



ISSN:2615 - 9600
English Edition II -

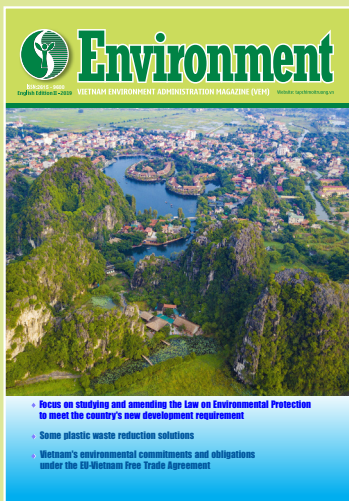
Environment

VIETNAM ENVIRONMENT ADMINISTRATION MAGAZINE (VEM)

Website: tapchimoitruong.vn



- ◆ **Focus on studying and amending the Law on Environmental Protection to meet the country's new development requirement**
- ◆ **Some plastic waste reduction solutions**
- ◆ **Vietnam's environmental commitments and obligations under the EU-Vietnam Free Trade Agreement**



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PERSON IN CHARGE OF ENVIRONMENT MAGAZINE

Nguyễn Văn Thùy
Tel: (024) 61281438

OFFICE

• Hanoi:

Floor 7, lot E2, Duong Dinh Nghe Str.,
Cau Giay Dist. Hanoi

Managing: (024) 66569135

Editorial: (024) 61281446

Fax: (024) 39412053

Email: tapchimoitruongtcm@vea.gov.vn

<http://www.tapchimoitruong.vn>

• Ho Chi Minh City:

A 907, 9th floor - MONRE's office complex,
No. 200 - Ly Chinh Thang Street,
9 ward, 3 district, Ho Chi Minh city

Tel: (028) 66814471; Fax: (028) 62676875

PUBLICATION PERMIT

Nº 1347/GP-BTTTT - Date 23/8/2011

Photo on the cover page:

Ninh Binh Landscape

Photo by: VNA

Processed & printed by:

Đà Sắc Printed Co., Ltd

English edition II/2019

Price: 30.000VND

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Việt Nam to propose initiatives at the G20 Summit

Prime Minister (PM) Nguyễn Xuân Phúc led a high-ranking Vietnamese delegation in a visit to Japan to attend the 14th G20 Summit. The 14th G20 Summit was held in Osaka City on June 28 - 29, 2019, with the participation of heads of State and leaders of 20 leading developed and emerging economies in the world. The visit, made at the invitation of Japanese PM Shinzo Abe, was expected to open new cooperation opportunities between the two countries and promote bilateral relations.

In the days of the Summit, delegates discussed issues related to different themes including global economy; trade and investment; innovation; environment and energy; employment; women's empowerment; sustainable development and health. In particular, the theme of environment and energy focused on 3 contents, including climate change, energy and environment (specifically, marine plastic waste).

At the Summit, PM Nguyễn Xuân Phúc had some important speeches on key issues of the Summit. The issues to be put on the table consist of the reform of the World Trade Organization (WTO), digital economy and environment, especially marine environment. The PM proposed some notable initiatives at the G20 Summit, receiving high commendation from the international community. Accordingly, the PM proposed an initiative to set up a global network on preventing plastic waste at a discussion on climate and environment. The PM emphasized impacts of climate change, environmental pollution and energy insecurity on mankind, while urging countries to mobilize and allocate effectively resources and fully carry out commitments in the Paris Agreement on climate.

The PM also called for increased support from the international community to nations that are vulnerable to climate change, including the Mekong Delta region of Việt Nam, with a view to coping with environmental changes. Plastic waste discharged into the sea seriously degrades the marine ecosystem, the PM said while asking countries to join hands in building institutions and regulations on sea and oceans in order to control, reduce and prevent marine plastic waste.



▲ PM Nguyễn Xuân Phúc joins activities at 14th G20 Summit

In addition, PM Nguyễn Xuân Phúc especially expresses interest in the area of innovation and the digital economy. The PM proposed several initiatives, including building up a global network connecting innovation centres including centres with development of Artificial Intelligence, technological renovation, as well as data administration via digital technology. According to the PM, awareness for the digital age is a key component for the future growth of Việt Nam. The digital economy will be a new driving force for the country to achieve the goal of rapid and sustainable growth.

Aside from participating in the Summit's sessions, PM Nguyễn Xuân Phúc had bilateral meetings with leaders of G20 member economies.

On June 28 - 29, the Minister of Natural Resources and Environment Trần Hồng Hà joined the delegation of PM Nguyễn Xuân Phúc to attend the G20 Summit in Osaka. Just before the G20 Summit, the Ministerial Conference on the transformation of energy and the global environment for sustainable growth (June 15 - 16, 2019, Karuizawa) exchanged and agreed some related content, including: Joint Statement of the Ministerial Conference; G20 Marine Plastic Litter Implementation Framework Initiative.

The Ministry of Natural Resources and Environment has proposed some contents in Vietnam's contribution for discussions at G20, specifically:

In terms of climate change, it is necessary to have breakthrough solutions on a global scale, especially in mobilizing and effectively allocating resources to fully implement climate commitments. Countries need close cooperation and the G20 needs to promote its leading role in implementing its commitments, providing practical support to vulnerable countries to climate change.

In terms of energy, the transformation of the energy model from mainly dependent on fossil energy to renewable energy sources is of great significance globally and in each country, in order to both protect the environment and reduce mild climate



This is the fourth time Việt Nam has participated in the G20 Summit as an honorary invitee of the host country. In the previous conferences, Việt Nam was actively engaged in and made responsible contributions, proposing and promoting some issues of concern among developing nations, particularly ASEAN member states.

Many ideas raised by Việt Nam were recognized by G20 in joint statements, including upholding international cooperation in dealing with global economic issues, inclusive and sustainable development, agriculture and water security, and employment in the digital economy. These efforts have worked to improve Việt Nam's position as a reliable and responsible partner of the international community.

change, both ensuring sustainable growth. Việt Nam has issued and is continuing to build important policies, enabling businesses, households to invest strongly and widely to develop solar, wind energy, energy sources.

Regarding ocean plastic waste, Việt Nam understands the importance and urgency in solving the problem of plastic waste in the country and joining hands with the international community. Việt Nam is currently developing a National Action Plan on the management of ocean plastic waste, launched the Anti-plastic Waste Movement from 2018. In international cooperation, Việt Nam proactively proposed and participated in a number of regional and global initiatives on ocean plastic waste, such as the ASEAN Action Framework on marine waste, in collaboration with the World Economic Forum, taking part in the Global Action Cooperation Initiative on Plastics. Việt Nam supports G20 to develop G20 Action Framework on ocean plastic waste and acclaim Japan to establish a Regional Knowledge Center on plastic waste.

In the two days of the Summit, Minister Trần Hồng Hà attended the plenary session on the topic of climate change, environment, energy and the closing session; attended PM Nguyễn Xuân Phúc's meetings with Canadian Prime Minister Justin Trudeau, European Commission President Jean-Claude Juncker, Chile's President Sebastian Piñera...■

PHƯƠNG TÂM

Joint efforts needed to fight plastic wastes



▲ Prime Minister Nguyễn Xuân Phúc and children draw a painting on environmental protection

The Ministry of Natural Resources and Environment (MONRE), on June 9, 2019 launched the National Campaign on anti-plastic waste in collaboration with the Hanoi People's Committee and the Ho Chi Minh Communist Youth Union Central Committee (CYUCC).

The launching ceremony was attended by the Prime Minister (PM) Nguyễn Xuân Phúc; Deputy Prime Minister Trịnh Đình Dũng; President of the Vietnam Fatherland Front Trần Thanh Mẫn; Minister of Natural Resources and Environment Trần Hồng Hà; Chairman of Hanoi People's Committee Nguyễn Đức Chung; the First Secretary of the CYUCC; leaders of other ministries, sectors and central agencies; leaders of provincial authorities, political-social organizations, corporates and international organizations and a number of students and people.

Plastic waste has in recent years become a problem that requires urgent actions from the global community. Each year, the volume of disposed plastic wastes is enough to cover an area that fourfolds the Earth's surface. Of the total, 13 million tons of plastic wastes are thrown away into the ocean. Plastic wastes are the major factor that hourly and daily damages the ecosystem, environment, people's health and sustainable development of all nations.

In Việt Nam, the volume of daily-used plastic and nylon bags and packages is increasing and threatens the quality of land, water, air and ocean. Việt Nam is one of the four Asian countries with the highest volumes of plastic waste disposal - after China, Indonesia and the Philippines. It is estimated that a Vietnamese each year consumes average 30 - 40kg of plastic products. In Hà Nội and Hồ Chí Minh City - the two largest cities of the country - about 80 tons of plastic products are discharged each day. Meanwhile, the percentage of plastic bags and packages, which are not recycled and must be buried, is 5 - 8 percent of the total, equal to 2,5 million tons each year.

In recent years, the Party and the Government have issued many policies to strengthen the quality of plastic waste treat-



ment and management. The Government in April 2015 issued Decree No. 38/2015/ND-CP regulating the management of wastes and scraps, under which individuals, households, organizations and companies in Việt Nam are required to gather recyclable plastic wastes from living and industrial solid wastes. The PM in May 2018 approved the amendment of the national strategy on solid waste treatment and management, which lasts to 2050. Under the national strategy, ministries and sectors are asked to complete legal policies and preferential mechanisms to encourage people, organizations and companies to reduce the amount of solid wastes and try to recycle them. The Ministries and sectors are also requested to develop a plan that increases the import tax on plastic scraps, raises the export tax on bead outputs made from plastic scraps and environmentally-harmful plastic products. Besides, Việt Nam has been working with the international community to fight plastic pollution and its consequences.

To show the commitment to the determination of the PM and the Government as well as the United Nations' campaign on fighting plastic and nylon pollution, the MONRE in 2018 launched its "Anti-plastic waste programme" that draws the participation of other ministries, sectors, political bodies, international organizations, business associations, markets and shopping centers. At the program launching ceremony, the PM Nguyễn Xuân Phúc called on the political system and society to act and fight plastic pollution. The PM asked secretariats of ministries and sectors, secretaries of provincial and city people's committees, central cities, the Vietnam Fatherland Front, organizations, associations and communities to organize anti-plastic activities. Each ministry and sector must assist the Government to deliver appropriate policies to reduce the use of plastic outputs; business, political and social associations and communities, markets, supermarkets, restaurants and hotels should form an alliance that says "no" to single-use plastics like nylon bag and encourage the collection, recycling and re-use of environmentally-friendly products.

The PM also designated the MONRE to work with other ministries and Government agencies to review and complete the legal framework so that the single-use plas-

tics are reduced and advanced technologies are applied to recycle, re-use plastic wastes. Government agencies must also re-allocate small-scale, individual plastic recycling facilities into industrial parks; they have to work to end the import and production of disposable nylon bags. Research facilities, scientists, specialists, experts and inventors were required to study new methods, solutions and technologies - which are harmless to the environment; develop new products to replace single-use plastics; participate in activities to cut the use and discharge of solid and plastic wastes, encourage the collection and re-use of recyclable wastes; contribute to the development of Việt Nam's circular economy.

The PM also called for each person to start changing, with their smallest activities, to thrive to a no-plastic future. Media agencies should keep raising public awareness about the campaign and honor examples (people, organizations, companies) that do well to help the society achieve that future. He believed that, with the determination of the political system and efforts of Government agencies, social organizations, business community and the people, Việt Nam would improve its achievements, fix existing problems and cut the use of plastics, driving the nation to a no-plastics future, improving the environment and preserving the nature of the Earth.

On behalf of all provinces and cities, Chairman of Hanoi People's Committee Nguyễn Đức Chung said the capital City would organize a signing ceremony on plastic waste prevention with all manufacturers and producers. By December 31, 2020, 100 percent of all shopping centers and supermarkets in the city would have stopped using nylon bags in their operations. The City would also raise the public awareness about the negative impacts of made-from-plastic products and single-use nylon bags on the environment, ecosystem and people's health. It would develop and perfect the policy, which helps environmentally-friendly outputs be introduced, consumed and encourages the society and business community to join projects - in which recyclable plastics and environmentally-friendly bags and packages are produced. At the same time, the City would improve the facilitation for collecting and recycling plastic wastes, consider purchasing technologies to recycle plastic wastes and nylon bags and turn them into useful, environmentally-friendly outputs. The City authorities would carry out waste classification at the source and support companies switch from producing plastic, nylon bags to making paper, fabric bags.

The organizer of the Campaign launching ceremony on the same day also honored companies and organizations - that are members to the Anti-Plastic Waste Alliance of the Retail and Consumer Sectors and are considered "Ambassadors of Anti-Plastic Campaign" - for having done their best efforts in fighting plastic pollution.

After the campaign launching ceremony, PM Nguyễn Xuân Phúc and officials marched to demonstrate their will and call for the community to help fight plastic pollution, complete the group drawing with the children of the capital City and visited the exhibition and awards for the "Change Challenge" Pictorial Contest.■

GIA LINH



Prime Minister: Package Recycling Organization meets the needs of international community



▲ Company officers sign the joint agreement to form the Package Recycling Organization Vietnam with the presence of Government offices and international organizations

Nine leading companies in the consumer goods and packaging industries joined together to establish the Packaging Recycling Organization Vietnam (PRO Vietnam) in Hồ Chí Minh City on June 21, 2019 in response to the movement against plastic waste.

Highly appreciating the establishment of PRO Vietnam, Prime Minister (PM) Nguyễn Xuân Phúc said in a letter to the Coalition that its foundation matches the United Nations' 2018 campaign on freeing the world from plastic and nylon items as it tried to raise people's awareness to stop consuming single-use plastic products to reduce environmental protection and protect the health of the human being. Along with many other countries, Việt Nam has been enhanced its efforts to control the use of plastic products and call for its people to join hands to protect the environment and fight against plastic wastes.

The PM expected PRO Vietnam will side with the Vietnamese Government and people to prevent and minimize the disposal of plastic wastes by cutting the use of

single-use plastic items and using advanced technologies to collect and recycle packages at the best quality and safety. In addition, the PM asked the Ministries of Natural Resources and Environment; Industry and Trade, other Ministries, Government agencies and local authorities to provide the best working conditions for PRO Vietnam so that the Coalition can make best efforts to improve the environment and help the country achieve its sustainable development goals.

PRO Vietnam founding companies are TH Group, Coca-Cola Vietnam, Friesland Campina Vietnam, La Vie, Nestle, Nutifood, Suntory PepsiCo Vietnam, Tetra Pak and Universal Robina Corporation. The Coalition will help develop an ecosystem to collect and recycle packages in the country at an adequate level, increasing the rate of recycled items and cutting the volume of packages discharged to the environment. PRO Vietnam plans to strongly raise people's awareness about waste classification and recycling, strengthen the existing collection system while assisting treatment plants improve their recycling programs and produce recyclable materials. The organization will also work with the Government in the "Recycle" aspect of 3R (reduce, re-use and recycle) through private-public-partnership (PPP) projects. In addition to those activities, PRO Vietnam will work with universities to find the solutions that best suit with the Vietnam's environment ■

TRÀ MY



Ensuring the harmony, fairness and transparency in the amending and supplementing the contents of the Law on Environmental Protection and the Land Law

On June 12, 2019, the National Assembly's Committee on Science, Technology and Environment and Ministry of Natural Resources and Environment (MONRE) has cooperated with the People's Deputies Online Newspaper to organize the Workshop on consultation with the National Assembly (NA) delegates on some major orientations to be amended and supplemented in the Law on Environmental Protection (LEP) and the Land Law in Hà Nội. This is considered to be a large-scale Workshop on the consultation with the NA delegates, conducted in the first phase of the Law amendment process, demonstrating the close connection between drafting agencies and legislators.

In recent years, the LEP and the Land Law has brought into full play the effectiveness and efficiency in management, creating a quite complete and comprehensive legal framework for environmental protection. However, inadequacies and problems that arise in practice still need to be addressed. In the context of the country entering a new period that requires policy breakthroughs to create a new driving force for the sustainable development and the balance between economic growth with environmental protection, the amendment of the LEP and the Land Law poses urgent requirements.

At the Workshop opening speech, Minister of Natural Resources and Environment Trần Hồng Hà said that, the NA had voted to approve the Resolution on the Program for development of laws and ordinances in 2020 and adjust the Program for development of laws and ordinances in 2019. Accordingly, the Law amending and supplementing a number of articles of the LEP and the Land Law will be submitted by the Government to the NA for comments at the May 2020 Session and is expected to be passed at the October 2020 Session. These are two Laws projects of great significance for the country's socio-economic development in the new period. Therefore, the MONRE wishes to have the participation and support of the



▲ Minister of Natural Resources and Environment Trần Hồng Hà spoke at the Workshop

Committees as well as receive comments from the NA delegates from local practices in issues related to land and environmental management for the MONRE to focus on amending, perfecting and supplementing the two Laws in order to meet the socio-economic development as well as the people's aspirations.

These amendments and supplementations of the LEP are expected to focus on reviewing and perfecting 8 major policy groups including: Criteria for screening investment projects to enhance the proactive prevention, reduction and control of environmental pollution sources; Perfecting regulations on environmental impact assessment to promote the efficiency and effectiveness of environmental impact assessment tools, proactively preventing, minimizing and controlling pollution sources; Simplifying regulations on administrative procedures for production and business types, environmentally - friendly technologies or perfecting regulations on waste management and waste treatment technology to turn waste into resources and raw materials for production; Perfecting regulations on technical regulations and environmental standards; Regulating



▲ The Workshop overview



the State management responsibility and the assignment and decentralization to perform the State management responsibility on environmental protection; Perfecting economic tools and financial mechanisms to improve the efficiency and effectiveness of the State management on environmental protection in accordance with market mechanisms; promoting the environmental industry and developing a circular economy in Việt Nam; Perfecting the regulations on responding to climate change, meeting the country's economic development requirements, implementing international commitments on responding to climate change.

The draft Land Law focuses on 3 objectives: Strictly managing and improving use efficiency, promoting land resources for economic development; Removing bottlenecks and barriers on land policies, perfecting regulations on land use rights to promote development; Resolving and reducing complaints in the field of land. To address the above objectives, the MONRE plans to consider amending and supplementing a number of major policy groups such as: Land use planning and plans; Land economy and finance and promoting land resources; Land allocation, land lease, land use purpose change, etc...

At the Workshop closing remarks, the Chairman of the NA's Committee on Science, Technology and Environment Phan Xuân Dũng affirmed that the comments of the NA delegates at this Workshop showed the importance of the two projects on the LEP and the Land Law in people's life, as well as socioeconomic development. The NA will always accompany the Government in general as well as the MONRE in particular to improve the two Laws projects to meet the country's practical development requirements. ■

HỒNG NHỰ

Celebration Ceremony of the International Day for Biodiversity 2019: Our biodiversity, Our food, Our health



▲ Deputy Minister Võ Tuấn Nhân delivered the opening speech to celebrate the ceremony

On May 22, 2019, in Vân Long Nature Reserve, Vân Long (Gia Viễn District, Ninh Binh Province), the Ministry of Natural Resources and Environment (MONRE) cooperated with Ninh Binh Provincial People's Committee to hold a celebration ceremony and activities to respond to the International Day for Biodiversity (IDB) in 2019 with the theme of "Our biodiversity, Our food, Our health" and awarded the Ramsar Certificate of Việt Nam to Vân Long Wetland Nature Reserve (WNR). Attending the ceremony were the Deputy Minister of MONRE Võ Tuấn Nhân, the Vice Chairman of Ninh Binh Provincial People's Committee Phạm Quang Ngọc, the representatives of the departments, branches and numerous armed forces, students and people of Ninh Binh Province.

Speaking at the ceremony, Deputy Minister Võ Tuấn Nhân emphasized that the theme of this year's IDB aims to promote understanding of knowledge and strengthen communication on the relationship between food, nutrition and human health with biodiversity, contributing to the implementation of sustainable development goals, including mitigation of and adapting to climate change, restoring ecosystems, cleaning up water sources and poverty reduction. At the same time, he also honored the nature diversity and abundance provided to people as a foundation for human existence and development on Earth.

Việt Nam is a country blessed with the abundance and diversity of ecosystems, species and genetic resources. The survey results show that 10% of the world's mammal, bird and fish species are found in Việt Nam and more than 40% of endemic plant species are not found anywhere other than Việt Nam. As a country with high biodiversity, Việt Nam is also facing the risk of biodiversity degradation and a strong loss of ecological balance, which directly affects human living environment, threatening the Earth's sustainable development. Therefore, the biodiversity conservation needs a multi-stakeholder cooperation and strong participation of the whole society to be



able to achieve the objectives of the Convention on Biodiversity, as well as the objectives of the National Strategy on Biodiversity.

In response to the IDB 2019, Deputy Minister Võ Tuấn Nhân requested the ministries, branches and localities to promote communication activities to raise awareness for officials and communities, especially young people on the role of biodiversity in providing food and nutrition, ensuring human health and socio-economic development; To propagate the implementation of legal provisions on biodiversity conservation, focusing on the conservation and development of livestock and plant varieties; To launch local biodiversity conservation movements, to rationally and economically use natural resources, to implement green and environmentally - friendly consumption, not to trade and use endangered and rare animal, plant species, to give priority to protection; To implement models of biodiversity conservation and sustainable use in combination with hunger elimination, poverty alleviation and new rural construction, to carry out rearing and planting activities in combination with sustainable use of species, especially in agriculture, forestry, fishery, pharmaceutical and processing industries.

