico. Illegal trade in “Siamese Rosewood” from Southeast Asia has escalated in recent years, too.

To solve the problem, The United Nations Development Programme launching new initiatives to halt the illegal trade in wildlife in Asia and Africa, tackling wildlife crime by focusing on law enforcement, regulations, and engaging the private sector and strengthening collaboration between governments within and across the two regions.

In mid-2014, United Nations Office on Drugs and Crime also launched a “Global Programme for Combating Wildlife and Forest Crime” to build government capacity in preventing and combating these crimes at regional, national and local levels, and to raise awareness to reduce demand for wild fauna and flora. The Global Programme is working with the wildlife law enforcement community to ensure that wildlife crime, illegal logging, and related crimes are treated as serious transnational organized crimes.

HT (UNEP Source)



According to new The United Nations World Tourism Organization (UNWTO) research released on the occasion of World Wildlife Day, wildlife watching tourism is one of the most important tourism segments in Africa, represents 80% of the total annual sales of the trips to Africa, with safari as the most popular product.

UN Secretary General, Ban Ki-moon said “Illegal wildlife trade undermines the rule of law and threatens national security; it degrades ecosystems and is a major obstacle to the efforts of rural communities and indigenous people striving to sustainably manage their natural resources.”

However, poaching and illicit trade in wildlife pose a serious threat to not only the ecosystems, but also the socio-economic development. The loss of biodiversity is directly causing the loss of development opportunities in the African tourism sector, which provides livelihoods for millions of people.

In order to tackle unprecedented levels of poaching and strengthen the role of tourism against wildlife crime, UNWTO is spearheading efforts to increase knowledge on the economic value of wildlife watching in Africa. *Towards Measuring the Economic Value of Wildlife Watching Tourism in Africa* builds on a survey of 48 African tourism and conservation authorities from 31

countries, as well as 145 international and African-based tour operators, provides a first overview of this segment, its economic impact and the current involvement of tourism in anti-poaching measures. The research also brings further insights into the economic significance of wildlife watching tourism. Around 50% of the participating tour operators are funding anti-poaching initiatives and engaging in nature conservation projects, however only a few are so far proactively informing and engaging their customers on the issue. In addition, there are a number of actions for national tourism authorities recommended for national tourism authorities, including increased involvement in anti-poaching initiatives, systematic integration and evaluation of available data, and capacity building for a more consistent monitoring of protected areas visitors and receipts.

“Given its economic importance, the tourism sector should play an important role in raising awareness among both policy makers and tourists on the devastating impacts of wildlife crime, and help finance anti-poaching initiatives. UNWTO remains deeply committed to mobilizing the international tourism community on this critical issue, which requires our immediate action”, said UNWTO Secretary General, Taleb Rifai.

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# Five critically endangered animals dying out in the wild

As of 2014, there are 2,464 animals and 2,104 plants that have been labelled “critically endangered”; therefore face a high risk of extinction in the wild. The figures have more than doubled since 1998, when the levels were 854 and 909, respectively.

United Nations Secretary General Ban Ki-moon said “Illegal trade in wildlife has become a sophisticated transnational form of crime, comparable to other pernicious examples, such as trafficking of drugs, humans, counterfeit items and oil. It is driven by rising demand, and often facilitated by corruption and weak governance. There is strong evidence of the increased involvement of organised crime networks and non-State armed groups. Getting serious about wildlife crime means enrolling the support of all sections of society involved in the production and consumption of wildlife products widely used as medicines, food, building materials, furniture, cosmetics, clothing and accessories”.

Five of the most critically endangered animals around the world are pointed out in the following.

## Amur leopard

Amur leopard known as the Far Eastern Leopard is the world’s rarest cat with the population of around 57 in Russia and 12 in adjacent areas of China because they are threatened by poaching, encroaching civilisation, new roads and the exploitation of forests.



▲ Amur leopards are critically endangered by poaching, deforestation and encroaching civilisation

In the Russian Far East, Amur leopards have adapted to life in the temperate forests making the northern-most parts of the species’ range. Their instincts are solitary, strong and nimble, with the reported leap-

ing ability of more than 19ft horizontally and 10ft vertically. According to wildlife experts, some male Amur leopards stay with females after mating and even help rear cubs.



## Hawksbill turtle

The Hawksbill is a critically endangered sea turtle found in the tropical reefs of the Indian, Pacific and Atlantic Oceans. The turtles have a distinctive pattern of overlapping scales on their shells making them highly valuable and commonly sold as “tortoiseshell” in markets.

Hawkbills use their narrow,

pointed beaks to pick sponges as a main food from a reef, as well as jellyfish and sea anemones. The ancient creatures are 100 million years old and a fundamental link in marine ecosystems, to help maintain the health of coral reefs and sea grass beds.

A Hawksbill sea turtle is swimming in Lady Elliot Island, Australia



### Cross river gorilla

It is estimated that there are only around 200 - 300 of these gorillas left in the wild, scattered in around 11 groups across the forests and rainforests of Cameroon and Nigeria.

The subspecies is aesthetically similar to the more numerous western lowland gorilla but vary in terms of skull structure. Cross River gorillas live in a region with a high population of humans encroaching on their territory by deforestation for agricultural activities. Poaching also occurs in forests, with devastating consequences for the animals.



### Javan rhino

There are 35 Javan rhinos surviving in Ujung Kulon NP in Java, Indonesia. The last Javan rhino in Viet Nam was poached in 2010. Once the most widespread of Asian rhinoceroses, the Sunda rhino, ranged from the islands of Java and Sumatra into India and China, but populations were destroyed by poaching – primarily for their horns highly valued in traditional Chinese medicines.

As European presented increasingly in their range, accompanied with trophy hunting also posing a threat to the animals, as habitat loss as a result of the Viet Nam war. The remaining Javan rhinos live in a nationally protected area, however, they are still at risk from poachers, disease and loss of genetic diversity, which leads to inbreeding depression.

### Black rhino

There are just 5,055 black rhinos left in the wild in Kenya, Namibia, South Africa, Swaziland, Tanzania, Zimbabwe, Zambia, Botswana and Malawi. During the 19<sup>th</sup> century, as European influence over land use and trade strengthened, the black rhino was hunted relentlessly.

The populations now much

smaller than those of 65,000 individuals left by 1970 due to the continuance of poaching. The demand of rhino horn in Chinese medicines led to a 96% decline in black rhino numbers between 1970 and 1991. Black rhinos are solitary animals in the wild, known for their shy yet territorially aggressive behaviour in comparison to African white rhinos.

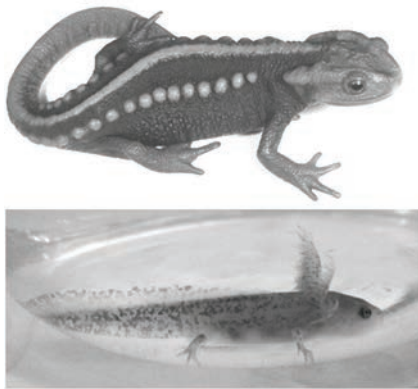
HD (CMS Source)



▲ A baby black rhino stays close to her mother at the Metrozoo in Miami



## New amphibian species in Viet Nam



The new amphibian species was found in Viet Nam by the scientists from Vietnam National Museum of Nature, Ha Noi Education University, Viet Nam's Institute of Ecology and Biological Resources; Univer-

sity of Cologne (German), and Kyoto University (Japan). It is distributed in Dien Bien and Son La; Chiang Rai (Thailand) and is also expected in Mianma (Laos). Its scientifically name is *Tylototriton anguliceps* Le, Nguyen, Nishikawa, Nguyen, Pham, Matsui, Bernardes & Nguyen, 2015.

The male of the new species is 61 - 63 mm long and the female is between 65 - 74 mm, with large nodules along both dorsolateral ridges, rough skin with small nodules, long and small legs, and thin tail. Its head, limbs, dorsal ridges, large bumps along dorsolateral ridges, and tail are orange; the ventral surface is brown or black-brown; the rest of the body is black.

**K**on Ka Kinh National Park (NP) is located in the northeast of Gia Lai province, with the total area of 42,057.3 ha, with 33,565 ha of natural forests, mainly primary forest. The NP has three functional zones: strict protection zone (17,137.5 ha), ecological restoration zone (23,990 ha), administrative and service zone (929.8 ha). Kon Ka Kinh is also known as "the highest mountain peak" with 1,748 m higher than the sea level. This mountain peak is also known as the "roof of Gia Lai province".

In 1986, Kon Ka Kinh NP was included in the list of special-use forests to "conserve high mountain subtropical forests of gymnosperm species." In 1999, the Forest Inventory and Planning Institute (FIPI) in conjunction with the BirdLife International developed the investment project to establish the Kon Ka Kinh Nature Reserve and this project was approved by the Ministry of Agriculture and Rural Development and Gia Lai province. In 2002, the Prime Minister issued Decision No. 167/2002/QĐ-TTg to convert it to be the Kon Ka Kinh NP. In the ASEAN Environment Ministers Meeting held in Yangon (Myanmar) on 18 December 2003, Kon Ka Kinh NP was recognized as an ASEAN Heritage Park.