Also in the framework of the ceremony, Deputy Minister Võ Tuấn Nhân awarded the Ramsar Recognition Certificate to Vân Long WNR for Ninh Binh Province. Vân Long WNR was awarded a certificate of recognition by the Ramsar Secretariat as the Ramsar site No. 2360 of the world (the 9th Ramsar Site of Việt Nam) at the 13th Ramsar Convention Conference in Dubai City, the United Arab Emirates. This is an intact inland wetland remaining in the Red River Delta, including shallow rivers and lakes and rich submerged vegetation, bearing specific ecological characteristics, which creates a unique natural landscape for the Reserve. The area is surrounded by a very famous limestone system with a beautiful cave system and typical vegetation for limestone mountain ecosystem (karst), which is the main habitat of the Delacour langur (*Trachypithecus delacouri*), one of the primate species threatened of extinction at the global level and only living in Việt Nam. This area has two natural records of Việt Nam as “Việt Nam’s largest langur Reserve” and “the largest natural picture area in Việt Nam - the cat-scratching mountain picture”.



▲ Deputy Minister Võ Tuấn Nhân awarded the Ramsar Recognition Certificate to Vân Long WNR to the Vice Chairman of Ninh Binh Provincial People's Committee Phạm Quang Ngọc



▲ Numerous armed forces, students and people of Ninh Binh Province attended the ceremony

On this occasion, the leaders of Ninh Binh Province and Gia Viễn District have committed to continue to conserve, rationally extract and use the values of Vân Long WNR for it to live up as the 9th Ramsar Site of Việt Nam. At the same time, to call on every agency, organization, household and individual in the Province to participate in biodiversity conservation and environmental protection through practical actions for a sustainable socio-economic development.

Also in the framework of activities responding to the IDB, the Vietnam Environment Administration has cooperated with the Vietnam Buddhist Sangha, the Ninh Binh Province's Department of Natural Resources and Environment to organize a conference on the Vietnam Buddhist Sangha with biodiversity conservation.

At the conference, the delegates have exchanged and discussed contents such as analyzing and clarifying the current situation and challenges for nature and biodiversity conservation; assessing the achievements of the Vietnam Buddhist Sangha and the coordination with local authorities at all levels in the nature and biodiversity conservation in the past time; at the same time, proposing feasible solutions, good models and specific activities to enhance the cohesion and promote the role of the Vietnam Buddhist Sangha on the nature and biodiversity conservation, the environmental protection in the coming time.

NGUYỄN HẰNG



The Ministry of Natural Resources and Environment and the PRO Vietnam signed a Memorandum of Understanding for sharing responsibilities in promoting the circular economy

In the morning of September 11, 2019, in Hà Nội, the Ministry of Natural Resources and Environment (MONRE) and the Packaging Recycling Organization Vietnam (PRO Vietnam) signed a Memorandum of Understanding (MOU) to share goals, visions and responsibilities in promoting the circular economy in Việt Nam through activities of reducing, separating, collecting and recycling waste.

Attending the signing ceremony were Minister Trần Hồng Hà, Deputy Minister Võ Tuấn Nhân, leaders and experts of affiliated units on the side of the MONRE, Mr. Phạm Phú Ngọc Trai, the Chairman of PRO Vietnam and 12 members on the side of PRO Vietnam, in addition, the ceremony was attended by other ministries and branches; international organizations and non-governmental organizations involved.

Currently, the problem of marine waste and plastic pollution is becoming one of the biggest challenges that mankind is facing. One million plastic bottles of water are sold every minute around the world and up to five trillion disposable plastic bags are used worldwide each year. But half of the total produced plastic is designed to be used only once and then thrown away. Of the total plastic ever produced, only 9% of plastic waste is recycled, about 12% is incinerated, while the remaining amount, 79%, has accumulated in landfills or natural environment. Plastic waste is so common in the natural environment that scientists even think it may serve as a geological indicator of the Anthropocene era - the new geologic era where humans play a prominent role in changing the face of the Earth.

Plastic pollution causes enormous damage to the environment and the ecosystem. Plastic waste clogs the flow of rivers, destroys or degrades biodiversity. Many creatures die due to entanglement in the lost or abandoned fishing nets in the ocean or from eating plastic waste for food by mistake. Floating plastic fragments also provide



▲ Minister of Natural Resources and Environment Trần Hồng Hà speaks at the signing ceremony

"transportation" for creatures, which increases the risk of the exotic species to the ecosystem. Plastic additives can also have a negative effect on organisms. Plastic micro-fibers mixed with seawater have the ability to adsorb non-biodegradable organic pollutants available in seawater and marine sediments. These plastic micro-fibers following the food chain shall increase the risk of many diseases for higher-level organisms, including humans.

Given that situation, aware of the role and mission in solving the global plastic waste crisis, Việt Nam has committed to taking actions to reduce plastic waste to protect the marine and ocean ecological environment. In December 2017, Việt Nam officially joined the list of 127 countries through the UN Environment Assembly's Resolution on plastic and marine waste treatment. Prime Minister Nguyễn Xuân Phúc also called for global cooperation in solving plastic problems at sea at the G7 Summit in Canada in 2018. The MONRE has launched the "Anti-plastic waste" movement in response to the "Clean up the World 2018" campaign. On September 6, 2019, this movement was raised by the Prime Minister through the national launching ceremony of the "anti-plastic waste movement" in order to raise the general awareness of the whole society in saying no to plastic bags and disposable plastic products.

Responding to the call of the Government, administrative agencies, international organizations, non-governmental organizations, especially production facilities and enterprises have taken specific actions, showing corporate social responsibility for reducing waste, especially plastic waste, with many initiatives that have been deployed in practice. The establishment of



the "Alliance to End Plastic Waste" in 2018 is also an initiative supported by the MONRE.

Speaking at the signing ceremony, the Minister Trần Hồng Hà said, to solve the problem of solid waste in general and plastic waste in particular, the MONRE - the focal agency unifying the State management of solid waste as assigned by the Government in Resolution No. 09/NQ-CP - is actively improving institutions and laws; At the same time, it has been actively cooperating with related parties to jointly seek solutions to protect the environment through strengthening the effectiveness of solid waste management, promoting the circular economy and developing the mechanism of expanded responsibilities of manufacturers, enterprises and supporting environmentally-friendly initiatives towards the sustainable development of Việt Nam.

"On behalf of the Government, the MONRE highly appreciates the awareness and initiative of the PRO Vietnam members in sharing responsibilities with the MONRE for dealing with waste in Việt Nam, especially plastic waste in the packaging industry. Obviously, enterprises are not only a part of the problem but they can also become an important part of the solution", the Minister emphasized.

"This MOU is the result of the cooperation and sharing of goals, vision and responsibilities for promoting the circular economy in Việt Nam between the MONRE and the PRO Vietnam members by developing a mechanism on the manufacturer's expanded responsibilities to ensure more effective reduction, classification, collection and recycling of waste. The signing ceremony of the MOU today once again demonstrates the commitment and determination of the MONRE in dealing with the problem of solid waste and plastic waste, we are always open and listening in cooperation with the stakeholders to develop an inclusive and fair policy for the environment", said Minister Trần Hồng Hà.

The Minister believes that "with the commitment and determination of the MONRE and the PRO Vietnam members, we will overcome the current challenges and create new opportunities for Việt Nam to develop a strong and environmentally and socially responsible economy. I believe that the pioneering of PRO Vietnam members will in-

Hà Nội, ngày 11 tháng 9 năm 2019



▲ Minister Trần Hồng Hà and the Chairman of PRO Vietnam Phạm Phú Ngọc Trai provided the MOU for cooperation

spire and become a movement to connect more enterprises to act responsibly to the environment, to the country and to work together on sustainable development".

Mr. Phạm Phú Ngọc Trai - the Chairman of PRO Vietnam shared that carrying out the mission of "driving circular economy and making recycling of packaging more accessible and sustainable", the PRO Vietnam's ambition is that, by 2030, all packaging material put into the market by its members shall be collected for recycling, in which the focus will be on developing the packaging collection system in cooperation with the local authorities and the stakeholders in the industry to promote recycling with activities such as educating, collecting and recycling of waste, especially cooperating with Government agencies in its role as Citizen Enterprises.

According to the signed MOU, in the coming time, the MONRE and the PRO Vietnam will focus on implementing the following contents: Promote and support activities to minimize and classify waste at source; support and strengthen the capacity and efficiency of waste collection, transportation, treatment and recycling systems; strengthen the responsibilities of modern and traditional manufacturers, brand owners, distributors, retailers and importers in the management of post-consumption waste and recycling; foster the formation of a recycling industry and support environmentally - friendly and recyclable products; communicate and raise public awareness about reducing, separating, collecting, recycling waste and the circular economy.

Waste management in general, especially plastic waste and packaging waste after use is a challenge because of its prevalence and convenience in daily life. This is not only the responsibility of the State management agencies, but also the responsibility of enterprises and the community. The signing of this MOU represents the cooperation between the State management agencies and enterprises in turning challenges into opportunities to help solve common social problems■

BÙI HẰNG



Focus on studying and amending the Law on Environmental Protection to meet the country's

On July 26, 2019, the Vietnam Environment Administration (VEA) held a conference to review the first 6 months of work and mission directions for the last 6 months of 2019 in Hà Nội. The Deputy Minister of Natural Resources and Environment Võ Tuấn Nhân attended and directed the Conference.

Speaking at the opening of the Conference, the General Director of VEA Nguyễn Văn Tài said that from the beginning of 2019, VEA has developed and organized the 2019 work program, focusing on key tasks such as: Strengthening and organizing the organizational apparatus; developing legal documents, planning environmental protection; promoting inspection, examination and strictly handling violations of the Law on Environmental Protection (LEP); strictly controlling environmental issues in river basins, industrial zones, rural areas and craft villages; thoroughly handling establishments which cause serious environmental pollution; strengthening supervision of projects and establishments that are likely to cause high environmental pollution,... In general, VEA has basically completed the proposed work program, including a number of objectives and tasks with good results.

SOME ACHIEVEMENTS

In the first 6 months, VEA has cooperated with units to complete and accelerate the promulgation of the Government's Decree No. 40/2019/ND-CP dated May 13, 2019 on amending and supplementing a number of articles of the Decrees detailing and guiding the implementation of the Law on Environmental Protection; Decree No. 64/2019/ND-CP dated July 16, 2019 of the Government amending Article 7 of Decree No. 160/2013/ND-CP dated November 12, 2013 of the Government on criteria for identifying species and management mechanism of species on the List of endangered, precious and rare species prioritized for protection; Submitting to the Minister of Natural Resources and Environment for promulgation of Circular No. 01/2019/TT-BTNMT dated March 8, 2019 providing for the suspension of implementation of some

provisions of Circular No. 08/2018/TT-BTNMT dated September 14, 2018 and Circular No. 09/2018/TT-BTNMT dated September 14, 2018 issuing the national technical regulations on environment.

The VEA is focusing on developing 3 plannings and 3 schemes including: The National Environmental Protection Planning in the 2021 - 2030 period, with a vision to 2050; the National Master Plan on Biodiversity Conservation in the 2021 - 2030 period, with a vision to 2050; the Master Plan for National Environmental Monitoring in the 2021 - 2030 period, with a vision to 2050; the Master Scheme on Solid Waste Treatment Technology Model for Urban and Rural Activities; the Master Scheme on Strengthening Environmental Management in Industrial Zones (IZs), Industrial Clusters (ICs), Craft Villages; the Scheme on Strengthening Plastic Waste Management in Việt Nam. Up to now, 3 planning tasks have been submitted and 3 schemes are being actively implemented.

Regarding the inspection and examination, VEA has focused on directing and handling the provision of results of inspection, sanctioning of administrative violations and the review of inspection and examination in 2018. Up to now, the inspection conclusions in 2018 are basically completed; the administrative sanctions against 29 establishments with a total amount of 3.659 million VND have been implemented. Organizing 3 inspection teams as planned in the provinces of Khánh Hòa, Bình Định and Bà Rịa - Vũng Tàu with 53 establishments and 4 inspection teams on the implementation of inspection conclusions for 32 establishments in the provinces of Điện Biên, Hà Tĩnh, Thái Nguyên and Bà Rịa - Vũng Tàu. In addition, VEA has organized 4 inspection and assessment teams of solid waste management nationwide.

At the same time, VEA has strengthened irregular inspection and examination activities to resolve feedbacks and petitions of the voters and the press such as the observance of the LEP for the Hapaco Đông Bắc Company Limited in Hòa Bình Province and the Long Mỹ Phát Sugar and Alcohol Company Limited in Hậu Giang Province; inspecting the observance of the LEP in the transportation, transfer and use of cast iron scrap of the MHD Vietnam Development Investment Company Limited...; inspecting the remediation of administrative violations in the field of environmental protection for 3 facilities: Pacific Crystal Textile Co., Ltd. and Phả Lại Thermal Power Joint Stock Company in Hải Dương; Heineken Vietnam Brewery Limited Company in Hà Nội; Organizing inspection and handling of many cases of pollution, other environmental and biodiversity incidents nationwide.

Regarding the implementation of policies, laws, management tools and measures, in the first 6 months of 2019, VEA has approved 2 strategic environmental assessment (SEA) reports, 230 environmental impact assessment (EIA) reports, 12 EIA reports and environmental rehabilitation and restoration plans; issuing Certificates of environmental protection work



completion for 42 projects; approving 4 alternatives for environmental renovation and restoration in mineral exploitation; issuing and adjusting 292 permits of all kinds for the environment. In general, the evaluation of SEA reports, EIA reports and the issuance of the Certificates of environmental protection work completion and the permits are carried out in the correct order, procedures and quality assurance.

In particular, VEA has promoted the control of projects and large-volume waste sources, which are likely to cause environmental incidents. Accordingly, VEA has submitted to the Minister for promulgating the Decision to establish 10 new environmental monitoring groups for establishments requiring special supervision, at the same time to consolidate 4 monitoring groups; Continuing to well maintain the supervising activities of the Hưng Nghiệp Formosa Hà Tĩnh Steel Company, the Vietnam Lee & Man Paper Manufacturing Ltd., the VNT19 Pulp - Paper Plant Project in Dung Quất Economic Zone, the Nghi Sơn Refinery & Petrochemical Limited Liability Company in Thanh Hóa Province; the Projects at Vĩnh Tân Power Center in Bình Thuận; the Hậu River Thermal Power Plant in Hậu Giang and the Duyên Hải Thermal Power Plant in Trà Vinh; the Lâm Đồng Aluminum-Bauxite Complex Project and the projects at Thái Bình Power Center; the Project "Domestic waste treatment factory" in Quảng Ngãi Province.

VEA has actively instructed localities to carry out many activities to accelerate the progress of thorough treatment of establishments causing serious environmental pollution; at the same time, to organize a meeting of the Inter-Ministerial Steering Committee to implement the Plan of thoroughly handling the establishments causing serious environmental pollution in rural areas by 2020. Up to now, there are 147 establishments nationwide out of 435 ones causing serious environmental pollution in rural areas under the Decision No. 1788/2013/QĐ-TTg that have not been completely handled (decrease by 79 establishments compared to 2017). The VEA has cooperated with localities to speed up the process of treating, renovating and restoring the environment in areas polluted by residual plant protection chemicals according to Decision No. 1946/QĐ-TTg and Decision No. 807/QĐ-TTg of the Prime Minister.

At the same time, VEA continues to strictly control the environment of areas where many sources of waste are concentrated, such as economic zones, industrial zones, industrial complexes, river basins and craft villages. As of June 2019, there are 242/274 operating industrial zones with concentrated wastewater treatment areas (reaching 88,3%), of which 191 industrial zones have automatic monitoring stations (accounting for 78,9%). Working closely with localities to actively implement 3 master plans on environmental protection of river basins: Cầu river, Nhuệ - Đáy river, Đồng Nai river system. Continuing to monitor and urge localities to thoroughly address pollution in 47 villages of particularly serious pollution. Actively promoting the implementation of environmental criteria in new rural development.

In addition, VEA has accelerated the implementation of the Government's Resolution No. 09/NQ-CP dated February 3, 2019; to evaluate and develop a report on reviewing relevant legal documents to propose amendments and supplements to legal documents to implement the plan to unify the State management on solid waste; to organize a workshop on the "State management on solid waste" and a scientific workshop on the "Management model and technology of domestic solid waste treatment". Currently, VEA is urgently preparing to organize a national conference on solid waste.

Nature and biodiversity conservation continues to be focused. Promoting the control of trade and consumption of endangered wildlife species and release of invasive alien species. Strengthening the control of import and trade of the Red Swamp Crayfish in Việt Nam. Implementing procedures for establishing the Thái Thụy wetland protected area.

At the Conference, the delegates highly appreciated the efforts of VEA in recent years and stated that the State management of the environment has changed from passive to active. However, there are still some shortcomings that need to be overcome such as the direction progress of the Government and Ministry leaders; the slow handling of proposals of ministries, branches, localities, people and enterprises in some cases...

HIGHLY FOCUSED ON STUDY AND AMENDING THE LEP

Speaking at the Conference, the Deputy Minister Võ Tuấn Nhân noted and appreciated the achievements of VEA in recent years. He also emphasized many emerging environmental issues that need to be handled such as solid waste management, plastic waste..., posing more important and heavy tasks for the State management of environmental protection. Therefore, the Deputy Minister suggested that in the coming time, VEA should focus on well implementing a number of key tasks:

Being highly focused on study and amending the LEP, overcoming the limitations and shortcomings in the legal system on environmental protection in order to meet the country's new development requirements. Speeding up the progress of perfecting and submitting the Circular to guide the implementation of Decree No. 40/2019/ND-CP; the Decree amending and supplementing a number of articles of Decree No. 155/2016/ND-CP as these are important documents, creating a legal framework for localities and organizational units to im-



plement many new regulations in the field of the environment.

Continuing to advise and propose solutions to the implementation of the Government's Resolution No. 09/NQ-CP on unified solutions for solid waste management nationwide; in which, urgently completing the report to assess the solid waste management status, the List of solid waste treatment technologies to encourage localities to apply; preparing carefully the conditions to successfully organize the National Conference on solid waste management chaired by the Prime Minister, scheduled to be held in September 2019. Continuing to closely coordinate with the General Department of Vietnam Customs and related units to deal with the situation of imported scrap abandoned in ports, to promptly report and advise the Ministry leaders.

Strictly complying with the schedule and quality of tasks assigned by the Government, the Prime Minister and the Ministry leaders. Particularly, attention should be paid to the planning and finance work, urgently approving projects and tasks, speeding up the disbursement progress and quality.

Implementing effectively the inspection and examination of environmental protection in accordance with the Ministry's plan and the Minister's direction; strengthening irregular inspection activities; issuing inspection conclusions in time according to regulations; strictly handling and deterring violations, at the same time, promptly removing obstacles on policies and laws, helping localities to well perform the State management in their localities.

Paying attention to strengthen the organization of the apparatus for the attached units and at the same time, constantly training and fostering to enhance the quality of the cadres to be capable of carrying out the assigned tasks, especially in the context of many changes in management and international integration.

Continuing to improve and innovate the way of doing business, focusing on reorganizing administrative discipline of the units; promoting capacity and strengths of each team and individual; developing mechanisms of commendation and encouragement in time to stimulate the working spirit of each cadre, civil servant and officer. Paying more attention to the control, review and evaluation of the quality and progress of implementing the tasks assigned by the Ministry's leaders, ensuring the fulfillment of the tasks set out.

NGUYỄN HẰNG

SAYING NO TO PLASTIC WASTE: Local Action, Global Impact

This is the theme of the Clean up the World Campaign 2019 organized by the Ministry of Natural Resources and Environment (MONRE) in collaboration with the Vietnam Women's Union and the Hải Phòng City People's Committee in Đồ Sơn Town (Hải Phòng).

The Clean Up the World Campaign 2019 focuses on reducing and preventing plastic pollution. This is a practical and urgent content in the context of many countries around the world trying to eliminate pollution due to plastic waste; at the same time, calling on the entire political system, units, organizations, enterprises and countrymen across the country to unanimously and determinedly join hands to act and implement the guiding objectives of the Prime Minister Nguyễn Xuân Phúc: "By 2021, stores, markets and supermarkets in urban areas will not use single-use plastics; by 2025, the whole country does not use single-use plastics".

At the launching ceremony, the Deputy Minister of Natural Resources and Environment Võ Tuấn Nhân suggested that sectors, agencies, enterprises and the community act together to implement activities such as: Do not use disposable plastics; launch the movement to collect and classify products from plastics, packaging, plastic bags and transport them to recycling and disposal places according to regulations; plant more trees; all levels and branches should strengthen propaganda and education to raise awareness about the harmful effects of plastic waste, plastic bags on socio-economic development, environment and human health; develop effective solutions to reduce consumption, increase reuse and recycling of plastic waste for the community and people. At the same time, enterprises, supermarkets, markets, trade centers need to use environmentally - friendly products, gradually reduce and limit non-biodegradable disposable plastics; research, apply, pilot and replicate good and effective models on reducing and restricting the use of disposable plastics in activities of agencies and units; strengthen global, regional and national cooperation to reduce global plastic waste, as well as in Việt Nam.

In the framework of the ceremony, there was also the awarding ceremony of the drawing contest of "The Future without Plastic Waste" to children and the program on collecting garbage along Đồ Sơn beach, spreading the message of the Clean up the World Campaign over this year.

ĐỨC ANH



The Ministry of Natural Resources and Environment is actively preparing for the organization of the National Conference on Solid Waste Management

Following the Prime Minister's guidance in Resolution No. 09/NQ-CP dated February 3, 2019, over the past time, the Ministry of Natural Resources and Environment (MONRE) has cooperated with the concerned Ministries (Ministry of Justice, Ministry of Construction, Ministry of Home Affairs,...) to review the current legal documents related to the state management of solid waste, proposing amendments and supplements to implement a consistent state management plan on solid waste; to carry out practical assessment of solid waste management in localities to provide information on the current situation of solid waste collection, transportation and treatment. Based on the results of inspecting the solid waste management in recent years and perfecting the plan to unify the focal point of solid waste management, especially domestic solid waste, MONRE plans to orga-

nize the National Conference on Solid Waste Management in end of September 2019 in Hà Nội.

The objectives of the Conference are to assess the situation, challenges and opportunities for solid waste management and issues raised for the State management of solid waste, focusing on domestic solid waste; to propose, amend, adjust and supplement mechanisms, policies and laws on domestic solid waste management to submit to the Government and the Prime Minister for consideration and promulgation; at the same time, to unify the awareness and actions on the immediate and long-term guidelines and solutions in the management of domestic solid waste in our country in the coming time.

Based on the outcome of the Conference, MONRE will develop a draft directive on strengthening urgent solutions for domestic solid waste management, including contents related to "Adjusting and supplementing mechanisms, policies, laws, organizational models on solid waste management in general and domestic solid waste in particular", submitted to the Prime Minister for consideration and signing for promulgation.

At the meeting on the preparation of the National Conference on Solid Waste Management, on behalf of the Leader of

The program of the National Conference on Solid Waste Management:

- *Thematic seminar 1:* Mechanisms, policies and laws on solid waste management, which focuses on the following contents: Assessing the promulgation of policies and mechanisms related to the domestic solid waste management and treatment; investment and socialization in activities of domestic solid waste collection, transportation and treatment; reporting the current state of the organizational structure of the State management on solid waste from the central to local levels and proposing solutions to implement the

Government's Resolution No. 09/NQ-CP dated February 3, 2019; exchanging and discussing some contents related to the Draft Directive of the Prime Minister on strengthening urgent solutions for domestic solid waste management, including contents related to "Adjusting and supplementing mechanisms, policies, laws, organizational models on solid waste management in general and domestic solid waste in particular".

- *Thematic seminar 2:* Domestic solid waste treatment technologies, which focuses on the following contents: Overview of domestic solid waste treatment technologies and appraisal of domestic solid waste treatment technologies; reviewing and evaluating domestic solid waste treatment technologies in Việt Nam, proposing solutions in the near future; international experience in domestic solid waste treatment technologies; proposing domestic solid waste treatment technologies in accordance with Vietnamese conditions.

- *Thematic seminar 3:* The roles of community and socio-political organizations in the management and treatment of domestic solid waste, which focuses on the following contents: The roles of the Vietnam Fatherland



the Vietnam Environment Administration (VEA), the Deputy General Director Hoàng Văn Thúc reported to the Deputy Minister on the detailed organization plan of the Conference. Accordingly, the Conference will include 1 plenary session and 3 thematic seminars. Besides, there is an exhibition of models, equipment and technologies in solid waste collection, transportation and treatment. Currently, VEA is actively perfecting the report on the current status of solid waste management nationwide and the list of recommended solid waste treatment technologies.

Speaking at the meeting, Deputy Minister Võ Tuấn Nhân emphasized that the Conference is an important forum for managers, scientists, enterprises, socio-political organizations to exchange, discuss and evaluate the current status of solid waste management; the investment and socialization activities in the field of collection, transportation and treatment of domestic solid waste; the solid waste treatment models and technologies suitable to the practical conditions in Việt Nam. The Deputy Minister suggested that in order to ensure



▲ *The Vietnam Environment Administration reports the detailed scheme for organizing the National Conference on Solid Waste Management on August 13, 2019*

the successful organization of the Conference, VEA should closely coordinate with the relevant units to well prepare for the Conference organization activities, to make a clear list of participants and guests; to develop detailed scenarios for the time and content of the Conference's presentations; to well organize the information and propaganda activities to create a concrete change, to raise the awareness of managers, enterprises and the community in the treatment, classification of waste at source and limiting plastic waste■

Front, the Central Vietnam Women's Union, the Youth Union in the management of domestic solid waste; the current situation of plastic waste generation and proposed plastic waste management activities in the coming time; community activities in response to the anti-plastic waste movement launched by Prime Minister Nguyễn Xuân Phúc; plastic waste recovery and recycling solutions.

- *The plenary session includes the main contents:* Showing the documentary about the current state of solid waste management and treatment in Việt Nam; the overview report on the current status of solid waste management in recent years and implementation orientation in the coming time; the overview report on the domestic solid waste treatment technologies being applied in

Việt Nam and proposed orientations for domestic solid waste treatment technologies in the coming time; the report on the review and implementation of solid waste management planning and the assessment on the effectiveness of investment in building solid waste treatment facilities in the past; the report on the domestic solid waste management and treatment in Hà Nội City... It is expected that the Prime Minister will give a conclusion on the key tasks, strategic solutions to solid waste management, namely domestic solid waste.

- *Exhibition on domestic solid waste treatment models:*

Within the framework of the National Conference on Solid Waste Management, MONRE will organize an exhibition on domestic solid waste treatment technologies. Attending the exhibition is an opportunity for the State management agencies in charge of environment, organizations and enterprises to introduce and display their technology products and models for solid waste treatment to other units for exchanging and replicating the models, thereby contributing to the cause of environmental protection■

PHƯƠNG TÂM

News Decree on the conservation and sustainable use of wetlands

The Vietnam's Government has issued Decree No. 66/ND-CP on the conservation and sustainable use of wetlands. The Decree consists of 5 Chapters, 32 articles, specifying on the statistics, inventory, investigation, evaluation and monitoring of wetlands; establishment and management of wetland conservation areas on the conservation and sustainable use of wetlands.

The Decree underlines three principles of preserving and using wetlands: The first principal is ensuring the maintenance of the whole structure, function, ecological characteristics and biodiversity of wetlands; The second is enhancing the role and involvement of the community in preserving submerged areas; The third one is ensuring a fair and reasonable benefit sharing mechanism for the rights and obligations of involved parties in using wetland ecosystem services.

Decree No. 66/ND-CP has clearly defined criteria for determining important wetlands. Under the Decree, the State encourages domestic and foreign organisations, individuals and residents to take part in environmental protection, biodiversity preservation and protection of natural ecosystems and migratory birds.

Added to this are recovering degraded or over-exploited wetlands and supervising activities on important submerged areas to detect legal violations in the field as well as implementing a sustainable environmental livelihood and conducting eco-tourism activities according to Law. The establishment of wetland preservation areas must accord with the Law on Biodiversity.

The State budget will provide investment in building and upgrading technical infrastructure for the conservation and sustainable use of wetlands.

The State will also offer investment incentives for activities to recover habitats of endangered and rare species■

GIA LINH (*VNA source*)



▲ *Xuân Thủy National Mangrove Forest (Nam Định Province)*



The amendment and supplement for Decree No. 155/2016/ND-CP should ensure consistency and objectivity

This was the direction of Deputy Minister of Natural Resources and Environment Võ Tuấn Nhân at the meeting held on July 18th, 2019 by the Drafting Board and Editorial Team to develop a decree on sanctioning administrative violations in the environmental protection field, replacing the Government's Decree No. 155/2016/ND-CP dated November 18 on sanctioning administrative violations in the environmental protection field.

Accordingly, the Decree No. 155/2016/2016/ND-CP is issued with a high framework and fine, additional penalties and remedial measures are strict, highly deterrent, creating positive changes for enterprises and consciousness. The environmental protection of enterprises has been improved, the environment in industrial zones, production and business zones has been gradually improved.

However, in addition to the achieved results, the implementation of Decree No. 155/2016 / ND-CP still has some shortcomings that need to be amended and supplemented to suit current reality such as not clearly defined subjects sanctioned for administrative violations; the use of results obtained by equipment, automatic and continuous monitoring systems on waste gas and waste water as a basis for sanctioning administrative violations still have limitations; regulations related to the implementation of the Environmental Protection Plan, Environmental Impact Assessment Report and the Environmental Protection Project lack of behavior; no regulation on failing to conduct periodic environmental monitoring; obstacles in the process of enforcing decisions on sanctioning administrative violations, enforcing additional sanction-



▲ Deputy Minister Võ Tuấn Nhân directed at the meeting

ing measures or remedial measures. Derived from the above mentioned fact and based on the Decree No. 40/2019/ND-CP of the Government, the formulation of the Decree amending and supplementing a number of articles of Decree No. 155/2016/2016/ND-CP on sanctioning administrative violations in the field of environmental protection is necessary, with a sufficient legal basis and an important meaning to enhance the effectiveness and efficiency of the state management of environmental protection in next time.

As expected, the Decree will amend, supplement and abolish some articles of Decree No. 155/2016 / ND-CP such as adjusting and amending 7 articles and adding one more article in Chapter I, supplementing activities mineral exploration, exploitation and processing; in Chapter II: Fix 23 articles, add 1 article and abolish Article 22, Clause 1, Article 34 and Article 45; in Chapter III: Amending Articles 54 and 56; in chapter IV: Amending Article 61 and abolishing Article 62.

At the meeting, the members of the Drafting Board all agreed on the contents of the Decree, closely following the actual situation in the current environmental protection work. However, it is necessary to review penalties for some behaviors to increase deterrence; abandon acts in the public domain; abandon the act of forging papers for importing scrap materials because this is a criminal violation... Deputy Minister Võ Tuấn Nhân requested the Drafting Board to develop the Decree in an objective manner, close to the actual situation, to comply with the provisions of Law. In addition, the Drafting Board needs to review and supplement the missing acts, abolish inappropriate behaviors, ensure adequate, not omitted, duplicate violations and keep abreast of reality in environmental protection.■

QUANG NGỌC (MONRE)

Improving the efficacy of solid waste management in Việt Nam

On May 8, 2019, in Hà Nội, the Ministry of Natural Resources and Environment (MONRE) organized two seminars to discuss “The management of solid wastes” and “Models and technologies for solid waste treatment and management”. These forums were the opportunities for central and local Government agencies, political and social bodies, international organizations and businesses to discuss achievements and problems with the State mechanism on solid waste management and analyse the advantages and disadvantages of existing methods and technologies in Việt Nam in order to reveal some solutions to improve the quality of solid waste management in the future.

CURRENT STATUS OF STATE MANAGEMENT OF SOLID WASTE

In the past few decades, the sharp increase of total population and rapid socio-economic development have led to the sharp increase of the demand for commodities, raw materials and energy, thus releasing more waste to the environment and causing problems for Việt Nam’s society and economy. Though Government agencies have made the best efforts in waste collection, they still lag behind the growth in the volume of solid waste being discharged due to limited waste collection capability and public awareness. Therefore, solid waste management has remained a challenge for many local authorities. Facing the problem, the Government at its January meeting approved Decree No. 09/NQ-CP dated February 3, 2019 that assigns the MONRE to lead other Ministries and Government agencies in managing solid waste collection and holds provincial people’s committee chairmen responsible for dealing with waste issues in their localities. Besides, under the Law of Environmental Protection, the MONRE is accountable for writing rules on waste collection activities and work



▲ *The Workshop overview*

with the Ministries of Construction, Health and Transport to implement the Law.

However, the Law’s sub-regulations such as Decrees No. 36/2017/ND-CP, No. 46/2015/ND-CP and No. 38/2015/ND-CP don’t clearly state or assign the roles, responsibilities and tasks among Government agencies on State management of solid wastes while the working mechanism is not yet commonly agreed by agencies. In the meantime, the decrees overlap each other, causing more problems for the implementation. Though the MONRE is legible to assess solid waste treatment technologies under the Law of Technological Transfer and instructional documents, but the duty is actually designated to the Ministry of Science and Technology and its provincial departments in accordance with Decree No. 38/2015/ND-CP and Decree No. 08/2014/ND-CP, which instructs the implementation of the Law of Science and Technology.

After revising existing rules, the Vietnam Environment Administration (VEA) proposes the Government amend Decree No. 24/2014/ND-CP dated April 4, 2014 to re-designate the tasks and responsibilities of professional units on helping the centrally-run cities and provinces improve the management of solid wastes in urban areas, industrial zones, economic zones, high-tech parks and building material production facilities from the departments of construction to the departments of natural resources and environment. The VEA also proposes the Government develop a new decree to amend the regulations on State management of solid wastes in accordance with Article 19’s Item 2 of the Law on Promulgation of Legal Documents, which regulates measures to implement environmental policies under the Government’s direct management and supervision.

At the seminars, participants discussed big issues such as the State’s limitedness in management of solid wastes, policies on solid waste treatment projects, regional or interprovincial solid waste treatment planning and expenses for solid waste



treatment. Meanwhile, both domestic and international experts also shared their experiences and practices in other countries about State management of solid wastes.

MAKE BREAKTHROUGHS IN SOLID WASTE TREATMENT

At the seminar themed “Models and technologies for solid waste treatment and management”, reports showed that the volume of solid wastes discharged from the daily living activities is about 38.000 tons a day in the urban area and 32.000 tons a day in the rural area. Meanwhile, successful waste collection rate is 85 percent and 40 - 55 percent, respectively, in the two areas. Daily-life solid wastes are often buried but only 30 percent of those facilities are sanitary. Besides, across the country, there are now 30 facilities, which decompose wastes to organic humus and nearly 300 solid waste incinerators, which are small in size and properly serves the need of a commune. The investment and development of sanitary waste treatment facilities and burying areas have only been carried out some provinces and cities that have huge budget revenues. Therefore, the key matter for Việt Nam to improve its solid waste management is how to select the suitable model and technology.

The seminar displayed some solid waste treatment technologies that have been used effectively such as electronic waste incineration, waste decomposition, electrification and common incineration. Among those models, the Cần Thơ electronic waste incinerator constructed by the China Everbright International Co., Ltd. in June 2017 at Trường Xuân Commune, Thới Lai District was quite well-received by attendees. Others included the daily-life waste incinerator that has a capacity of 400 tons a day and power of 8 MW and a factory treating wastes to produce biogas and organic fertilizers in Quảng Bình Province’s Bố Trạch District is built by the Vietnam Project Development Co., Ltd. Another remarkable project combines three technologies to collect recycleable materials and produce gas for power generation and organic fertilisers. The project can process 245 tons of solid waste a day



▲ The seminar themed “Models and technologies for solid waste treatment and management”

and treat 76 tons of agricultural wastes a day. Meanwhile, a technology developed by the Hydraulics and Machinery Co., Ltd. can turn solid wastes into synthesis gas to run internal combustion engine and produce electricity.

However, attendees said domestic solid waste treatment technologies have not been mastered and replicated because the initial investment expenses are quite higher than other forms of solid waste treatment while there are no incentives for businesses and organizations developing those technologies. Besides, most of foreign-developed technologies do not suit the practice in Việt Nam, where humidity is high, local supplies are not corresponding to the technological development and the quality of automation is low, therefore, the technologies and their impacts are not yet made in large scale. Advantages and disadvantages of each locality regarding solid waste management were also discussed at the seminar and so were the technologies to find the solutions to improve the quality and efficiency of daily-life solid waste management in the future.

Concluding the seminar, Deputy Minister of Natural Resources and Environment Võ Tuấn Nhân requested the VEA collect feedback of participants and quickly complete the draft Decree to amend regulations on State management of solid wastes and submit the draft to the Government. The VEA was also asked to work with all provincial departments of natural resources and environment to inspect and evaluate the quality of solid waste management in local areas. In addition, the VEA must also develop a draft criteria on the selection of solid waste treatment technologies and send it to local authorities for pilot implementation. The Deputy Minister also asked the VEA and relevant agencies to keep studying the plan in which the State budget is used to hire international consultancy to develop an environmental protection scheme, which includes solid waste management. Meanwhile, other ministries should work closely with the MONRE and local authorities to seriously carry out the Government’s Resolution No. 09/NQ-CP dated February 3, 2019 to learn the ways to improve the quality of solid waste collection, treatment and management in the country. ■

THU HẰNG

Some plastic waste reduction solutions

DR. HOÀNG VĂN THỨC - *Deputy Director
Vietnam Environment Administration*

We are now in the early 21st Century - a century of the dramatic development of science and technology with the imprints of the 4th industrial revolution, but at the same time, of environmental and climate change issues that have become more urgent than ever before. In particular, a long-standing problem that has been voiced by many countries is plastic waste. “Beat Plastic Pollution” was chosen by the United Nations as the theme of the World Environment Day 2018 and at the 2019 World Economic Forum, the Heads of State, leaders of multinational corporations have had strong commitments on anti-plastic waste.

According to estimates and incomplete statistics of the Ministry of Natural Resources and Environment (MONRE), plastic waste accounts for about 5 - 10% of domestic waste (similar to other countries in the world); about 23 - 25 million tons of domestic waste per year are generated nationwide, corresponding to 1,15 - 2 million tons of plastic waste per year.

The matter of plastic waste has been concerned by the Government since early on; many policies and regulations directly related to the management and control of plastic waste and plastic bags have been implemented in the past time. Since 2009, the Prime Minister has promulgated the National Strategy of Integrated Solid Waste Management up to 2025, with a vision to 2050 in Decision No. 2149/QĐ-TTg (this Strategy continues to be approved for adjustment in Decision No. 491/QĐ-TTg dated May 7, 2018); Decision No. 582/QĐ-TTg dated April 11, 2013 on approving the Project on enhancing the control of environmental pollution due to the use of non-biodegradable plastic bags by 2020. Along with the regulations on solid waste management in the Law on Environmental Protection and documents guiding the implementation of this Law, the National Assembly enacted the Law on Environmental Protection Tax, stipulating that environmentally unfriendly plastic bags are one of those commodities subject to environmental protection tax. Besides, over the past time,

the MONRE has collaborated with the ministries, branches and localities to organize many seminars to disseminate and propagate the harmful effects of the use of non-biodegradable plastic bags and encourage the community to strengthen the reuse of plastic bags and use of biodegradable plastic bags, most recently to launch a mass anti-plastic waste movement. In particular, the MONRE successfully organized the Nationwide Commencement Ceremony of “Anti-plastic Waste Movement 2019” on June 9, 2019 in Hà Nội. The above activities have initially achieved positive results in the management of plastic waste and plastic bags.

In addition to the achieved results, the management and restriction of the use of plastic waste and plastic bags still face difficulties and inadequacies such as: The habit of production, consumption and the awareness of people along with the propaganda are not synchronous and effective; The collection of environmental tax for non-biodegradable plastic bags still faces difficulties while the price of environmentally - friendly plastic bags is still high, so people, especially in rural areas, still use non-biodegradable plastic bags.

Plastic waste recycling facilities are still small in size, dispersed and use simple technology, potentially causing environmental pollution. The investigation and statistics on the production, consumption and treatment of plastic bags is still limited, leading to a lack of information when making management decisions.

To overcome the shortcomings and inadequacies in the current management of plastic waste and to effectively implement the direction of the Government and the Prime Minister on anti-plastic waste, right after the Nationwide Commencement Ceremony of “Anti-plastic Waste Movement 2019”, it is necessary to immediately implement some of the following main tasks and solutions:

- *Firstly, to promote propaganda, raise community awareness and replicate good examples of restrictions on plastic bag use and plastic waste discharge.*

In order to restrict the environmental pollution caused by plastic waste, it is necessary to have the participation of the whole political system and society. Therefore, the propaganda and community awareness-raising on the harmful effects of plastic waste; measures for reduction and reuse of plastic waste must be considered as key and thorough activities.

For cadres, civil servants and officials, especially heads of units: It is necessary to disseminate, manage and require each individual to uphold exemplary spirit and take the lead in saying no to non-biodegradable plastic bags; at the same time, to strengthen propaganda to encourage relatives, families and people in the neighborhood to limit the use of plastic waste.

For the community and enterprises: To continue to develop and implement propaganda programs on the prevention of plastic waste and disposable plastic bags, with diverse



and suitable forms to each subject of propaganda, creating widespread and effective effects. The implementation of these propaganda programs will help enterprises and community transform from awareness to specific actions to use plastic products and environmentally-friendly plastic bags economically and effectively.

To research and periodically organize to select and announce environmentally-friendly products, shops and supermarkets; to identify and replicate advanced models, out-standing examples, practical and effective initiatives to timely encourage and honor enterprises, organizations and individuals who have contributed in solving problems on plastic waste.

To review, develop and put anti-waste plastic content into educational programs at all educational levels to raise the students and teachers' awareness in schools.

- Secondly, to continue to improve mechanisms, policies and laws related to plastic waste management.

To promptly develop and complete the Scheme on Strengthening Plastic Waste Management Capacity, expected to submit to the Prime Minister in November 2019. The main contents to be studied and proposed in the Scheme include: to review and perfect mechanisms, policies and laws on plastic waste management; to strengthen facilities and equipment, science and technology applications in the plastic waste management...