### Natural ecosystems diversity and ecotourism development potentials

According to the Forest Inventory and Planning Institute, there are 1,022 species recorded, belonging to 568

## New plant species in Phong Nha-Ke Bang National Park

A new indigenous flora species has been found in the Phong Nha-Ke Bang NP of the central Quang Binh province, named *Bung buc Phong Nha*, with the scientific name *Mallotus phongnhaensis* Thin & Kim Thanh, first discovered by botanists Nguyen Thi Kim Thanh and Nguyen Nghia Thin from the Ha Noi-based Viet Nam Na-

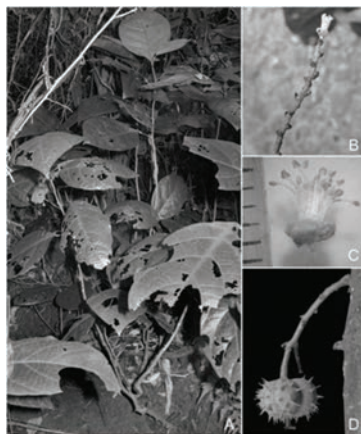
tional University in the park's Doc Tau area in mid-2006.

The plant belongs to section *Axenfeldia* and genus *Mallotus*, a genus of the spurge family Euphorbiaceae with several notable features, including its up to 1 m high shrubby habit, 6 to 12 sub-marginal extra-floral nectaries per side and few flowers with

Deputy Director of the management board Dinh Huy Tri said that the finding had not only scientific value, but also contributed to the rich diversity of the park.

The Phong Nha-Ke Bang NP (85,754 ha) was recognized as a World Natural Heritage Site on geological and geomorphological criteria by UNESCO in 2003.

The park is among the 238 most important ecological zones in the world, with a large number of fauna and flora species exist within the property such as 849 recorded vertebrate species, including a number of indigenous and endangered species like tigers, Asiatic black bears, Asian elephants and giant muntjacs, as well as Asian wild dogs and the recently discovered Sao la deer.



The imagine of *Bung buc Phong Nha*

VEM

# Conservation and Sustainable Development of Kon Ka Kinh - ASEAN Heritage Park

Nguyen Thi Phuong

Ministry of Natural Resources and Environment



▲ *Hoàng đàn giả* (*Dacrydium elatum*), *kim giao* (*Nageia fleuryi*) are rare and precious flora species of the Kon Ka Kinh NP

genera and 158 vascular plant systems. Of which, angiosperm species dominate with 928 species, followed by 80 species of cryptogams, 14 gymnosperm species. The combination of these species forms major forest vegetation types including evergreen forests, low mountain moist subtropical rainforest and mixed broadleaf and conifer closed forests of 2,000, consisting of a lot of *pơ mu* (*Fokienia*); this forest type is only found in Kon Ka Kinh NP. Long and interweaved vines in the forest are natural bridges between forest canopies to allow small animals to move and inhabit, are favourable conditions to create the biodiversity of the forest. Interspersed with ancient trees of hundreds of years old with 10 m height pointing to the sky are green vegetation, flowers of all shapes and colours and the colours often change

depending on the altitude and the light density where they inhabit.

Due to diverse topography and climate and some other factors forming the forest, Kon Ka Kinh NP has a very diverse vegetation, a meeting point of different flora types: vegetation type belonging to the North of Viet Nam including species in the family of Fabaceae, Moraceae, Annonaceae, Fagaceae, Euphorbiaceae, Magnoliaceae...; vegetation type belonging to Yunnan - Guizhou and Himalaya mountain including conifer species of the Gymnospermae such as: *thông nàng* (*Dacrycarpus imbricatus*), *hoàng đàn giả* (*Dacrydium elatum*), *kim giao* (*Nageia fleuryi*), *pơ mu* (*Fokienia*)...; vegetation type belonging Malaysia - Indonesia including species of the family of Dipterocarpaceae such as *chò chai* (*Hopea recopei*), *chò đen*

(*Parashorea stellata*), *chò chỉ* (*Parashorea chinensis*), *cầm* (*Shorea siamensis*); vegetation type belonging the India - Myanmar including species of Combretaceae such as *bằng lăng ổi* (*Lagerstroemia calyculata* Kurz)... In addition, there are some other endemic species such as *bộ nẹt trung bộ* (*Central Alchornea rugosa*), *du moóc* (*Calamus poilanei*), *hoa khế* (*Craibiodendron scleranthum*), *hoàng thảo vạch đỏ* (*Dendrobium ochraceum*), *gỗ đỏ* (*Afzelia xylocarpa*), *lọng hiệp* (*Bulbophyllum hiepui* Aver), *trắc* (*Dalbergia Vietnamensis*), *thông Đà Lạt* (*Pinus dalatensis*), *xoay* (*Dialium cochinchinensis*), *song bột* (*Calamus poilanei*) and some other rare and precious species listed in the Viet Nam Red Data Book and the IUCN Red List.