To speed up the progress of issuing the Decision No. 73/2014/QĐ-TTg of the Government on the list of discarded materials permitted to be imported with the direction of only allowing the import of plastics with high recycling value.

To continue to study and propose to add plastic packaging to taxable subjects and raise tax rates to limit production and consumption; to increase environmental protection tax on non-biodegradable plastic bags; to supplement the regulation on environmentally - friendly plastic bags to be exempted from environmental protection tax; incentives for the production and consumption of environmentally-friendly products to replace plastic products.

To develop sanctions and strengthen inspection and examination... At the same time, to develop policies, strategies and appropriate planning to put small, dispersed plastic facilities with simple technologies

to concentrated industrial zones, to upgrade appropriate treatment and recycling technologies; to establish concentrated plastic recycling industrial zones.

- Thirdly, to strengthen coordination among ministries, sectors and localities; the participation and supervision of political and social organizations and press agencies.

The MONRE needs to promote the role of the unified state management on waste, strengthen coordination, support and urge the ministries, sectors and localities and enterprises to implement the anti-plastic waste and non-biodegradable plastic bag movement.

To promote the role of the Vietnam Women's Union and the provincial Women's Unions in propagating and mobilizing members to actively participate in not using disposable plastic bags and replacing with other types of bags when going shopping.

Socio-political organizations and mass organizations need to mobilize members to participate in the sustainable consumption movement, not to use disposable plastic bags; to strengthen the role of supervising the implementation of the mechanism and policy to restrict the use of disposable plastic bags in localities, residential areas...

To continue to promote the role of press agencies and mass media in disseminating contents related to the restriction on the use of plastic bags and plastic waste for the community.

- Fourthly, to develop technologies for plastic waste recycling and treatment, to promote research and application of new materials to replace the use of plastic bags.

To increase investment, research and application of new and modern technologies in plastic waste treatment and recycling and substitute product and material development.

In the process of reviewing and evaluating environmental impact assessment reports and licensing for waste treatment projects, the investors will be required to enhance the use and application of new and modern technologies in waste recycling and treatment.

Institutes, schools, scientists and enterprises need to promote research, development and technology transfer activities on environmentally - friendly materials to replace disposable plastic products.

- Fifthly, to expand and promote the role of the Alliance to End Plastic Waste, to promote international cooperation on anti-plastic waste.

To promote the establishment and promotion of the roles of the regional and global centers and the alliances of enterprises and consumers on anti-plastic waste and non-biodegradable plastic bags; the organizations of packaging recycling, using environmentally-friendly materials and products to jointly prevent, treat and minimize plastic waste pollution; to restrict the use of disposable plastic products.

To continue to closely coordinate with other countries and international organizations to enlist the support of capital sources, technology transfer, information and experience sharing to improve the efficiency of the plastic waste and non-biodegradable plastic bag management and treatment in Việt Nam■

Capacity development for river basin water environment management in Việt Nam

LÊ THANH NGÀ

Environmental Science Institute

The project of “Capacity development for river basin water environment management” is supported by Japan Government with the following objectives: Capacity strengthening, development and implementation of river basin water environment management policies for the Ministry of Natural Resources and Environment (MONRE), as well as the Departments of Natural Resources and Environment (DONREs) through pilot projects implemented in Cầu river basin (Thái Nguyên, Bắc Giang, Bắc Ninh) and Đồng Nai river system basin (Bình Dương, Đồng Nai, Hồ Chí Minh City and Bà Rịa - Vũng Tàu). For more than 3 years of implementation, the project has achieved some important results, contributing significantly to the environmental protection in general and river basin water environment protection in particular in Việt Nam.

In recent years, the Vietnam Environment Administration (VEA) has co-operated closely with Japanese experts and concerned localities to implement many practical and technical activities, including the development of technical reports, legal documents and technical guidelines... Up to now, the project has basically completed the development of a number of draft legal documents and related guidelines within the output framework of the project. These outputs will be considered for application in river basin management in Việt Nam, especially in the river basin water environment management planning based on wastewater inventory science and total pollution load control approach, with the ability to meet the new requirements specified in the Law on Environmental Protection, the Law on Water Resources, as well as the Law on Planning. Specifically, a number of important legal documents have been developed through the project such as Circular No. 76/2017/TT-BTNMT of the MONRE regulating the assessment of wastewater reception capacity and carrying capacity of river and lake water sources; Decision

No. 154/QĐ-TCMT of the VEA on promulgating technical guidelines to calculate river carrying capacity; developing a draft Technical Report on coordination mechanism for river basin water environment management; Inventory handbook of wastewater pollution source for river basin water environment management; Guidance on information and data sharing for calculating carrying capacity and developing wastewater discharge source inventory; Guidance on coordination mechanism in pollutant load management...

In addition to developing legal documents and guidelines, based on the results and ways of river basin water environment management, the project has also outlined the Master Plan and the Action Plan of river basin water environment management in the pilot provinces and proposed a roadmap for integrated water resources management in Việt Nam. It is based on 5 factors: Implementation strategies and policies; Consideration on the amendment and supplementation of legal documents related to planning in accordance with the practical conditions; Development of an institutional framework (State administrative management of water resources, river basin, and public and private service organization for the water sector); Strengthening management capacity on water resources including data collection, professional skill improvement in management and monitoring of water resources, extraction and use of water and monitoring of inter-reservoir operation according to legal regulations; Application of tools in integrated management of water resources in accordance with practical conditions of Việt Nam.

At the same time, the project has also used QUAL2K model (model of river water and flow quality) and MIKE 11 model (simulation application of hydraulic mode, water quality and sediment transport in river mouths, rivers, irrigation systems, canals, other water systems) to perform pollution load analysis of selected areas on the Cầu river basin and the Đồng Nai



▲ The Steering Committee Meeting of the project “Capacity development for river basin water environment management” in December 2016



▲ The delegates took a photo at the final Project Steering Committee Meeting in April 2019

river system basin, respectively. Thereby, it is necessary to study the simulation model of water quality to calculate the carrying capacity and propose to use the model for pilot projects in the basins. In addition, the project has also developed a process for making inventory of wastewater discharge sources in the two above selected areas and organized trainings for capacity building of the Central and local managers for river basin water environment.

For more than 3 years of the project implementation, the objective of the project activities is to step by step realize the integrated management of water resources on river basins in Việt Nam. In order to achieve this objective, in the coming time, the management agencies need to consider and study to implement the 3 phases as described in the roadmap to better manage the river basin water resources after the completion of the project.

Phase 2020 - 2024: It is the phase of perfecting policies and creating a favorable environment for the integrated management of water resources. Applying the integrated management approach of water resources, taking Vu Gia - Thu Bồn river basin as a pilot area for application of institutions, policies, management tools to review and get experiences for other river basins. It is necessary to consider carefully the development of the Vu Gia - Thu Bồn river basin organization model to apply nationwide. As studies suggest, this phase shall be implemented in 4 years.

In Việt Nam, river basin organizations have been established but most of them

have not really operated effectively, so the establishment of a new river basin organization must be very careful and it is necessary to carefully study other countries' models with similar conditions to be able to rationally apply to Việt Nam.

Phase 2025 - 2030: It is the phase of establishing a number of priority river basin organizations and supporting the Directorate of Water Resources Management (DWRM) to operate and test the monitoring function.

To continue to complete relevant policies and strategies; to conduct study on the operational experience of the Vu Gia - Thu Bồn River Basin Committee (RBC) to continue the establishment and operation of the RBCs in the order of priority and the close coordination between the DWRM and the RBCs for synchronous application of the river basin water resources management solutions.

With the experience from the Vu Gia - Thu Bồn RBC's activities, the establishment of the River Basin Committees is prioritized for important river basins such as: River basins of Hồng - Thái Bình; Cửu Long; Sê San - Srê Pok and Đồng Nai.

Post-2030 Phase: It is the phase of establishing and operating the remaining RBCs and perfecting the functions of each Committee for the integrated management of river basin water resources: Promoting the application of economic tools in the integrated water resources management, promoting the private and public sectors' participation in the water resources management and completing additional policies to support the governance of water resources.

For this phase, to continue to perfect policies and strategies for the integrated water resources management and the operation regulations of the RBCs and to strengthen the operational capacity for the RBCs to self-operate and apply the management tools.

The roadmap for the integrated management of water resources according to the priority activities for the phase is as follows: Supporting the DWRM and operating the RBCs to include the function of "sanctioning" of small-scale violations in the basins; continuing to establish additional Committees for the remaining river basins. ■

Perfecting the legal basis to strengthen the management of endangered, precious and rare species prioritized for protection

TRẦN TRỌNG ANH TUẤN
NGUYỄN THỊ VÂN ANH
Vietnam Environment Administration

On July 16, 2019, the Prime Minister issued Decree No. 64/2019/ND-CP amending Article 7 of Decree No. 160/2013/ND-CP dated November 12, 2013 on criteria for identifying species and management regime of species on the List of endangered, precious and rare species prioritized for protection. The Decree was issued to perfect the legal basis and strengthen the management of endangered, precious and rare species prioritized for protection under the Law on Biodiversity 2008. At the same time, to update and add endangered, precious and rare species into the List of endangered, precious and rare species prioritized for protection in response to the actual situation.

THE NEED TO ISSUE DECREE NO. 64/2019/ND-CP

In Clause 3, Article 40 of the Law on Biodiversity 2008: “Once every 3 years or when in need, the species on the List of endangered, precious and rare species prioritized for protection must be investigated and assessed for amendment and supplement”. Clause 2, Article 7 of Decree No. 160/2013/ND-CP also stipulates: “Once every 3 years or when in need, the Prime Minister shall decide to adjust and supplement the List of species prioritized for protection at the proposal of the MONRE”.

Decree No. 160/2013/ND-CP issued the List of endangered, precious and rare species prioritized for protection, including 83 animal species, 17 plant species, 15 plant varieties, 6 animal breeds and the management regime of species on this List. The issued Decree No. 160/2013/ND-CP creates a legal basis for promoting management of species prioritized for protection, especially as a legal basis to handle violations in accordance with the provisions of the Criminal Code 2015 and the Law amend-

ing the Criminal Code 2017 and to develop and implement conservation programs of endangered, precious and rare species prioritized for protection.

In recent years, the MONRE has cooperated with relevant ministries, branches and organizations to develop, submit, promulgate and organize the implementation of documents guiding the implementation of Decree No. 160/2013/ND-CP, the programs on conservation of endangered, precious and rare species on the List of endangered, precious and rare species prioritized for protection such as: The National Program on Tiger Protection in the 2014 - 2022 period (Decision No. 539/QĐ-TTg dated April 16, 2014 of the Prime Minister), the Urgent Action Plan for Elephant Conservation in Việt Nam by 2020 (Decision No. 940/QĐ-TTg dated July 19, 2012 of the Prime Minister), the Urgent Action Plan for Primate Conservation in Việt Nam up to 2025, with a vision to 2030 (Decision No. 628/QĐ-TTg dated May 10, 2017 of the Prime Minister). Currently, the MONRE has developed and submitted to the Prime Minister to consider and approve the National Program on the Conservation of Endangered Turtle Species in Việt Nam.

During the implementation of Decree No. 160/2013/ND-CP, the information on endangered, precious and rare species prioritized for protection has changed, requiring updates, adjustments and supplements such as: Some species in the List issued together with Decree No. 160/2013/ND-CP have changed their scientific names; some species published by scientists have been separated into multiple species; some species confirmed by scientific agency no longer exist in Việt Nam; a number of endangered, precious and rare species meet the criteria for recognition as prioritized species for protection...

Implementing Clause 2, Article 7 of Decree No. 160/2013/ND-CP, the MONRE has coordinated with ministries, branches and localities to review and assess the current status of the endangered, precious and rare species on the List of endangered, precious and rare species prioritized for protection; assumed the prime responsibility for drafting the Government's Decree to adjust and supplement the List of endangered, precious and rare species prioritized for protection promulgated together with Decree No. 160/2013/ND-CP. Therefore, the promulgation of Decree No. 64/2019/ND-CP dated July 16, 2019 amending Article 7 of Decree No. 160/2013/ND-CP of November 12, 2013 is one of the important contents in the process of implementing the strategies and operational programs of international Treaties to which Việt Nam is a party, includ-



ing the Convention on Biological Diversity (CBD) and the Convention on International trade in Endangered Species of Wild Fauna and Flora (CITES).

In Article 8, the CBD also affirms the importance of developing and implementing regulations on the conservation of endangered, precious and rare species: “Develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations”. The CITES also emphasized: “Wild fauna and flora are an irreplaceable part of the earth’s natural ecosystems with great value in terms of aesthetics, science, culture, entertainment and economy. Therefore, peoples and nations must be the best defenders of their wild fauna and flora”.

According to Decree No. 64/2019/ND-CP, the number of species included or removed from the List is 15 wild animal and plant species listed in Appendix I on the List of wild animals and plants threatened with extinction, strictly prohibited to export, import, re-export, import via sea transportation and transit of specimens from nature for commercial purposes of the 2017 CITES. Some species that are proposed for supplementation in the List are species in danger of extinction in the wild. The listing is intended to concretize the implementation of the Convention and appropriate actions to conserve and prevent the decline of species threatened with extinction in Việt Nam.

In 2010, at the 10th Conference of the parties to the CBD, the member States adopted and committed to implementing the targets of the Convention to 2020 (Aichi Targets), including the target of endangered species conservation which is: “By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained”.

BASIC CONTENTS OF DECREE NO. 64/2019/ND-CP

Decree No. 64/2019/ND-CP includes 2 Articles and 1 Appendix. The contents of adjustment and supplement in Appendix I of the List of adjusting and adding endangered, precious and rare species prioritized for protection are as follows:

Plants: Adding 9 endangered, precious and rare wild plant species to the List of endangered, precious and rare species prioritized for protection, including: Lan hải chai (*Paphiopedilum callosum*); Jade Slipper Orchid (*Paphiopedilum malipoense*); the Beard carrying paphiopedilum (*Paphiopedilum barbigerum*); Lan hải trần châu (one species of *Paphiopedilum*); the Hang’s Paphiopedilum (*Paphiopedilum hangianum*); Lan hải đỏ (*Paphiopedilum delenatii*), Lan hải Tam Đảo (*Paphiopedilum gratixianum*), Lan hải thăng heng (*Paphiopedilum helenae*); Himalayan yew (*Taxus wallichiana*). The above-mentioned species are precious and rare gene sources that have been exploited and traded in exhaustion, threatened with extinction in the wild and all met the criteria of endangered, precious and rare species prioritized for protection specified in Decree No. 160/2013/ND-CP. Besides, the Vietnamese names of 2 species are adjusted from the *Bách vàng* to the *Bách vàng việt*, from the *Hoàng liên Trung Quốc* to the *Hoàng liên bắc*, which is divided into 3 species to concretize the species belonging to the family of *Berberis julianae* (*Hoàng liên gai*) on the List of prioritized species for protection, including the long-leaved *Hoàng liên gai*; mold-leaved *Hoàng liên gai*; the small-leaved *Hoàng liên gai*.

Animals, in the List of endangered, precious and rare species prioritized for protection of Decree No. 64/2019/ND-CP, the wild water buffalo (*Bubalus arnee*) is removed from the List as it has not been recorded in Việt Nam for many years. At the same time, 10 species including 3 mammal species, 3 reptile species and 4 endangered, precious and rare bird species are added to the List, including: The large-spotted civet (*Viverra megaspila*); the Owston’s palm civet (*Chrotogale owstoni*); the spotted linsang (*Prionodon pardicolor*); the Psychedelic Rock Gecko (*Cnemaspis psychedelica*); Chinese crocodile lizard (*Shinisaurus crocodilurus*); the big-headed turtle (*Platysternon megacephalum*); the Spoon-billed Sandpiper (*Eurynorhynchus pygmeus*); the crested argus (*Rheinardia ocellata*); the green peafowl (*Pavo muticus*); the Spotted Greenshank (*Tringa guttifer*). These species are currently threatened and meet the criteria of endangered, precious and rare species prioritized for protection under the provisions of Decree No. 160/2013/ND-CP.



▲ The Chinese crocodile lizard (*Shinisaurus crocodilurus*) is included in the List of endangered, precious and rare species prioritized for protection



▲ *The Hang's Paphiopedilum (Paphiopedilum hangianum)* is included in the List of endangered, precious and rare species prioritized for protection

The adjusted List of 10 species includes 6 mammal, 2 reptile and 2 bird species. These species have been separated into new species or their Vietnamese names and scientific names have been adjusted to conform with the latest published scientific research results, specifically: Separate the *Nomascus siki* from the Northern white-cheeked gibbon (*Nomascus leucogenys*) in the List of species prioritized for protection because during the study of molecular genetics, the primate taxonomists found a genetic difference; Separate the *Voọc bạc trường sơn* from the *Voọc bạc đồng dương*; Adjust the scientific name of the *Voọc bạc Đông Dương* (from *Trachypithecus villosus* to *Trachypithecus germaini*); Separate the Northern buffed-cheeked gibbon (*Nomascus annamensis*) from the Red-cheeked Gibbon (*Nomascus gabriellae*); Adjust the scientific name of the Phayre's leaf monkey (from *Trachypithecus (phayrei) barbei* to *Trachypithecus crepusculus*); Adjust the scientific name of the Chamois species; Separate the central-region *Rùa hộp trán vàng* (*Cuora bourreti*) and the Southern-region *Rùa hộp trán vàng* (*Cuora picturata*) from the Northern-region *Rùa hộp trán vàng* (*Cuora galbinifrons*); Adjust the scientific names of the Great hornbill and the Austen's brown hornbill.

The promulgation of Decree No. 64/2019/ND-CP is a necessary requirement, in accordance with the Party's viewpoint and the State's policies on the protection and sustainable development of biodiversity and endangered, precious and rare species prioritized for protection, while ensuring compatibility with relevant international treaties to which Việt Nam is a member.■

Decree No. 40/2019/ND-CP amending and supplementing a number of articles of Decrees detailing and guiding the implementation of the Law on Environmental Protection

Prime Minister (PM) Nguyễn Xuân Phúc signed the issuance of Decree No. 40/2019/ND-CP on May 13, 2019 amending and supplementing a number of articles of decrees detailing and guiding the implementation of the Law on Environmental Protection (Decree No. 40/2019/ND-CP).

Specifically, Decree No. 40/2019/ND-CP amended and supplemented a number of articles of 04 Decrees including: Decree No. 18/2015/ND-CP dated February 14, 2015 on planning environmental protection, strategic environmental assessment, environmental impact assessment and environmental protection plans; Decree No. 19/2015/ND-CP dated February 14, 2015 detailing the implementation of a number of articles of the Law on Environmental Protection; Decree No. 38/2015/ND-CP dated December 31, 2014 regulating waste and waste management; Decree No. 127/2014/ND-CP dated April 24, 2015 regulates the conditions of organizations providing environmental monitoring services.

Decree No. 40/2019/ND-CP also stipulates that: Records received before the effective date of this Decree (except for transitional articles and provisions specified in Article 22 of Decree No. 18/201/ND-CP and Article 64 Decree No. 38/2015/ND-CP) will continue to be resolved in accordance with the Decrees at the time of reception, unless the organization or individual has filed the application comply with the provisions of this Decree. Periodic reports of project owners, establishments and industrial zones on periodical environmental monitoring and supervision, continuous automatic monitoring, management of daily-life solid waste, and management of industrial solid waste, hazardous and imported waste management, environmental monitoring and restoration results and other environmental reports are integrated in the same environmental protection work report. Ministry of Natural Resources and Environment guides the implementation of this regulation.

Decree No. 40/2019/ND-CP repealed: Article 11 Decree No. 18/2015/ND-CP; Articles 26, 27, 28, 29, 30, 34, 35, 36 and Clauses 3, 4, 5, 6 Article 55 and Appendix V of Decree No. 19/2015/ND-CP; Clauses 5 and 9, Article 9, Points a and b, Clause 1, Article 27, Article 38, Article 41, Point b, Clause 1, Article 43, Clause 3, Article 44 of Decree No. 38/2015/ND-CP.

Decree No. 40/201 /ND-CP took effect from July 1, 2019.■
PHƯƠNG ANH (VEA source)



Initiative of Zero Waste to Nature: TOWARDS THE CIRCULAR ECONOMY MODEL



▲ Mr. Phạm Hoàng Hải - VBCSD Coordinator

Currently, the amount of plastic waste and plastic bags nationwide accounts for about 8 - 12% of domestic solid waste, if there is no effective management solution, this will be a burden for the environment. Therefore, in order to minimize the amount of plastic waste to the environment, contributing to the development of the circular economy, in addition to the close coordination among ministries and branches, many models as well as research studies to perfect the waste recycling and treatment technology in accordance with Vietnam's conditions are required. At the workshop on Circular economy model implementation promotion in Việt Nam organized by the Vietnam Business Council for Sustainable Development (VBCSD), the Vietnam Chamber of Commerce and Industry (VCCI), the Vietnam Environment Administration Magazine (VEM) had an interview with Mr. Phạm Hoàng Hải - VBCSD Coordinator on this issue.

• **VEM:** What do you think about the situation of plastic bag and plastic waste generation nationwide?

Mr. Phạm Hoàng Hải: Currently, plastic products and plastic bags become more popular items in human life. According to statistics, each Vietnamese household discharges more than 1 plastic bag per day, leading to millions of plastic bags being disposed of every day. However, it takes hundreds, even thousands of years, for plastic waste to decompose; at the same time, burning plastic waste will produce poisonous emissions containing dioxin and furan substances, which are persistent in the environment and adversely affect human health.

Việt Nam currently ranks 4th in the world in terms of plastic waste amount discharged into the sea (each year, there are about 730.000 tons of plastic waste to the sea, 80% of which originates from the mainland). It is worrisome that most local people, as well as tourists, are not well aware of the danger of plastic waste pollution, leading to many beautiful tourist sites to become “black spots” of environmental pollution.

• **VEM:** In order to promote the circular economy development, the VBCSD's Initiative of Zero Waste to Nature (VCCI)

has been launched, could you please tell us more about this initiative?

Mr. Phạm Hoàng Hải: If “circular way of thinking” is thoroughly applied in the design, production and recycling of goods, the circular economy will create a market opportunity worth at least 4,5 trillion dollars for enterprises, creating hundreds of millions of jobs, helping enterprises reduce risks due to material scarcity and orienting enterprises to operate under the Strategy of green growth and national sustainable development.

On January 23, 2018, the VBCSD's Initiative of Zero Waste to Nature was launched. This is an activity within the Project framework of the Vietnam Center for Circular Economy (VCCE), chaired by the VBCSD, in coordination with the Unilever Vietnam International Co., Ltd., the Coca-Cola Beverages Vietnam Limited and the Dow Chemical Vietnam Limited Liability Company.

As a pioneering step towards the circular economy for a sustainable Việt Nam, the Initiative aims at 4 goals: To solve problems arising from plastic waste; To develop a roadmap to formulate and promote sustainable business models; To develop a value chain in the direction of circular economy; To propose policies to facilitate the circular economy implementation in Việt Nam. In the first stage, the main activity of the Initiative is sorting waste at source in Tân Phú District (Hồ Chí Minh City), which is implemented by the Unilever in collaboration with the Hồ Chí Minh City Urban Environment Co., Ltd (CITENCO).

After that, the Initiative will be implemented in the plastic sector for 5 years (2018 - 2022), with the pioneering of the Unilever Vietnam International Co., Ltd., the Coca-Cola Beverages



Vietnam Limited and the Dow Chemical Vietnam LLC. On that basis, the Program will replicate the model with the participation of other enterprises in the aluminum, steel, cement, glass, wood and agriculture sectors..., thereby forming a sustainable circular economy model and developing a market of recycled and reused materials in Việt Nam.

• **VEM:** *In your opinion, what activities should the Việt Nam's Government implement to promote the circular economy?*

Mr. Phạm Hoàng Hải: Circular economy is an economic model, in which the design, production and service activities aim to extend the material life and eliminate negative impacts on the environment. If the linear economic model is only interested in the exploitation of natural resources, production and disposal of products after consumption, creating a large amount of waste, then the circular economy focuses on managing and regenerating resources in a closed cycle, to avoid creating waste. The utilization of resources for the circular economy is done through various forms such as repair, reuse, recycling, share, or lease of materials.

The era of the linear economy is over, we cannot just exploit, use and dispose materials and products after the expiry of use value. In the context of natural resources becoming increasingly exhausted, the circular economy model has proven effective in creating new business opportunities and profit sources based on the principle of using natural resources, materials and ancillary materials properly.

Therefore, in order to apply the circular economy model in Việt Nam, first of all, it is necessary to complete the system of management, environmental protection, financial and commercial policies, to consider common wastes as secondary materials for other industries; to have material treatment technology, to carry out research on new materials with greater flexibility, applicability and durability. In addition, the investment in and testing of innovative business models are necessary.

• **VEM:** *What do you think about the circular economy model development capacity of manufacturing enterprises in Việt Nam?*

Mr. Phạm Hoàng Hải: It is feasible for manufacturing enterprises in Việt Nam to apply this model. Besides, the business com-



▲ *Activity of exchanging waste for gifts at the Launching Ceremony of Zero Waste to Nature Initiative*

munity, including manufacturing enterprises are currently of high concern and awareness on the circular economy. There are nearly 200 enterprises from industries of wood processing, seafood, leather and footwear, garment, fast-moving consumer goods and food processing, paper production, information technology, participating in the workshop on Circular economy implementation promotion in Việt Nam. With the nature of a closed cycle, the circular economy needs to mobilize multi-sector participation, through which the secondary materials of one sector can become inputs of high economic value and use value for other sectors. The more active the participation of many enterprises, the higher the feasibility of the circular economy model shall be.

Besides, although most domestic enterprises are small and medium-sized enterprises, many enterprises are the suppliers of other large enterprises as they own human resources with high creativity, quick learning and good workmanship. Therefore, the re-design of products with high applicability, long life cycle, good durability and resistance and the design of streamlined production processes, using secondary materials as a replacement, saving energy, or using clean energy sources, are feasible. These are the basic principles for an enterprise to start implementing the circular economy within the Company's production line.

Finally, the circular economy model is the main concern of the Government. In the coming time, the policies to create a legal framework to help the circulation of primary/secondary materials among enterprises and industries become favorable, as well as those to support investment activities for the circular business model will also gradually be issued. The agencies consulting and supporting enterprises to implement the circular economy as being implemented at the VCCI, the VBCSD will be established. Enterprises can participate in initiatives such as Zero Waste to Nature and activities of training, propagating knowledge, providing information and sharing models to find suitable activities for their companies. As a result, enterprises can remove difficulties and carry out production and business activities in a more favorable circular orientation.

• **VEM:** *Thank you very much!*

VŨ NHUNG (Implemented)



9 years after the last rhino's death at Cát Tiên National Park

TRẦN LÊ TRÀ
GIZ in Việt Nam

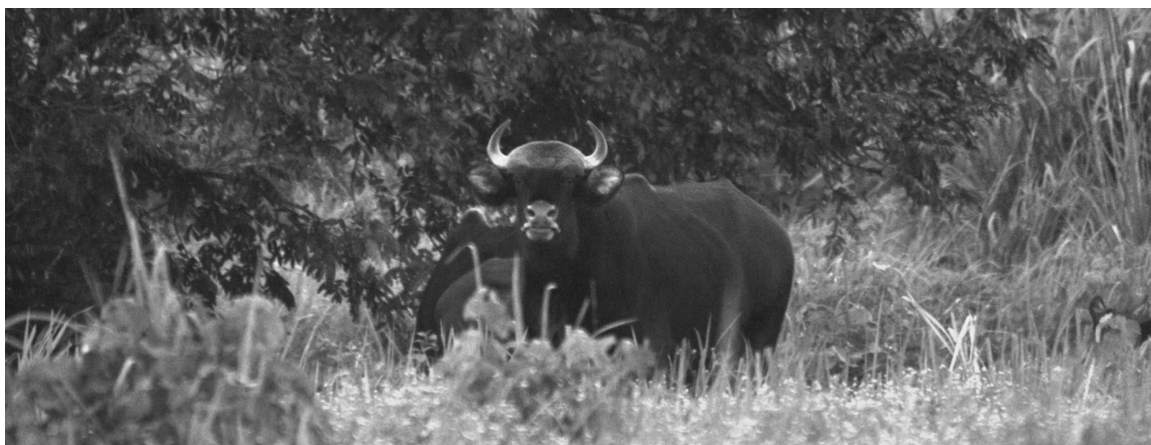
The last rhino's death at Cát Tiên National Park in 2010 has pushed the subspecies of the rhinoceros *sondaicus* one step further on the brink of extinction. On March 21, 2019, a male Javan rhino of the same species as the rhino at Cát Tiên National Park died in Indonesia's Ujung Kulon National Park, reducing the total number of this subspecies to 68 individuals worldwide.

Cát Tiên is one of the 5 largest national parks in Việt Nam, with an area of 71.187,9 ha, with diverse ecosystems, so fauna and flora species are also rich and developed. Cát Tiên National Park has up to 1.610 species of vascular plants, 79 species of reptiles, 41 species of amphibians, 348 species of birds and 113 species of animals. A number of new species are still being discovered in Cát Tiên such as the Cát Tiên bent-toed gecko (*Cyrtodactylus cattienensis*), or the ruby-eyed green pit viper (*Trimeresurus rubeus*). However, Cát Tiên is also one of the few protected areas that still have wild animals running in sight such as peacocks, red jungle-fowls, deer and some small carnivorous animals... Cát Tiên is still one of the rare places in Việt Nam where the gaurs of the Red Book can be seen and captured.

The area's list of aquatic plants and animals includes 125 surface dwelling species, 122 bottom dwelling species and 168 species of fish, leading to the gathering of many indigenous and migratory bird spe-

cies. Cát Tiên is currently a South Vietnam lowland endemic bird ground, one of 63 important bird grounds. It can be said that the species present in Cát Tiên National Park account for more than one third of the total number of bird species in Việt Nam, including endemic and precious species such as orange-necked partridge (*Arborophila davidi*), Germain's peacock-pheasant (*Polyplectron germaini*), Siamese fireback (*Lophura diardi*), white-necked stork (*Ciconia episcopus*), white-shouldered ibis (*Pseudibis davisoni*), white-winged Duck (*Asarcornis scutulata*), great hornbill (*Buceros bicornis*), wreathed hornbill (*Rhyticeros undulatus*). That is not to mention migratory birds or species that only come to Cát Tiên during the breeding season such as garganey (*Anas querquedula*), pheasant-tailed jacana (*Hydrophasianus chirurgus*), grey-headed lapwing (*Vanellus cinereus*), oriental pratincole (*Glareola maldivarum*)...

In the past few decades, Vietnam's wild animals have fallen sharply in both the quantity of species and the quantity of individuals in each species. According to data from the Vietnam's Red Book (2007), if Vietnam had 365 rare and endangered animals based on the IUCN's assessment standards of species status in 1992, then in 2004 and in 2007, this number was up to 407 and 418. The number of critically endangered wildlife species in 2007 was 116. The number of precious and rare species classified as endangered also increased from 356 species in 1996 to 450 species and 464 species in 2004 and 2007, respectively. This is a consequence of illegal hunting, habitat destruction and illegal trade in many rare and precious species of animals and plants over the years. According to another report by the World Bank, the Ministry of Natural Resources and Environment (MONRE) and the Swedish International Development Cooperation Agency (SIDA) in 2005, Việt Nam has about 700 wild species at the risk of extinction at the national level, 300 species endangered at a global level and up to 45% of these



▲ The gaurs at Cát Tiên National Park



were classified as critically endangered.

Like many other areas, Cát Tiên used to be devastated by war and contaminated with toxic chemicals. After the war, this was where the military stations were located and had been used for the purpose of post-war reconstruction. Some communities of Ma and S'Tiêng people in this period still maintained the custom of deforestation for farming and hunting wild animals, making the number of wild animals in Nam Cát Tiên's decline. The hunting and catching wild animals have been greatly reduced at present, due to more strictly protected forests and the communities' relocation out of the National Park core zone.

From the late 1990s to the beginning of 2000, the raising of wildlife animals for commercial exploitation out broke. Some "easy-to-raise, easy-to-sell" species have been hunted to near extinction in the wild. The sika deer (*Cervus nippon*) are only in farms. After many years of being confined to farms and sucked of bile to exhaustion, bears are now only living in rescue centers or in semi-wild conditions. In Cát Tiên, crocodiles were considered extinct in 1996. Five years later, in 2001, the World Wide Fund for Nature (WWF) in collaboration with Cát Tiên National Park implemented the first program to restore wild fresh-water crocodiles in Việt Nam and the world, releasing 30 individual crocodiles that have been DNA tested to ensure the purity to the Bàu Sấu area. Perhaps this is a vivid example of the almost unique success in the restoration of the species already extinct in the wild. Up to now, crocodiles have been well rehabilitated, the number of observable individuals has increased to nearly 300 large and small ones.

A few years after the last rhino's death, the story about whether or not to sacrifice part of Cát Tiên forest for the Đồng Nai 6 and 6A hydro-power projects used to heat up in 2013. The two hydro-power projects, proposed at the time of high energy demand, are expected to contribute to the State budget 322,7 billion VND in 40 years with the immediate price of more than 370 hectares of forest, of which 137 ha of the National Park core zone, going to be destroyed. Probably the lesson about the last Javan rhino and the saltwater crocodiles (*Crocodylus porosus*) in Cát Tiên has alerted and con-



▲ One of the crocodile individuals was re-released in Bàu Sấu area in 2001

tributed significantly to the competent authorities' decision to stop the implementation of two hydro-power projects after many years of fierce controversy. Cát Tiên has become a rare example of a National Park "resistant" to the invasion of powerful private enterprises. The Bàu Sấu complex, mineral deposits and vegetation along the Bàu Sấu, Bàu Chim, Bàu Cá areas were retained, the Cát Tiên forests managed to avoid being divided... The habitats of many wildlife species were restored, maintaining the area's biodiversity level.

As the current statistics of species in all forests of Việt Nam are so obsolete, in many places they are several decades old, it is difficult to provide scientific evidence and identify that the Cát Tiên forest biodiversity has gotten better or worse after the last rhino's death. Resource allocation and statistical effort are limited and biodiversity monitoring is only focused on certain species. But one thing is certain that Cát Tiên forest is being restored and developed sustainably. Deep into more than 71.000 hectares currently under management, the species of primates, ungulates, small carnivores, pangolins are still alive and in need of protection. The Cát Tiên forest guards are always aware that their mission will not end but only get more difficult. The UNESCO's World Heritage Committee in May 2013 recommended that "Cát Tiên National Park needs to use internationally recognized conservation forms to manage forests more effectively against threats such as hydro-power development, quarrying, uncontrolled tourism and especially urgent actions against illegal wildlife trafficking and hunting - the cause of serious damage to the National Park's natural values". The above recommendations are being directed by the Vietnam Administration of Forestry, the Forest Management Board, the local authorities and people are to make efforts and cooperate for implementation.

At present, Cát Tiên National Park still retains the Javan rhino image on its logo, even though this species is extinct in Cát Tiên. The skeleton of the last Javan rhino still stands in the glass case. Though the rhino's death has an impact on the general ecosystem of the Nam Cát Tiên forest area, the lesson it left is strong and convincing enough to promote efforts and dedication to the forest conservation, for other wild species in the forest, for the people's lives around the forest and the future generations■



Vietnam's environmental commitments and obligations under the EU-Vietnam Free Trade Agreement

HOÀNG XUÂN HUY - *Deputy Director
International Cooperation Department, MONRE*

The EU-Vietnam Free Trade Agreement (EVFTA) was signed after many years of negotiations. This Agreement is expected to open up benefits for companies, consumers and workers in the European Union (EU) and Việt Nam, while strengthening respect for the rights on labor and environmental protection. After signing, the Agreement will have to undergo an internal approval process in the EU and Việt Nam to officially take effect.

THE EVFTA'S ENVIRONMENTAL COMMITMENTS, OBLIGATIONS AND AGREEMENTS

The EVFTA consists of 17 Chapters and the environmental contents of the Agreement are in Chapter 17 on Sustainable Development. The commitments and obligations related to the environment are established in the EVFTA to enhance the reciprocity between trade and environmental policies, ensuring that trade and investment activities will have no negative impact on environmental protection. In the Chapter on Sustainable Development, the environmental commitments, obligations and agreements cover specific areas and actions such as: The commitments and obligations on the serious and effective implementation of Multilateral Environmental Agreements (MEAs) to which the Parties are the members (the Convention on Biological Diversity - CBD, the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES, the United Nations Framework Convention on Climate Change - UNFCCC...); Establishment of the environmental protection level: The parties should endeavor to maintain environmental protection activities at a high level and must not reduce the legal effect on the environment to attract trade and investment (the environmental standards and regulations, if adjusted/amended, are allowed to be increased only). The environmental

protection level is decided by each party, but not lower than the committed level in the MEAs; To enhance the willingness and corporate social responsibility (CSR) of businesses in production and business according to international rules and guidance of the Organization for Economic Co-operation and Development (OECD); To strengthen the conservation and management of natural resources; To prevent illegal logging and illegal fishing...

Thus, it can be said that both the EU and Việt Nam respect and set goals for sustainable and harmonious development between economic development and society and environmental protection. Therefore, the environmental commitments and obligations established in the EVFTA impose a demand on the responsibilities of the Government, enterprises and all citizens to seriously and effectively implement these commitments and obligations. For enterprises, the EVFTA is a new generation agreement with very high standards. Therefore, besides meeting requirements and standards on trade in goods and services, Việt Nam also needs to comply with and meet high environmental requirements and standards. The EU is a group of developed European countries with very high and strict requirements on environmental standards, quality and safety for goods imported from abroad. Therefore, for goods and on the environment, the EU issues strict regulations on relevant technical regulations and standards. For example, products must be labeled with the CE mandatory brand for goods (as prescribed) and be treated as a commercial passport into the EU market) in order to be considered to meet safety and environmental regulations and be circulated on the EU market. Over the past time, the EU has been paying more and more attention to the factors showing the environmental friendliness of the products and the corporate social responsibility in its goods and services trading.

SOME CHALLENGES WHEN THE EVFTA TAKES EFFECT

In the current situation, when the EVFTA takes effect, it will be difficult for enterprises to immediately meet the requirements of high standards and regulations related to the environment, especially for enterprises with outdated production and business technologies. At the same time, many enterprises lack information or do not know the accurate and timely information about the EU's environmental standards, requirements and conditions, which will affect production and business activities. Recently, although many enterprises have changed in their awareness of environmental protection, it is still limited due to development level or economic difficulties.

For regulatory agencies at all levels, the signed EVFTA will have difficulties in implementing environmental commitments and obligations, resulting from a number of reasons such as the system of policies and laws on the environment is still in the improvement process. Recently, many environmental policies and laws have been developed and enacted; however, in some areas related to the environment, there is a lack of specific regulations and an overlap in management, leading to difficulties and shortcomings in the management and implementation of international commitments and obligations. The implementation and compliance with laws on environmental in general are not really effective as expected. Although there are laws and regulations on environmental protection, along with strengthening inspections, examinations and sanctions against violations of environmental laws, there are still many violations of environmental laws that are detected. The capacity of the staff in dealing with international trade issues related to the environment has not met the requirements. The financial resources for environmental protection activities are limited. The financial difficulties will lead to difficulties in adequately investing in modern technologies for environmental protection management. This will lead to difficulties in meeting and complying with the obligations and high standards committed in the Agreements. Along with preferential tariffs and gradual removal of trade barriers, the import of goods, supplies and technologies under conditions of environmental standards is still lower than that of international standards in general, especially of developed countries, which leads to the risk that Việt Nam becomes a place to store and use outdated equipment and production lines, and consume low quality goods. There is still a situation where local authorities are applying various incentives to attract FDI, while not really paying attention to environmental protection and sustainable development.



▲ *The Signing Ceremony of EVFTA*

PROPOSAL OF SOLUTIONS

In the coming time, when the EVFTA takes effect, Việt Nam needs to be prepared and ready for the implementation of environmental commitments and obligations, in the immediate future, it is necessary to have a specific and comprehensive action plan to address the above-mentioned difficulties and challenges, focusing on a number of main contents such as:

Perfecting policies and laws: Reviewing, amending, supplementing and perfecting the system of policies and laws on environmental protection, ensuring the uniformity and consistency of the domestic legal system, compatibility with environmental commitments and obligations in the MEAs and the EVFTA. Amending, supplementing and perfecting the system of policies and Laws on environmental protection, especially perfecting the system of appropriate and harmonized (asymptotically) environmental standards and regulations with the regional and international systems of standards and regulations.

Strengthening the inspection, examination and supervision of the observance of the Law on Environmental Protection, ensuring strict control over those sectors and fields likely to cause high environmental pollution, strengthening responsibilities of organizations and individuals concerned, increasing sanctions to deal with environmental law violations.

Strengthening (human and financial) resources: Training and fostering knowledge about trade related to environment and environment related to trade, as well as strengthening the capacity and level of international trade dispute settlement, including disputes related to environment for the contingent of managerial officials, legal officials/experts of the concerned Ministries and branches; investing in activities related to environmental protection; developing mechanisms to encourage the private sector to participate in trade and service activities related to environmental protection in order to make full use of resources from enterprises and people for environmental protection activities.



IEC, awareness raising: Organizing information and widely propagating about compliance with environmental commitments and obligations in the EVFTA for all subjects, especially for enterprises; providing information on the consequences and impacts of violations of these commitments and obligations and encouraging participation and propaganda to raise the awareness of people and enterprises in environmental protection activities.

Establishment of coordination mechanisms to address environmental issues in the EVFTA: The contents of environmental commitments and obligations in the EVFTA involve many ministries, sectors and fields. Therefore, in order to ensure the serious and effective implementation of these commitments and obligations, it is necessary to establish mechanisms of coordination and inter-sectoral cooperation at the central and local levels and between the central and local levels. In addition to coordination and cooperation in the implementation of commitments and obligations, these coordination mechanisms are particularly necessary and important when dealing with emerging issues (for example, trade disputes related to the environment) during the implementation of the EVFTA.