In addition to the diverse vegetation, Kon Ka Kinh NP also has a typical fauna system with 351 species, including 47 rare and precious species, listed in the Red Data Book such as: yellow cheeked gibbon, grey shanked douc langur, tiger, Truong Son muntjac, and giant muntjac. In addition, the NP is located in the Kon Tum central highland of typical bird area with 160 bird species, 51 reptiles, 209 butterfly species, of which there are 7 endemic bird species such as *khướu đầu đen* (*Garrulax yersini*), *khướu mỏ dài* (*Jabouilleia danjoui*), *khướu đầu xám* (*Garrulax vassali* Grant), *trò cây mỏ vàng* (*Sitta solangiae*), *gà lôi vằn* (*Lophura nycthemera annamensis*) và *thầy chùa đít đỏ* (*Megalaima lagrand-*





▲ *Eco-tourism development brings benefits to communities living around the Kon Ka Kinh NP*

ieri) và khướu Kon Ka Kinh (*Garulax konkakinhensis*) - this rare bird is considered as the symbol of the NP and was discovered for the first time at the NP 30 years ago in Asia. Therefore, this bird is named after the Park. Particularly, the NP is the conservation area of endemic amphibian species: thần lằn buôn lười (*Sphenomorphus buonloicus*), thần lằn đuôi đỏ (*Scincella rufoaudata*), chàng Sa Pa (*Babina chapaensis*), ếch gai sần (*Quasipaa verrucospinosa*)...

As beloved by the natural and climatic conditions, in recent years, the NP has developed many eco-tourism models, contributing to increase the incomes and to improve the living conditions of local people. Attractive ecotourism activities can be: conquering the peak of Kon Ka Kinh mountain of 1,748 m, seeing the roof of Pleiku central highland with magnificent mountain landscapes and big waterfalls; visiting primary forests with diverse flora species in terms of shape and colour, particularly thousand-year old trees; observing many rare and precious and endemic fauna species

such as grey shanked douc langur, gibbon, muntjac, flying squirrel... In addition, tourists can participate in festivals to understand the cultural characteristics of the ethnic minorities of the Central Highlands. Particularly cultural features of Ba Na group are still maintained in early ages and gong festivals echo the mountains....

#### **Proposal of solutions for conservation and sustainable development**

In 2011 - 2020, Gia Lai proposes different sustainable development objectives, to develop the Kon Ka Kinh NP to become the database of natural resources and conserve surrounding areas to become a bigger natural forest area, protect, maintain and develop wild fauna. To implement this objective, the province has implemented some solutions:

Ecotourism in harmony with environmental protection, selecting appropriate tourism types and models, having specific plans in tourism development strategy; combining activities of the Rescue Centre and animal development both to rescue wild fauna and become the sight-

seeing area for visitors to the NP; enhancing the quality and creating special features of tourism products, cultural festivals....

In addition, the province assigns the NP Management Board to develop the "co-management, community-based management mechanism" on the basis of capacity building for staff working on wild fauna and flora, natural resources and environment, creating stable jobs, improving livelihoods for local people, reducing pressures and negative impacts on the forest resources and biodiversity; collaborating with scientific institutes, universities and international organizations to develop projects on biodiversity studies, particularly effective solutions to protect and conserve rare and precious fauna and birds.

Enhance Investment increase on infrastructure, facilities and equipment for research and management of the NP; prevent illegal hunting affecting the sustainability and integrity of the ecosystems and the biodiversity of the NP; collaborate with provincial agencies and departments, national professional agencies and organizations and international organisations in scientific study, sustainable management of forest ecosystems, and development of communities in the buffer zone; collaborate with the Vietnam National Administration of Tourism to develop the eco-tourism development strategy in cooperation with other tourism sites in the province.