For enterprises, in order to continue to maintain a foothold in the market, expand and develop goods and services to the markets of developed countries, the important things are: Raising awareness and responsibility of environmental protection of enterprises, learning and grasping information on environmental requirements and standards of developed countries and markets, attaching importance to solutions on management and investment in technological innovation to meet the environmental high standards of these countries and markets■

Honoring scientists for their contribution to the environment



▲ Prof. Trịnh Văn Tuyên

The Vietnam Academy of Science and Technology gave the Trần Đại Nghĩa awards to four groups of scientists for having originated four projects and made great contributions to the country's socio-economic development. This year's nominees were produced by both domestic and overseas scientists in nine fields of natural science and technology (Mathematics; Mechanics; Information science and computer science; Physics; Chemistry; The sciences of life, earth, marine, environmental and energy). One of the four pieces of outstanding research was the "Treatment technology for hazardous industrial and medical waste". The work was developed by the group of three scientists - Prof. Trịnh Văn Tuyên, Dr. Nguyễn Thế Đồng and engineer Mai Trọng Chinh - and the group had received an intellectual property certificate and worldwide recognition for their work as well as brought the idea into practice. On the occasion of the award, the Vietnam Environmental Administration Magazine (VEM) speaks to Prof. Trịnh Văn Tuyên, Director of the Environmental Institute, about his efforts to achieve brilliant results and contributions to the country's socio-economic development.

• **VEM:** *Congratulations for your magnificent award in the science scholar community. How do you feel about it?*

Prof. Trịnh Văn Tuyên: It is an honor for me to receive the Trần Đại Nghĩa award in 2019 but it is not mine only. This award must be dedicated to other scientists who have supported me with their expertise, knowledge and experience. It is an honor for me to have such great assistance.

• **VEM:** *Can you tell some advantages of the treatment technology for hazardous industrial and medical waste in comparison to others in Việt Nam as well as its practical applicability in the modern day?*

Prof. Trịnh Văn Tuyên: The treatment technology focuses on two main subjects: solid waste and waste water. We make a selection of some technologies which are used to burn solid waste, bio-filter natural air, make biological membrane for waste water treatment, and produce absorbent material in emission treatment – to create hazardous waste treatment devices. After 15 years of working, the scientists succeeded with the devices VHI-18B and IET-BF that have been installed at 50 hazardous industrial and medi-



cal waste treatment facilities and 25 waste water treatment plants across the country. For example, the VHI-18B solid waste incinerators are stationed at Thái Nguyên Tuberculosis Hospital and Thái Nguyên C General Hospital - which can process 10 - 20 kilos of waste per hour - and the waste water treatment devices IET-BF are operated at Mộc Châu Milk Company in Sơn La Province and the Hưng Yên Mental Hospital - which can handle 130 - 360 cubic metres of waste water a day.

The advantages of IET-BF technology is the stable functioning, which means the more the machine works, the more efficient it gets because the biological membrane will get thicker and wider. On the other hand, because of the unique design of the bio-filter, we don't need to provide extra air for the filtration while operational expenses for the device are quite low. The technology is suitable for treating waste water discharged from medical and daily-life activities. But it needs combining with other types of technology to deal with different kinds of waste water.

Meanwhile, the treatment technology for burning hazardous solid waste is more complete, durable and fully automated. The whole device is split into smaller modules so it is easy to be transported and installed. The operational expenses are much lower than other types of incinerators, even imported ones.

It is verified that VHI-18B and IET-BF technologies have been being used efficiently in dealing with Vietnam's industrial and medical waste as they are cost-saving, easy to operate, helpful for environmental protection and useful to improve living conditions for Vietnamese people.

With this research, the scientists have received many licenses such as the Patent License No. 4271 issued on April 27, 2004 in the Decision No. A1734/QĐ-DK by the Intellectual Property Office for "Hazard-



▲ Prof. Trịnh Văn Tuyên (fifth from left) and other scientists receive Trần Đại Nghĩa awards 2019

ous solid waste incinerator"; Patent License No. 11841 issued on September 30, 2013 in the Decision No. 54205/QĐ-SHTT by the Intellectual Property Office for "Natural air bio-filter and its use for waste water treatment"; Solution License No. 1580 issued on October 3, 2017 in the Decision No. 68990/QĐ-SHTT by the Intellectual Property Office for "Biological membrane for waste water treatment".

• **VEM: What difficulties have you encountered when working on your project?**

Prof. Trịnh Văn Tuyên: The devices have been functioned properly at the mentioned facilities and our team is working on the ways to improve their efficiency and lower the expenses. The expenses are too high while the devices might be at risk of not being used widely. Meanwhile, the devices would release various types of hazardous emission when operating in high temperature. If the selected facility and its staff are unable to pay attention to the manual and maintenance guidance, the incinerator would be damaged, pulling its working efficiency. To make sure the device worked properly, our engineers have always been willing to support the selected facilities with the maintenance of the devices even when the warranty term is over.

Besides, there are challenges in promoting the devices as scientists are inexperienced and unwilling to do marketing campaign. Moreover, we need to gather a group of people working in different fields such as mechanics, automation and construction to assure the devices were ran accurately and constantly.

Human resource is also another trouble. As our country's per capita income is still low compared to many others, a lot of people have to give up on sciences and work for living. So scientists have to sacrifice so much to produce great achievements.

• **VEM: What do you recommend Government agencies do to make this technology more popular in Việt Nam?**

Prof. Trịnh Văn Tuyên: In recent years, the strong industrial development in many cities and provinces has raised public concerns about the administration of waste disposal,



requiring new technologies to handle hazardous waste. Therefore, I think the Government's policies should be reasonable to encourage the Vietnamese use the technologies provided by local businesses and organizations. Besides, there should incentives to boost the study of science projects that are highly applicable in practice. The Government must also raise the awareness of local businesses, people, ministries and sectors about how important science and technology are towards environmental protection. Environmental management officials at all levels must be trained regularly to improve the quality in operating waste treatment facilities in the local areas by using sciences and technologies. Meanwhile, local authorities and Government offices must work on at-source waste classification to cut the load of hazardous waste, lower treatment expenses and promote the advantages of the two works so that people will change their attitude towards the issue, thus raising the whole society's awareness. At the same time, the Government should develop new rules to attract and diversify both domestic and foreign investment, encourage businesses and science research institutes to study and use biological sciences and technologies in economic development and environmental protection.

• **VEM: Thank you Professor!**

MAI HƯƠNG
(Implemented)

New study shows path for reducing the environmental impact of making plastics

Manufacturing products like steel, plastics and iron is the world's top source of energy consumption and it also releases carbon dioxide as a byproduct. Researchers have long been looking for ways to make these processes more eco-friendly and now chemical engineers from Massachusetts Institute of Technology (USA) have come up with a novel approach to making plastic that will reduce the impact of industrial manufacturing on the environment.

It involves synthesizing epoxides, which are chemicals used for manufacturing pharmaceuticals, textiles and plastics. Epoxides are ubiquitous, being used for manufacturing everything from detergents and polyester to antifreeze and the researchers say it's impossible for people to get through even short periods of time without coming into contact with something that was made using epoxides.

Manufacturing them is a long process full of energy-intensive, chemical steps. For example, one step sees an oxygen atom attached to ethylene to create ethylene oxide; this must be done under pressure that is 20 times more than normal atmospheric pressure and at a temperature of roughly 300°C. The energy for this type of manufacturing generally comes from fossil fuels. Other epoxides are even worse, being made with explosive peroxides and irritants like calcium hydroxide.

The researchers came up with a more sustainable approach that was inspired by the water oxidation reaction that uses electricity to split water into electrons, protons and oxygen. Their method also uses electricity and it can be carried out at room temperature and under normal atmospheric pressure without releasing carbon dioxide as a

byproduct. They believe they could reduce the carbon footprint of the process even further by turning to renewable sources like wind or solar to power the epoxide conversion. In addition, their method uses less voltage than that used by a standard AA battery - just one volt of electricity, to be precise. The study's author, Karthish Manthiram said: "What isn't often realized is that industrial energy usage is far greater than transportation or residential usage. The researchers have successfully used the process to create the cyclooctene oxide and they are now adapting it to create other epoxides and make the overall process even more efficient overall.

According to their estimates, the process could produce ethylene oxide at scale for around \$900 per ton; the current methods run around \$1,500 per ton. Moreover, because the method also happens to generate hydrogen as a byproduct, its economic viability could be increased even further as the hydrogen it produces can power fuel cells. The researchers have already filed for a patent for their innovative method and are now working on developing their approach with a view to commercializing it for use in manufacturing. They are also looking into how electricity can be used to synthesize other chemicals.

The premise behind this new method is simple, but the potential savings in terms of environmental impact is huge. It is becoming increasingly clear that basic and more natural approaches can really help preserve our planet, whether it's using natural pest control methods instead of cancer-causing pesticides or finding novel ways to reduce the chemicals and waste associated with manufacturing.

PHƯƠNG LINH
(Pollution.news source)



From the details of using banana

VŨ LÂN - Journalist

Food products are now wrapped in banana leaves and other natural materials instead of nylon and plastic bags at supermarket chains Big C, Co.opmart and Saigon Co.op in the three big cities Hà Nội, Đà Nẵng and Hồ Chí Minh City. The new move has been well-received by the public and even the Prime Minister Nguyễn Xuân Phúc sees it a model for the business community, associations, supermarkets, restaurants and hotels - those that work in the services sector - to follow: Say no to nylon and plastic bags to protect the environment.

In response to the Prime Minister's request, many companies have begun importing items that are friendly to the environment for food packaging. On April 1, 2019, the Vietnam Central Group was the first business to start doing so and its activity last for one month. The policy was then executed at all of the Group's supermarket while other businesses also started doing the same like Co.opmart and Co.op Food in Phan Thiết, Quy Nhơn, Tam Kỳ and Hồ Chí Minh City. Other retailers such as Intimex and Hapro - members of the BRG Group - are in talks with their suppliers as the firms want food supplies to be wrapped in leaves when being delivered to the retail store. From a Company's sole act, the use of leaves in packing food products has become popular to all retailers and it helps change the attitude of producers, sellers and consumers towards environmental protection.

It's easily seen that using environmentally-friendly materials for food packing brings is more gainful than using plastic and nylon bags. Leaves had been used to wrap food for thousands of years in Việt Nam before nylon and plastic items were created. As a tropical country with abundance of trees and plants - unlike others in cold, dry and frozen weather conditions - the Vietnamese agriculture production and consumption are highly productive. After a long history, farmers still use leaves, branches and stems left over from harvested plants and vegetables to pack (wrap and tie) agricultural products when they are harvested, transported and traded. Among the natural materials being used, banana tree may be a typical example as it is some kind of highly decomposable and environmentally

- friendly plant, whose parts are totally capable of replacing plastics and nylon.

As the Vietnamese culture originated from the wet rice culture, natural materials, especially plants, are useful in living and working activities. Farmers don't carry packages and bags when harvesting the crops. The only things they bring to the field are sickle, two baskets and carrying pole. Each bunch of harvested paddies is tied by one single paddy, then the paddies are carried back to the home ground for being threshed and dried in the sun. The same action is also done with other types of crop like sugarcane and vegetable. In the coastal area, a crab is tied with soaked banana sheaths so it remains humid and fresh. All of those actions help keep the items fresh, cheap and what is left from them isn't harmful to the environment.

Rope is in use if someone wants to tie something firmly and rope is also naturally made. Rattan basket, creel and sedge bag were once chosen by women in the past when going to the market. For kids, the scene of the mothers and grandmothers coming home from the market and taking along some buns being covered inside a bunch of banana leaves has remained the very best of their memories.

The Vietnamese tradition of using natural materials forces local people to find ways to boost plantation and production to improve the resources for farming and serving the daily life. Because Việt Nam was once an agricultural economy, the demand for raw materials such as bamboo to make farming, planting and fishing tools was high all the time. Bamboo, banana and other trees were closely attached to the Vietnamese people for generations as they shadowed the land and inspired the poetry to make everlasting sentences.

Jute, a multi-task tree, can provide food for human and cattle, wood for burning and raw material for craft villages to produce things like bag, mat and rope. Meanwhile, harvesting or collect-



▲ Vegetables are wrapped in banana leaves at Big C Thăng Long supermarket (Hà Nội City)



ing hyacinth in the past was quite a good job for local people as demand for hyacinth - as a raw material - to make mat, craft and bag for both domestic and overseas markets. There are many other examples that had symbolized the beauty of the Vietnamese consumer culture - which is attached to the agriculture, nature and environment - before plastic and nylon items flooded the country.

However, in just a short period of a few decades, the production of single-use plastic products (nylon bag, straw...) has emerged and overshadowed Vietnam's environmentally-friendly consumer culture as plastic items are cheap, easy to use and popular. One of the man-made disasters nowadays is plastic waste covering every corner of Việt Nam. Single-use plastic bags, bottles, pipes and straws have penetrated into every corner of daily life. Even local specialties that used to be wrapped in leaves are now packaged in plastic boxes and bags such as *cốm* (green rice) - a Vietnamese seasonal dish associated with autumn. It often takes people a second to get rid of a nylon or plastic bag, but it will take hundreds to thousands of years for the bag to decompose. Everyone of us has realized that the overuse of nylon and plastic packages may bring benefits in short term but damages the environment (land, water and air) and living conditions of both human and animals for the next hundreds and thousands of years. It is time we had to restore, develop and preserve our naturally-friendly living style, which is using environmentally-friendly materials in the life.

Buying environmentally-friendly products has become a new trend all around the world and Vietnamese items are becoming the center of attention. If we take a look at the retailer Amazon.com's website, Vietnamese local crafts are often sold at very high prices. For example, a paddy broom is worth \$11,99 or VND 278.000 while a cone hat is sold for \$18,99 or VND 430.000. Perhaps, the market demand for environmental friendliness is what makes those Vietnamese products so expensive.

If Việt Nam wants to preserve its environmentally-friendly consumption tradition, the Government needs to constantly educate people and raise their awareness to shape an environmentally-friendly consumer culture. In the meantime, businesses and consumers are encouraged to apply traditional methods that are friendly to the environment. There should be stronger penalties, punishments and taxes on the producers of single-use plastic and nylon bags. Besides, anyone that quits using nylon and plastic bags must be credited so that others are influenced by such action. These are the long-term, urgent solutions which will help keep the Earth green forever.■

Hồ Chí Minh City: Waste collection crisis proves mind-boggling

Recycling or incinerating the 10.000 tons of waste produced per day in Hồ Chí Minh (HCM) City is no easy task. The outdated and mostly unregulated waste collecting system only adds more obstacles to the situation.

According to HCMC's Department of Natural Resources and Environment, the City strives to dispose of up to 60% domestic waste by means of recycling and incineration by 2020. Experts, however, doubt the plausibility of this goal by pointing out that the current waste-collecting system has yet to reach an "industrialized and modernized" scale. More specifically, a majority of waste collectors' establishments still use makeshift and outdated vehicles to collect garbage, employing a mostly unknown number of workers on a city-wide scale. The indecorous vehicles usually result in leakage and scattered trash, making the City an unsightly scene wherever these wagons appear. On the other hand, due to the large number of unregulated workers, wastes are often time not properly sorted for recycling and sometimes garbage bags can be left piling up for days without being collected.

According to the HCMC Department of Natural Resources and Environment, nearly 2.200 makeshift vehicles are being used by private waste-collectors companies and co-operatives. In addition, there are about 3.500 more modern equipment and vehicles used by local public service companies and HCMC Urban Environment Co., Ltd.

The City has been encouraging waste collectors' businesses to get loans from the Environmental Protection Fund at with preferential interest rates to replace their outdated vehicle, said Mr. Nguyễn Trung Tuấn Anh, Head of the Solid Waste Management Division under the Department of Natural Resources and Environment. The result, however, is not looking bright. According to Mr. Tống Văn Thơm, representative of District 5 waste-collectors cooperative, most self-regulated establishments cannot afford vehicle and equipment renewal and hire of vehicle operators and collectors at a household level.

On the other hand, many businesses like HCMC Urban Environment Co., Ltd have made efforts in renovating their equipment, but still cannot utilize them to the fullest due to an already limited number of areas that need their service being shared among too many collectors' establishments. Moreover, waste sorting at the source can only be done with enough equipment and manpower and must be narrowed down to at least an urban area scale. The success of this method has already been proven at Tân Phú District's urban areas since 2013. Environmental experts encourage HCMC to shift the waste collecting duty onto businesses with sufficient competence and workforce, and regulate the returning costs and expenses for this service more reasonably.■

ĐỨC ANH (SGGP source)



NESTLÉ VIETNAM CO., LTD: Realizing commitments on environmental protection and sustainable development



▲ Mr. Ganesan - General Director of Nestlé Vietnam

Nestlé Vietnam, Top 10 Vietnam Sustainable Enterprises, continues to affirm its commitment to the implementation of environmental protection and sustainable development goals launched by the Prime Minister and the Nestlé Group. At the same time, Nestlé Vietnam is also a pioneer in realizing a series of initiatives as well as cooperating with enterprises in response to the “Month of Action for the Environment”. On this occasion, the Vietnam Environment Administration Magazine (VEM) had a conversation with Mr. Ganesan Ampalavanar - General Director of Nestlé Vietnam Co., Ltd. on the implementation of initiatives on plastic waste reduction and environmental protection.

• VEM: Could you please tell us the reason why the Company participated in responding to the movement of anti-plastic waste and environmental protection launched by the Prime Minister and the Ministry of Natural Resources and Environment (MONRE)?

Mr. Ganesan: Today, climate change and environmental pollution are more urgent than ever, especially the problems of plastic waste. We all realize that plastic waste is a complex problem that cannot be solved by an individual or an organization, but it requires a synchronized solution with the long-term participation and commitment to implementation by all agencies, organizations and individuals. This is also evident in the National Strategy on Environmental Protection to 2020, with a vision to 2030, in which the Government has set out policies to socialize environmental protection, thereby, calling upon organizations and individuals to participate, contribute initiatives and take practical actions.

From Nestlé Group, we have made a commitment to recycle and reuse 100% of product packaging by 2025 globally. To realize this commitment, Nestlé Vietnam has cooperated with enterprises in the industry, social organizations, as well as cooperating with Government agencies to implement many initiatives and organize many activities recommended by the movement of anti-plastic waste and environmental protection.

• VEM: To fulfill this commitment, what is your solution to the goal of recycling and reusing product packaging without discharging solid waste into the environment?

Mr. Ganesan: To realize the aforementioned goal, Nestlé implements a series of initiatives, through cooperative activities, in collaboration with many Government's environmental organizations in various fields, specifically: The Company shall pioneer cooperation with enterprises in the field of consumer goods and packaging to sign the Packaging Recycling Organization Việt Nam (PRO Việt Nam) with the desire to contribute to a green, clean and beautiful Việt Nam and promote the circular economy model through making product packaging collection and recycling process done in a more accessible and sustainable manner. To join the PRO Việt Nam organized by the MONRE with the direction of the Prime Minister with the commitment that 100% of waste from the factory is collected and classified at source; 100% of factories do not discharge solid waste into the environment.

On the occasion of responding to the World Environment Day and the Vietnam Sea and Islands Week 2019, the Company participated in the program of awareness raising and supporting to equip waste separation bins at source for people in Bạc Liêu Province organized by the MONRE; Cooperating with Đồng Nai Department of Natural Resources and Environment to plant trees for the environment; Joining the Waste Recycling Festival as an annual activity.

Since 2018, Nestlé Vietnam has been accompanying with the social enterprise mGreen to implement the initiative of “Waste Sorting and Recycling” at residential buildings and schools in Vinhomes Central Park urban area, Bình Thạnh District, Hồ Chí Minh City in order to develop a habit of separating waste at source for people and pupils to support the collection and treatment of recyclable waste.



▲ The representative of Nestlé Vietnam donates trash bins to people in Bạc Liêu



▲ Nestlé Vietnam accompanies mGreen to implement the project in the Primary and Secondary Schools

In the summer of 2019, the Company launched the program “Spread the summer joy with Nestlé” in order to raise consumers’ awareness and call for people to keep the environment clean, beautiful and put waste in the right place, which was implemented in a series of public places in 19 provinces/cities across the country with more than 13,000 bottles of used products being collected.

For Nestlé Vietnam, the above activities and objectives of environmental protection are carried out consistently and synchronously in all localities where the Company has production and business activities. In addition, the Company continually organizes activities to contribute to raising employees’ awareness of plastic waste. One of the typical activities is Nestlé Cares, a volunteer activity to clean the beach held on June 9th, 2019. In a day, more than 300 employees of Nestlé Vietnam cleaned the beach in Phước Hải Town, Bà Rịa - Vũng Tàu Province, more than 1,1 tons of all kinds of garbage was collected and transported to the centralized waste treatment area.

• **VEM:** It is known that since 2018, Nestlé Vietnam, together with mGreen, has just launched the program of “Waste Sorting and Recycling” in residential buildings and schools in urban areas. This is an initiative of a series of activities aimed at raising awareness and changing behaviors that contribute to protecting the environment and the planet. So how does this work now?

Mr. Ganesan: Within this Project, Nestlé Vietnam continues to accompany mGreen to implement the project at the Vinschool Central Park Primary and Secondary Schools. In the first 6 months of 2019, the project, in collaboration with the schools and students, has sorted and collected more than 2,2 tons of waste of all types in the schools. In addition, the Project also established an Environment Ambassador Club of students who are the key to propagate about environmental protection in all classes. It is expected that this year we will expand the project at some primary and secondary schools in Bình Thạnh District, Hồ Chí Minh City, attracting the participation of more than 3,500 students. Our goal and priority is to strengthen the connection with the schools and parents to spread the message and join hands in environmental protection.

• **VEM:** In order to effectively implement the commitment on anti-plastic waste and environmental protection in the long-term for the future, what are your recommendations and proposals to the authorities?

Mr. Ganesan: We persist in implementing initiatives to realize the goal of 100% recycling and reuse of product packaging by 2025 that the Nestlé Group has set. In addition, Nestlé Vietnam is also a pioneer in applying the circular economy model, an economic model in which the design, production and service activities set out the goal to extend the life of materials and eliminate negative environmental impacts throughout its operations. As a result, Nestlé Vietnam has been honored to be voted in the Top 10 Vietnam Sustainable Enterprises.

In order to effectively implement the commitment on anti-plastic waste in the long-term, we believe that it is necessary to promote and expand the circular economy model. At the same time, the Government and related parties need to pay more attention to developing an packaging collecting and recycling ecosystem, aiming to minimize the amount of packaging discharged into the environment as well as to have appropriate mechanisms and policies in encouraging consumers and enterprises to have initiatives and actively contribute to the anti-plastic waste activities in particular and environmental protection in general.

• **VEM:** As a big brand in the world with more than 150 years of operation, how does Nestlé share experiences and contribute to the sustainable development of Việt Nam?

Mr. Ganesan: Last July, Deputy Minister of Natural Resources and Environment Võ Tuấn Nhân had a meeting and worked with Nestlé Vietnam. In addition to sharing on initiatives and achievements, we are committed to continuing to share practical experiences and enhance support for advocacy activities on environmental protection, towards the sustainable development and the up-coming “National Conference on Solid Waste Management” chaired by the Prime Minister.

• **VEM:** Thank you very much!

PHẠM ĐÌNH (Implemented)



Inauguration of Fujiwara Solar Power Plant in Bình Định



▲ Deputy Prime Minister Trương Hòa Bình and representatives cut the ribbon to inaugurate the Solar Power Plant in Bình Định Province

On August 19, 2019, at Nhơn Hội economic zone, (Quy Nhơn City, Bình Định Province), Fujiwara Bình Định Việt Nam Co., Ltd. held the inauguration ceremony of Fujiwara Bình Định Solar Power Plant (SPP), with Deputy Prime Minister Trương Hòa Bình in attendance.

Fujiwara Bình Định SPP has a capacity of 50 MWp, built in an area of 60 ha, located in the west of Phương Mai mountain. The project has a total investment of VND 1.300 billion, capital of the Japan's Fujiwara Company (Japan). After two years of construction, the plant was run on a trial basis starting in June 2019 and has now been put into official operation and joined the national grid. The solar plant was connected to the 110 kV Nhơn Hội power station, providing about 3.000 kWh with revenues of some VND 550 million

Deputy Prime Minister Trương Hòa Bình expressed his appreciation for the project, the first of its kind by Fujiwara in Việt Nam, which marks a new milestone in diplomatic and investment relations between Việt Nam and Japan. The project also contributes to the Government's target of increasing the production of renewable and clean energy. The Deputy Prime Minister asked Fujiwara Bình Định Co.Ltd. to operate the plant effectively and use more local workers to contribute to the local budget and economic development■

BÌNH MINH (VietnamEnergy source)

Long An-based technology park project to treat over 36.000 tons of waste per day

The Green Environmental Technology Park (GETP) owned by Vietnam Waste Solutions (VWS), with a total area of 1.760 hectares, will have the capacity to treat 36.500 tons of waste each day by 2050.

A representative of VWS said the GETP was developed to handle all sorts of garbage, including household, hazardous, medical, industrial and electronic wastes, sewage sludge, wastewater and used tires. The inauguration ceremony of the two bridges (VWS1 and VWS2) leading to the GETP was held on March 27, 2019 in Thủ Thừa District, (Long An Province), funded by Vietnam Waste Solutions - Long An (VWSLA).

VWS General Director David Duong remarked that the operation of the project was expected to last 50 years and would be funded in three phases. The first phase, lasting until 2025, will treat an estimated 21.400 tons of waste per day. Meanwhile, in the second phase from 2026 to 2035 and the third phase until 2050, the GETP will handle 26.800 tons and 36.500 tons each day, respectively. A total of US\$ 450 million will be poured into the first phase of the project.

The representative noted that the project employs four treatment methods: Biotechnological processes, recycling, waste incineration for energy generation and waste burial. He said that when in place, apart from processing all sorts of waste, the park would be able to treat the waste from Hồ Chí Minh City, Long An Province and provinces in the Southern key economic zone.

The establishment of the GETP will contribute to sustainable environmental protection, creating jobs for local laborers and fostering the economic growth of Long An Province as well as the Southern key economic zone.

Vice Chairman of Thủ Thừa District People's Committee Phan Văn Tới remarked that Long An Province alone has 600 tons of waste in need of treatment daily, half of which is handled at the Tâm Sinh Nghĩa treatment facility in Long An's Thạnh Hóa District and the remaining 50% is treated at Đa Phước Waste Treatment Complex in Bình Chánh District and Phước Hiệp Waste Treatment Complex in Củ Chi District. The two bridges and approach roads were constructed to serve the GETP, playing a key role in its success■

MAI HƯƠNG (VNS source)



Hanwha Group launches Solar-Powered Mekong river clean-up campaign in Việt Nam

Hanwha Group (Korea), with support from the Vietnam Environment Administration (VEA) and the Global Green Growth Institute (GGGI), launched the Clean Up Mekong campaign in Vinh Long Province. The campaign will combat water pollution caused by floating waste in the Mekong river. Under the campaign, Hanwha Group donated two solar-powered boats to Vinh Long Province that to be used to clean up the river. Vinh Long is the first province to pilot project. If it proves success, Hanwha will plan to expand the campaign to other provinces in Việt Nam.

Ahead of the handover ceremony for the solar-powered boat, Hanwha carried out social media based campaign to raise public awareness of the environmental issues caused by water pollution and the importance and benefits of environmentally - friendly energy sources. The campaign's launch was a success, with 3.3 million video views and more that over 1.000 comments being posted on Facebook in just a week.

The Mekong is a trans-boundary river that runs through China, Myanmar, Laos, Thailand, Cambodia and Việt Nam, before discharging into the sea. It carries 475 billion km³ of water annually and supports over 70 million people who rely on it as their main source of water.



▲ The two solar-powered boats donated by Hanwha Group to Vinh Long Province that to be used to clean up the Mekong river

Indiscriminate waste disposal and sewage discharge along the river's length, however, has turned the Mekong into one of world's ten most polluted rivers. The pollutants ultimately float into the ocean and threatens all marine life. The Clean Up Mekong campaign aims to remove waste before it enters the ocean, at the riverside city of Vinh Long.

Powered and propelled by Hanwha Q CELLS' Q.PEAK solar modules, the boat will be used to scoop up waste in the Mekong river without emitting any greenhouse gases or other pollutants. Further the boat is also silent, resulting in minimal disturbance to local wildlife. Chairman and General Director of Hanwha Life Vietnam (a member of Hanwha Group) Back Jong Kook said that cleaning up the Mekong river is a truly meaningful project to protect the local environment and improving the quality of life for Vietnamese people. This activity once again affirms the mission of Hanwha Group and Hanwha Life Vietnam always wants to contribute more to Việt Nam as a member of the local community■

QUỲNH ANH (VEN source)

Program to promote development of rooftop solar power launched

Renewable energy is expected to generate 6,5% of the country's total electricity in 2020 and 10,7% in 2030, Việt Nam also aims to save 10% of energy of the total power consumption in 2020. The information was released by the Electricity and Renewable Energy Authority (EREA) of the Ministry of Industry and Trade at a workshop held in Hồ Chí Minh City on July 25, 2019 to launch a program to boost the development of rooftop solar power in Việt Nam.

According to Director of the EREA Phương Hoàng Kim, the Vietnamese Government has been more aware of the role

of solar energy and energy saving in maintaining economic growth, ensuring energy security and protecting public health and environment.

The Vietnam Low Emission Energy Program (V-LEEP), funded by the US Agency for International Development (USAID), is designed to attract investment from the private sector to invest in clean energy.

According to Director of the USAID Michael Greene, through this program, the US Agency will support the Vietnamese Government to harmonise national strategies, laws, policies and regulations to encourage the development of clean energy.

Earlier, the Ministry of Industry and Trade had approved a program to develop rooftop solar power in Việt Nam between 2019 and 2025■

NHẬT MINH (VNA source)



Tetra Pak Company commits to build a low carbon, circular economy

Tetra Pak (Switzerland), the world's leading food processing and packaging solutions company, announces its Sustainability Report 2019 that highlights its strong commitment to build a low carbon, circular economy and a sustainability approach that covers the entire value chain, thereby reducing its climate change impact and eliminating carbon emissions from economies. Tetra Pak is dedicated to support all of the 17 United Nation Sustainable Development Goals (SDG) and prioritized those where the Company could have the greatest influence and impact. The Report also features Tetra Pak's achievements in its sustainability journey based on its cutting-edge technologies, good management and future human resources... The Company has been implementing action plans to reduce the lifecycle impact of its packaging, processing and service solutions.

FULLY RENEWABLE PACKAGE

In 2018, Tetra Pak took the first steps to address marine litter by investing heavily on a new closures portfolio in line with our strategy to build a fully renewable package. The Company plans to spend approximately 100 million Euros per year for the next five years on developing alternative solutions to on-pack plastic straws, such as paper straws, tethered caps and other drink-from systems. Tetra Pak expects to industrialise production of paper straws on a scale that will meet global demand by 2025. It will incorporate a minimum of 2 percent recycled plastics content (2 percent in Europe) on average across beverage cartons by 2025, subject to technical and economic availability of suitable foodgrade recycled plastic.

RESPONSIBLE SOURCING

Tetra Pak sources 3,1 million tonnes of base materials (paperboard, polymer and aluminium) every year. The Company fully understand that the way it buys has a profound impact on people, the environment and the economy. Some 71 percent of the raw material Tetra Pak put in our carton packages is paperboard. In 2018, Tetra Pak reached the major milestone of helping customers produce more than 460 billion FSC (Forest



▲ Tetra Pak Việt Nam



Stewardship Council) labelled packages since 2007. Tetra Pak has been on the CDP A-List Forests Program for the last three years in recognition of its work in managing and mitigating risks associated with the sourcing and production of timber.

Tetra Pak's long-term ambition is for all chilled and ambient packages to use renewable and/or recycled polymers. Tetra Pak's supplier is also establishing a Bonsucro Chain of Custody from sugar cane plantation to their production facility for renewable polyethylene. 60% of the bioethanol used for our renewable polyethylene was sourced with Bonsucro Certification.

HEAVY INVESTMENT ON RECYCLING

Having invested more than 25 years of exploring and evaluating recycling technologies, Tetra Pak visions that all beverage cartons are collected for recycling and zero beverage cartons become litter or are sent to landfill. The Company did invest 20 million Euro to support recycling infrastructures from 2012 to 2018.

ENVIRONMENTALLY-FRIENDLY TECHNOLOGIES

In May 2018, Tetra Pak launched Encapt™ technology for high capacity separators for the dairy industry, helps to reduce the air pressure around the spinning bowl which lowers the air friction and thereby the energy consumption. The combination of the new Encapt™ technology and the established AirTight design enables as much as 40 percent savings compared to alternative separator designs.

In addition, Tetra Pak has made great improvements to its JNSD beverage line architecture by combining UV, filtration and aseptic technologies. The white paper case study shows that the results would be energy reduction of 67 percent and water savings of 50 percent in juice production. The Tetra Pak® Extrusion Wheel lets

customers make premium, uniform, high quality ice cream products at the highest capacity and lowest cost in the industry. The Extrusion Wheel for ice cream products reduces waste in 98% line yield and records a maximum level of 2% waste compared to the usual 8%.

ELIMINATING CLIMATE IMPACTS

In 2016, Tetra Pak was the first - ever Company in the food packaging industry to have climate impact reduction targets approved by Science Based Targets (SBT) initiative. The Company committed to reducing its operational GHG emissions by 42 percent by 2030 and 58 percent by 2040, from a 2015 baseline and to reducing GHG emissions across the value chain per unit of revenue by 16 percent by 2020 from a 2010 base-year. As working on the new strategy, Tetra Pak is looking at how best to ensure alignment with the latest science that indicates the need to keep global temperature increase below 1,5°C.

Tetra Pak is on track to have 80 percent of its operations supplied with renewable electricity by 2020 and 100 percent by 2030. The Company is evaluating how Tetra Pak can directly initiate new renewable projects in the regions where it operates.

SUSTAINABLE SUPPLY CHAIN

Tetra Pak's supply chain accounts for 45 percent of the greenhouse gas emissions in its value chain. Tetra Pak works closely with suppliers and partners to identify efficiencies, both in their operations and through their own supply and the Company formally evaluate supplier sustainability performance annually.

Việt Nam will also see Tetra Pak adopt the global sustainable strategy to its local business. Although cartons are but a tiny fraction of total consumer packaging waste in the country, Tetra Pak Vietnam sustains a strong and abiding commitment to sustainable programs to promote carton package recycling through partnerships. In particular, Tetra Pak Vietnam has established strong partnerships with 4 collectors, 2 recyclers and set up a chain of public drop-off stations in Hà Nội and Hồ Chí Minh City. We are planning to expanding our partnerships in the future to promote carton package collection and recycling. Tetra Pak Vietnam ran a school recycling initiative covering more than 2.000 primary schools across Việt Nam cumulatively during 2007 - 2013. Altogether, a million primary school students were encouraged to fold, flatten and drop their used cartons into bins for recycling. In the years to come, the Company's intention is to expand this model to more than 1.000 schools in Hà Nội and Hồ Chí Minh City■

PHƯƠNG TÂM (VEN source)



Nordic Assistance to Vietnam is actively coordinating and supporting for environmental protection, climate change response

On the occasion of the upcoming National Conference "Promoting the roles of faith-based organizations in environmental protection and climate change responses" to be organized in Huế City, the Vietnam Administration Environment Magazine (VEM) had a talk with Director of Nordic Assistance to Vietnam Mr. Knut Chritansen about this Organization's coordination with competent Vietnamese agencies to effectively implement solutions to protect the environment.



▲ Mr. Knut Chritansen - Director of Nordic Assistance to Vietnam

• **VEM:** *Would you please introduce briefly about Nordic Assistance to Việt Nam (NAV/NCAVN)?*

Mr. Knut Chritansen: NCAVN is rooted in a Nordic program aiming at supporting repatriated Vietnamese in the late eighties. Finding that host communities and people in rural parts of provinces were equally vulnerable the program broadened its scope towards integrated rural development. NCA entered in 1994. The program was implemented in close cooperation with local/provincial authorities and the mass-organisations, Farmers Union, Women's Union, Youth Union... When addressing the emerging HIV and Aids Pandemic, NCA engaged with faith organizations and religious structures, benefiting from experiences of similar interventions in Thailand. CFF became an important partner facilitating an expanded network of FBOs on HIV/Aids work, culminating in the first National Inter-Faith Conference on that subject - in 2006. From 2013 NCA shifted from direct implementation towards civil society partnerships - with FBOs as a priority. At the same time climate change and the environment protection issues came on the top of the agenda. Mobilising religious communities and leaders across the different faith traditions became the focus. Work on climate change responses (CRR) and Disaster Risk reduction management (DRRM) and Emergency Preparedness (EP) where conducted in 4 provinces/cities.

• **VEM:** *In early December 2015, with the support of NAV/NCA and under the co-partnership between the Standing Committee of the Central Committee of Vietnam Fatherland Front and Ministry of Natural Resources and Environment, the first National Conference was organized in Huế City with the participation of all Faith-based organizations in Việt Nam to discuss on the coordination for environmental protection and climate change responses. This was considered as a historic milestone marking the joint commitment from all related stakeholders to protect the environment. Could you please tell us the meaning, purpose, as well as the importance of the event that NAV/NCA has joined and supported?*

Mr. Knut Chritansen: NCA found the initiative taken in Việt Nam, by religious social activists, the VFF and the MONRE, as an important sign of hope and change. NCA is proud and privileged to be part of creating NIC 2015 - and promoting the role of FBOs on such critically important issues.

Climate change is a political challenge and problem, it needs political action. But at the same time, NCA has always stressed that this is a problem driven by human behaviour, of greed, short-term perspectives and a failure to maintain collective responsibility. These issues can not only be addressed politically, they also need to be addressed on an ethical or spiritual level. Faith leaders and the values and ethical reflection promoted by spiritual education can play a forceful part in moving and changing the way we prioritise and act.

• **VEM:** *Being known that Ms. Anne Marie Helland, the General Secretary of NCA Global, did refuse to attend COP 21 but prioritised her time to Huế for the conference and for many people, her availability at the conference was a special gift, a predestined relationship. Do you have any comments or shares about this event?*



Mr. Knut Chritansen: For Ms. Anne Marie Helland, the choice was not so difficult. The historic meeting in Huế, and the process of mobilizing faith actors in Việt Nam has a potential to create very significant impact. Việt Nam is an important country, not just in South East Asia. With almost 100 million inhabitants, and a fast-growing economy, Việt Nam has a skilled and hard-working population, known for both its individual entrepreneurship and strong collective. It is a country that could become a part of the problem, or an important contributor to the solution for today's global problems with environmental degradation and climate change.

When the Government and the faith leaders both come together and demonstrate a commitment to work together and promote solutions and change, NAV/NCA cannot stand on the side-lines with our commitment elsewhere.

• **VEM:** *At the conference, NAV/NCA indicated its commitment to cooperate and support necessary conditions for environmental protection and climate change response activities of faith-based organizations, to build pilot models of religions participating in environmental protection and climate change responses. So, what are the results of this cooperation and support over the years, Sir?*

Mr. Knut Chritansen: An outcome of NIC 2015 was a national joint statement committing all the main faiths and Government at all levels on CCR and DRRM. This has resulted in local commitments at provincial level of local faith groups, DONRE and local authorities. According to the national report of CFF in 2017, there are 355 local initiatives of FBOs on CCR, DRRM and EP.

Central Fatherland Front (CFF) and local chapters have been key to reach out to Faith-based partners of all the different faith traditions, raising their awareness through workshops and training sessions. By this we have provided space for learning and sharing experience among all faith groups in Việt Nam. NCA has been instrumental in setting up management systems for 8 FBOs to ensure the quality of management in emergency relief and project management. 960 faith members have been trained through 12 national training sessions on DRRM, CCR and EP.

Five pilot models have been recognized and launched nationally, 45 rescue teams based in pagodas and churches in Huế and Hải Phòng have been established. We have supported Pháp Vân pagoda in Hà Nội and Pháp Bảo center in Hồ Chí Minh City to develop campaigns on Environmental protection, in close collaboration with local authorities and local people to ensure the ownership of the interventions.

• **VEM:** *After that Conference, the Standing Committee in cooperation with the Ministry of MONRE signed the Guidelines to develop the Coordination Program/Plan between the Central Committee of Vietnam Fatherland Front, the Departments of Natural Resources and Environment of provinces and cities and with faith-based organizations for implementation. What are your assessments about the effectiveness and things to improve for this Joint Program during the implementation in recent years?*

Mr. Knut Chritansen: We appreciate the broad mobilization capacity of FBOs and the support of local authorities. NIC provides conducive platform for learning and sharing best practices of pilot models in target provinces/cities, creating mutual understanding among the FBO leaders and related organizations as well as local authorities. The potential for scaling up best practices on CCR, DRRM and EP is great. For the FBOs to be seen as relevant and competent actors in DRRM and CCR, the quality and professionalism need to be strengthened. Documentation need to be made for learning and sharing.

• **VEM:** *Could you please share the experiences of the world religions on environmental protection and climate change response? In the coming time, will NAV/NCA take what specific actions to support Việt Nam in training and networking religions to endeavour this joint mission?*

Mr. Knut Chritansen: CCR and CRRM remain high on the NCA agenda globally. As for the Vietnam program - NCA is phasing out its direct involvement here but strong efforts are being made to secure the sustainability of programs and the continuation of the facilitating and networking role that NCA have played. International support is being negotiated from Germany (Bread for the World) and Norway (Norwegian Mission Alliance). This will secure the continuation of direct support to FBOs in 5 provinces/ cities with a focus on DRRM and CCR. In collaboration with CFF and local FF, we will continue our capacity building plan and provide learning and sharing arena for FBO leaders, drawing on experts and experienced practitioners in these fields.

• **VEM:** *In your opinion, what does Việt Nam need to do so that religions go along with the authorities in implementing the joint commitments to protect the environment and respond to climate change effectively and in the long run?*

Mr. Knut Chritansen: The Vietnamese Government is doing good things already, especially through the great support it mobilises through the VFF all across Việt Nam. Many Western actors fail to that the support and facilitation from VFF sometime provides platforms of democratic participation that, any other countries can't match.



At the same time, it is important that the Vietnamese authorities give space and trust to local faith actors, so that initiatives can evolve from the bottom-up. It is often impossible for us as leaders, both in countries and international organizations, to find all the solutions ourselves. We depend on our people to see possibilities and solutions, and to let these flowers grow. This can sometimes be difficult, because Government leaders also have the responsibility to ensure that things are moving in the same direction and according to overall plans and strategies. But if you want to mobilise broad parts of society for action, you also need to trust local groups and leaders to find appropriate ways of doing this in their communities.