Promote propaganda on environmental protection of the forests to the youth, particularly students in the buffer communes of the NP; integrate forest protection into relevant development plans master plans; enhance international cooperation and effectively use of international support for environmental protection■



# Conservation, development and sustainable use of natural resources of Con Co marine and island protected area

*Con Co island marine protected area (Quang Tri province) was established in 2009 with the area of 4,532 ha, including 3 functional areas: strict protection zone (534 ha); ecological restoration zone (1,392 ha) and development zone (2,376 ha). With its importance and critical role in marine economic development strategy, Con Co marine protected area (MPA) is assessed to be one marine area in Viet Nam that has high biodiversity and diverse coral reef ecosystem and rare and precious fauna. In recent years, marine economic development has contributed to increase the income for fishermen.*

**Cao Van Khien**

*Viet Nam Marine and Island Project Management Board*

## **Marine biodiversity values**

According to Con Co island MPA, it is estimated that there are 57 seagrass and algae species, 67 benthic fauna species, 19 crustacean species, 224 offshore fish species, 87 coral reef fishes, 164 phytoplankton species, 68 zooplankton species/groups in marine and island areas. The total marine resource reserves in Con Co island area are estimated to be around 40,000 tonnes, including many rare and precious marine species of high economic values such as: marine turtle, ornate spiny lobster, ghẹ (*Portunus pelagicus*), sea cucumber, vẹm xanh (Asian green mussel), điệp (noble scallop), mackerel, grouper, white pomfret, cá hải quỳ (anemonefish), butterfly fish, red lionfish, crab, squid, trai tai tượng (giant clam), trai ngọc nữ (pearl oyster), abalone, ốc đụn (top shell), ốc gai (conch snail), ốc

vú nàng (*Cellana nigrolineata*), starfish, sea urchin... In particular, the endemic stone crab that inhabits terrestrial and aquatic environment is in the list of strictly protective fauna species due to the threat of extinction. Con Co Island is also famous for phong ba tree (*Heliotropium foertherianum*), bàng vuông tree (*Barringtonia asiatica*) and some other endemic species, etc.

In addition, the coral reef in Con Co is assessed to have diverse cover and species variety and it is relatively intact. As founded on the basalt stone, the coral reef has developed firmly and strongly. According to statistics, currently, there are 113 species, 42 genera and 15 families of corals, of which, there are many rare and precious corals such as black coral, red coral, san hô sừng (*Junceella gemmacea*), san hô cành (stony coral),

san hô tấm (flat plate coral)... The red coral in Con Co is the first species discovered in Viet Nam. The red coral is linked with famous legend in Con Co, becomes a spiritual "treasure" as well as a rare and precious produce for divers to see. The coral reef plays an important role to marine resources as well as in affecting biodiversity of the MPA. Therefore, the protection of the coral reef is very important to the sustainable development. Currently, the overexploitation together with environmental pollution has caused negative impacts on the coral reef. Road expansion, embankment, ship renovation, infrastructure or random rubbish disposal have also affected the coral reef.

## **Conservation and sustainable development solutions**

Being aware of the importance of conservation and sustainable

# Con Co's Biodiversity Values



use of natural resources of the MPA, in recent years, Quang Tri Provincial People's Committee has instructed the MPA Management Board to implement solutions for marine resources protection such as establishing the zoning floats, protection of the coral reefs; co-operating with the Fishery Capture and Resources Protection Sub-department and the border station in the island to patrol and monitor the protection of ecosystems and natural resources; enhancing legal enforcement, strictly handling violations on fishery capture; forming voluntary groups consisting of local people who live in the island to implement the propaganda and to participate in the patrolling and monitoring and to timely identify bad behaviours causing negative impacts on Con Co marine and island areas; preventing manufacturing and capture activities that affect the sustainability and the

integrity of the ecosystem and biodiversity of the MPA.

At the same time, conduct the investigation, study and monitor the ecosystems and marine natural resources; implement scientific studies on testing of coral breeding, rehabilitation of marine resources; establish the natural resources and environment monitoring program, periodically monitor the coral reefs and sea algae to monitor yearly changes; promote to establish the Center for marine turtle rescue in the MPA, etc.

Collaborate with the Viet Nam National Administration of Tourism to develop the ecotourism development strategy in cooperation with different tourism sites in the province. To motivate people to apply environmentally friendly livelihood models such as stone crab eco-labelling model, say "no" to nylon bags, at-source waste sep-

aration, home-stay, etc.

In addition, to promote the propaganda, education, awareness raising of local people in environmental protection, conservation and development of marine resources; organize training courses, publication, posters, leaflets and promote campaigns of cleaning the beach, contest on understanding of marine biodiversity; integrate education program into behaviour and proper response to the environment and marine ecosystem.

Pay attention to disaster response and climate change, including planning and implementation of climate change response program, forecast the impact of climate change on marine biodiversity of the Con Co Island■