Another thing Việt Nam should find solutions for is how both faith actors and other local volunteer groups can be mobilised and organized to complement and support the Government response capacity to emergencies and disasters. Việt Nam has an excellent infrastructure for response, much better than most comparable countries. At the same time, it is very important to not become comfortable, and think that everything is fine everywhere. Many local “flood and storm committees” need more training, more equipment and could benefit from close cooperation with actors like the local Buddhist Families. The Government should promote this local and regional cooperation, to ensure that all forces that want to do something positive are given the opportunity to be part of the solution.

Regarding the organizational structures supporting our joint initiatives we appreciate the formation of the National Steering Committee (SC) of FBOs for CCR, DRRM and EP - with members from CFF, MONRE, NCAVN and representatives of 14 main faiths in Việt Nam. This entity was established in 2017 and meet once a year.

We suggest that this meeting should be strengthened, to reflect the national priorities to CCR, DRRM and EP as well as answering to the different problems raised by FBOs. If FBO leaders are exposed to ideas that can applied for their practical work, we are sure that they will commit to join in. The SC should be an instrument for coordination and sharing amongst the faith groups and between faiths and the relevant Government structures. It can also be a platform for advocacy from



▲ *Strengthening connectivity and building capacity for faith-based organizations*

faiths and local people to Governments and related organizations. We also suggest that MONRE should have budget allocation plan for FBOs to engage in the national or provincial program and invite FBO members to national or provincial events related to CCR, DRRM and EP.

• **VEM: In the Mid-October 2019, in Huế City, there will be the National Conference “Promoting the roles of faith-based organizations in environmental protection and climate change responses”, as a co-chair with Organization Committee, what are your expectations for the outcomes from the Conference and the action plan of NAV/NCA after this Conference?**

Mr. Knut Chritansen: We hope for an inspiring and mobilizing event that reaffirms the commitments of FBO leaders as well as Government institutions and relevant ministries. Celebrating the achievements is important - but the task in front of us is colossal, calling on people of good will and with readiness to act - from all walks of life.

We are pleased to see that the space for FBOs to act as contributors to social development is expanding in Việt Nam. CFF in particular play an important role in building trust and acceptance between the Government and FBOs as well as between the different faith traditions.

Religion and spirituality are an important dimension of people's life - the challenges that we face is not merely a technological or financial issue - it is a moral challenge as well. We will close by quoting SirGus Speth, a US environmental lawyer, advocate and advisor on climate, who said: “I used to think that top environmental problems were biodiversity loss, ecosystem collapse and climate change. I thought that thirty years of good science could address these problems. I was wrong. The top environmental problems are selfishness, greed and apathy and to deal with these we need a cultural and spiritual transformation. And we scientists don't know how to do that”. The roles of FBOs in this process can no more be overlooked.

• **VEM: Thank you very much for the interview!**

PHẠM TUYỀN (Implemented)



ASEAN environment leaders call for cross-sectoral cooperation for biodiversity

Recognising that biodiversity is a cross-cutting concern, environment leaders of the ASEAN Member States (AMS) are set to collaborate with other sectors such as tourism, infrastructure, health, agriculture, cities and urban development and business, in working towards the sustainability of the region's biological resources.

As part of the 30th Meeting of the ASEAN Senior Officials on the Environment (ASOEN), the 21st Meeting of the Governing Board of the ASEAN Centre for Biodiversity (ACB), was held from 8 to 9 July 2019 in Bangkok, Thailand. Some of the meeting highlights include discussions on: mainstreaming biodiversity; new ASEAN Heritage Parks (AHP) nominations; protected area management; preparations for the 15th Meeting of the Conference of the Parties to the Convention on Biodiversity (CBD COP 15); ASEAN's inputs to the Post-2020 Global Biodiversity Framework and other updates on the operations of the ACB as the regional hub for biodiversity conservation in the ASEAN region.

REGIONAL COOPERATION IN PROTECTED AREA MANAGEMENT

The year 2019 marks the 35th anniversary of the AHP Program, a flagship program of the ASEAN that was established to recognise national parks and nature reserves with outstanding wilderness and biodiversity values. It offers opportunities to strengthen regional connectivity and cooperation, as ecosystems and their services transcend national borders. Five protected areas from Myanmar, Thailand and Việt Nam were nominated to join the growing network of AHPs. These are Hat Chao Mai National Park and Mu Ko Libong Non-hunting Area (Thailand); Mu Ko Ang Thong National Park (Thailand); Lò Gò-Xa Mát National Park (Việt Nam); Ngọc Linh Nature Reserve (Việt Nam); and Htamanthi Wildlife Sanctuary (Myanmar).

To facilitate sharing of good protected area management practices and to explore

ways on how to collaborate with various sectors in conserving the now 44 AHPs in the Region, the Sixth AHP Conference (AHP 6) will be held from 21 to 24 October 2019 in Pakse, Lao PDR.

With the theme Sustainability and Innovation for Parks and People, AHP 6 is set to convene representatives from the environment, government, economic, and education sectors, as well as from development partners such as the European Union (EU), GIZ, International Union for Conservation of Nature and the Secretariat of the Convention on Biological Diversity, to name a few.

Parallel sessions will focus on the following: accelerating progress on Aichi Biodiversity Target 11; species and wildlife conservation; innovative financing; business and biodiversity; women, youth, and indigenous peoples and local communities; sustainable livelihood and biodiversity-based products; and ecosystem-based solutions.

ONE ASEAN, 2020 AND BEYOND

Nearing the timeline for the Aichi Biodiversity Targets, the ASEAN is solidifying its position on and inputs to the Post-2020 Global Biodiversity Framework. The Post-2020 global biodiversity framework is a universal framework for action that is aimed at supporting the transformational changes needed to realise the 2050 Vision for Biodiversity - Living in Harmony with Nature.

"Transformational change is needed for biodiversity to address the needs of a warming world, expanding population, and increasing economic inequality in an effective way. We have to work closely together and make a unified statement as one ASEAN - a strong bloc in the upcoming CBD COP 15 in Kunming, China" said Dr. Theresa Munda Lim, ACB Executive Director.

An opportunity to prepare for ASEAN's position in COP 15 will be the Third ASEAN Conference on Biodiversity or ACB 2020, the biggest biodiversity event in the region, to discuss the status of biodiversity in the ASEAN region and synthesis of progress made by the AMS to achieve the Aichi Biodiversity Targets. ACB 2020 will be held from 16 to 19 March 2020 in Kota Kinabalu, Malaysia.

The ACB was established in 2005 by the AMS as a response to biodiversity loss in the region. It supports and coordinates the implementation of activities in the ASEAN region leading to the conservation and sustainable use of biological diversity, for the benefit of the region and the AMS. The ACB was tasked by the CBD Secretariat as the node for the Regional Implementation Support Network on the Aichi Biodiversity Targets on protected areas and endangered species. ■

PHƯƠNG ANH (ASEAN.Org Source)



Japan supports Việt Nam to mitigate greenhouse gas emissions

The Ministry of Natural Resources and Environment (MONRE) has approved a joint project with the Japan International Cooperation Agency to create a roadmap on greenhouse gas emission reduction in Việt Nam.

The project aims to help Việt Nam realise its targets in the Paris climate deal's nationally determined contributions (NDC). The MONRE and the Japanese Agency will join hands to build policies and legal documents outlining plans to reduce GHG emissions in 2020 - 2030. The project will be carried out from 2019 to 2020 with the capital provided by JICA while the MONRE's Climate Change Department will arrange human resources and material infrastructure.

According to a decree on roadmap and measures for GHG reduction in Việt Nam, GHG emissions in the country should be reduced by 6,6 percent by 2025, or about 40 million tonnes of CO₂ compared with business-as-usual (BAU). By 2030, reduction should reach at least 8 percent, or about 62,8 million tonnes of CO₂ compared with the BAU.

NAM VIỆT (*Investment source*)

Korean firms eye investment in renewable energy in Vietnam

Korean investors are keen to invest in renewable energy due to its potential and the incentives that Việt Nam has offered to foreign investors, an HSBC official said. Mr. Phạm Hồng Hải, CEO of HSBC Vietnam, said that electricity was one of the most important investments of Korean businesses into Việt Nam. "Korean firms are now looking to invest in the renewable energy sector".

Việt Nam plans to cooperate with the RoK in reducing greenhouse gas emissions, adaptation to climate change and environmental protection. It will also assist Việt Nam in personnel training and technological transfer in the field, he said. As the country is growing, Việt Nam needs more power sources. Coal and nuclear power could be short-term solutions, but air quality might be affected. If Việt Nam pur-

sues sustainable growth, renewable energy is an area that will attract foreign investment. The Government has issued regulations on tax relief for renewable projects, as well as a strategic plan for renewable energy development and a national power development plan. Power demand is forecast to grow by more than 10 percent each year from now to the end of 2020 and by 8 percent annually during 2021 - 2030.

According to the Vietnam Energy Association, Việt Nam aims to increase renewable power to 32 percent of the total energy mix by 2030 and to 43 percent by 2050. The potential for developing renewable energy is huge, especially for solar power production as the country is located in the equatorial area with a hot climate all year long in the South and Central regions.

Abundant energy sources such as wind, solar power and biomass remain largely untapped. To realise the great potential of solar power, the Government has developed policies to speed up investment in the sector. Advantages for foreign investors include the favourable geographic location of the country and the Government's incentive policies. The RoK's investment in ASEAN member countries last year rose by 16,7 percent over 2017. Việt Nam accounted for 51,5 percent of the RoK's total investment in ASEAN, followed by Singapore with 25,6 percent.

SƠN TÙNG (*Investment source*)

US begins investigation into wind towers imported from Việt Nam

The US Department of Commerce (DOC) has officially commenced anti-dumping and countervailing duty investigations into the imports of utility scale wind towers from Việt Nam. The products under investigation include wind towers coded HS: 7308.20 and 8502.31.

In addition to Việt Nam, Canada, Indonesia and the Republic of Korea are also being investigated. The investigation dates back to the 2016 - 2018 period in order to determine the loss suffered by the US's domestic manufacturing industry.

The country exported wind towers worth approximately US\$ 21,4 million to the US last year with the alleged dumping margins being 39,97 percent to 65,96 percent for Việt Nam. The US International Trade Commission (ITC) and DOC are expected to request that Vietnamese exporters and manufacturers answer an investigation questionnaire within 37 days from the start of the investigation. The ITC will issue preliminary conclusions regarding losses to the US' manufacturing industry on August 23, 2019.

Furthermore, the DOC plans to issue their preliminary conclusions on dumping on December 17, 2019 whilst their report on anti-subsidies should be concluded on October 3, 2019.

In response to the investigation, the Trade Defence Department of the Ministry of Industry and Trade has also asked relevant local firms to co-operate with the investigating agencies. In addition, they have been requested keep up-to-date information during the investigation process.

PHƯƠNG ANH (*VOV source*)



Việt Nam, Japan co-operate on construction waste

Việt Nam and Japan are working together to set up a construction waste management system to control pollution. This is to combat the large volume of construction and demolition waste (CDW) produced from urban development which is rapidly increasing in Asian countries including Việt Nam.

The National University of Civil Engineering (NUCE) and the Saitama University (SU) held a seminar to provide a platform for researchers and students to exchange ideas and discuss research finding and new advances in sustainable development in East Asia. This is the second joint workshop of the two universities for the SATREPS project for the "Establishment of environmentally sound management of construction and demolition waste and its wise utilization for environmental pollution control and for new recycled construction materials in Việt Nam". The project is expected to provide a platform for an environmentally sound waste management and resource recycling system in Hà Nội, applying technologies and experiences from Japan, where the rate of construction and demolition waste recycle reaches above 95 per cent.

At the workshop, participants shared their experiences on sustainable and environmentally-friendly construction waste management activities. On the same day, the two schools also held the opening ceremony of the SATREPS project laboratory, which had been set up in NUCE's laboratory building, with various testing and analytical equipment from Japan.

Major activities include the investigation of the generation status of construction and demolition waste and environmental



▲ Delegates cut the ribbon to inaugurate the SATREPS laboratory at the National University of Civil Engineering

pollution status at disposal sites of CDW, the development of standards for recycled materials, the development of various technologies utilizing recycled materials and the manufacturing and marketing of recycled materials on a trial basis. Human resource development and capacity building for Vietnamese counterparts through joint testing and research activities utilizing laboratories is also an important activity. Speaking at the seminar, Director of NUCE Phạm Duy Hòa said this was an opportunity for experts and students of both universities to develop new technologies to solve key issues of management and techniques in structure, materials and environment of Việt Nam and developing countries.

"We are confident that this laboratory will become one of the region's leading research centres for recycling and new technology development", he said. The project proposal was adopted by the SATREPS Program in the fiscal year of 2017, in response to NUCE's request for the implementation of international joint research in the environmental and social infrastructure sector.

This five year-project was then launched in Hà Nội and Hải Phòng in February 2018 with the aim of establishing a resource recycling system for CDW and developing new technologies utilizing CDW recycling materials, in order to promote sound management of CDW. ■

PHƯƠNG TÂM (VNS source)

GIZ offers to Hà Nội 18 air monitoring

Hà Nội has agreed to install 18 air quality monitoring devices offered by the German Development Cooperation Organisation (GIZ) as part of efforts to improve air quality in the capital. The devices will be installed in the downtown District of Hoàn Kiếm.

The Hà Nội Municipal People's Committee has assigned the Department of Natural Resources and Environment to co-ordinate

with the GIZ and the People's Committee of Hoàn Kiếm District as well as relevant agencies to manage data gathered by the sensors. Air quality data collected by the sensors will be made public at <http://moitruongthudo.vn> and apps, screens at State agencies and public places in Hoàn Kiếm District.

Causes of the problem are said to be pollutants - especially vehicle exhaust fumes, dust from construction activities, and smoke from various industrial activities and farmers burning straws in suburban areas. ■

QUỲNH ANH (DTiNews source)



Costa Rica: Designing a template for a cleaner, carbon-free world

Costa Rica has long punched above its weight as a global green pioneer with a strong social conscience, but now the Central American nation is preparing to cross the ultimate environmental frontier with a detailed plan to decarbonize its economy by 2050. Many countries have promised to do the same - reducing emissions is a key commitment of signatories to the Paris Climate Agreement - but Costa Rica is one of the first to turn pledges into solid policies and to frame the shift in terms of economic and social benefit.

In recognition of its decades-long commitment to ambitious policies to combat climate change and protect the planet's natural resources, Costa Rica was awarded the United Nations Environment Program's Champions of the Earth award for policy leadership this year. Mr. Leo Heileman - The UN Environment Programme's Regional Director in Latin America and the Caribbean said: "Costa Rica has been a pioneer in the protection of peace and nature. With effective policies that involve the state, citizens, scientists and the private sector, the country will achieve its goals and set an example to the region and the world".

Costa Rica's Government says it is going to decarbonize the economy because it makes economic and social sense, a statement that challenges the oft-quoted trope that fighting climate change will cost jobs and stifle development. Costa Rica's message is that sustainability and growth can and must go hand-in-hand. "The decarbonization plan consists of maintaining an upward curve in terms of economic growth and at the same time generating a downward curve in the use of fossil fuels, in order to stop polluting", said Costa Rica's President Carlos Alvarado Quesada. He said: "How are we going to achieve that? Through the electrification of transport, smart and resilient cities, sound waste management, sustainable agriculture and improved logistics".

Costa Rica's environmental credentials are impressive: more than 98 percent of its energy is renewable, forest cover now stands at more than 53 per cent after painstaking work to reverse decades of deforestation and around a quarter of the country's land has been turned into protected parks and reserves. This doesn't mean the challenge of decarbonization is any less daunting or any easier to deliver than in other countries. But Costa Rica's leaders are undeterred. They've pushed the boundaries before.

Costa Rica has a long history of achievements, not only in terms of the environment but also in other fields. About 50 years ago, this country began to push a series of innovative environmental policies because the paradigm of sustainable development is very much in the DNA of Costa Ricans. The National Decarbonization Plan, with bold mid- and long-term targets to reform transport, energy, waste and land use, was launched in February of 2019. The aim is to achieve net zero emissions by 2050, meaning the country will produce no more emissions than it can offset through actions such as maintaining and expanding its forests. The Plan will help the country fulfil its commitments under the 2015 Paris Climate Agreement and the United Nations Sustainable Development Goals, but those global targets are not the only drivers. Officials say they want to change the paradigm of development and build a consumption and production system that generates an environmental surplus rather than a deficit.

In fact, this country of 5 million people produces only 0,4 percent of global emissions. Despite this, it wants to inspire others with bigger carbon footprints to bring about the urgent transformations needed to prevent destructive global



▲ *Nacional Corcovado National Park (Costa Rica)*



warming. In 2018, the Intergovernmental Panel on Climate Change found that limiting global warming to 1.5°C would require unprecedented changes to reduce carbon emissions by 45 percent from 2010 levels by 2030, reaching net zero emissions around 2050.

The biggest challenge for Costa Rica will likely be decarbonizing the transport sector, which accounts for 40 percent of total emissions. The National Plan's targets are ambitious: by 2050 all public buses and taxis will emit zero emissions, and an electric train will provide transport in the capital city, San José. Construction of the line is due to start in 2022. Legislation has also been introduced to grant companies tax breaks if they build bike racks and buy bicycles for their employees. Municipalities will also be obliged to build bike lanes on all new roads.

President Carlos Alvarado Quesada has a clear vision of the city of the future. "I imagine a city where mobility is based on clean energy; a city that bets on technology but prioritizes people's well-being, freedom and right to privacy; a city where you breathe clean air; a city that manages waste sustainably and a city where you are in contact with nature to find peace of mind", he said.

Beyond transport, the Decarbonization Plan also states that by 2050 all of the country will have solutions for the collection, separation, reuse and disposal of waste and forest cover will be increased to 60 percent. Authorities say they Plan to introduce fiscal reforms, including taxes on pollution, and build on the clean energy potential of the country in order to incentivize green growth and phase out fossil fuels.

Environmental institutional reform will be needed to create modern, digitized and flexible institutions able to manage the transformation. Among the institutions that will be affected are the Costa Rican Petroleum Refinery, the Costa Rican Electricity Institute, the Ministry of Public Works and Transportation and the Public Transportation Council. With this Plan, Costa Rica is keen to show the world that clean and green development is possible and profitable. This message is particularly relevant ahead of the United Nations Climate Action Summit on 23 September 2019, when Member States will be asked to outline exactly how they plan to cut emissions■

HÔNG NHUNG (UNEP source)

Saving Green Group says no to plastic bags



▲ Saving Green's fanpage

Over the past year, residents in Rạch Giá City (Kiên Giang Province) have become familiar with the young people of Saving Green, an environmental protection group, collecting garbage in public places. The group has contributed to cleaning up the environment, inspiring the spirit of a green lifestyle and spreading awareness of environmental protection in the community.

Saving Green was established in 2018 with 20 members from Huỳnh Mẫn Đạt Specialized and Gifted High School in Rạch Giá City. The establishment of Saving Green was initiated by video clips on safe living and environmental protection made by a Vietnamese student overseas. Currently, Saving Green has 80 members and a Facebook fanpage.

The group's chief Trần Tiểu My said: "We say no to plastic bags and sponge lunch boxes. I hope our school will become a plastic rubbish free place and that the students will be inspired to lead a green lifestyle".

Group members are divided into small units to gather garbage and post reports on their Facebook fanpage calling on others to restrict single plastic use. The actions have received a positive response from students as well as the entire community. Saving Green members have contributed money to fund group activities.

The group's Deputy Head Trương Mỹ Anh said: "Joining the group has helped me better understand the environment and how it has suffered by the hand of human beings. I hope everyone can recognize our group's targets - communications and prevention of littering - instead of only collecting garbage".

Saving Green plans to work with Rạch Giá's Youth Union to organize a program called "No garbage" in Kiên Giang Province and launch a campaign inspired by an environmental protection game show called "Run away, don't wait". To realize the month-long plan, seminars will be held involving famous vloggers and influential people in society to create widespread influence in community, especially among the youth■

QUỖNH ANH (VOV source)



Việt Nam banks now keen on green credit

The Japan Bank for International Cooperation (JBIC) and the Joint Stock Commercial Bank for Foreign Trade of Việt Nam (Vietcombank) signed a \$200-million loan agreement in a cooperative effort to finance green energy projects in Việt Nam, contributing to Vietcombank's green growth and environmental protection plan.

Green credit as a global trend has played an important role over recent years in promoting sustainable socio - economic development and realizing all countries' green growth strategies. With regard to Việt Nam, following the Government's development orientation, green credit has constantly enjoyed special attention and resources from local banks.

GREEN FINANCING

Recognizing the importance of renewable energy projects for the economy, closely following the Government's orientation to encourage the development of clean energy sources, and completing its goal of becoming a green bank, Vietcombank has been involved in sponsoring a number of clean and renewable energy projects, such as small and medium-scale hydropower plants, eco-thermal power projects, and solar power projects. "Project owners must have good financial capacity and experience in renewable energy as well as in operating other power sources," said Mr. Phạm Mạnh Thắng, Deputy General Director of Vietcombank.

In particular, renewable energy projects must have legal documents fully complying with the Law on Environmental Protection, which is the basis for Vietcombank to study and consider granting credit. For each project, the requirement for reciprocal capital has different proportions based on evaluating investors' capacity as well as



▲ The signing ceremony of a green credit loan over 3 years of TPBank with The Global Climate Partnership Fund

analyzing the risk level, but normally the minimum counterpart funding is 30 percent of the total investment.

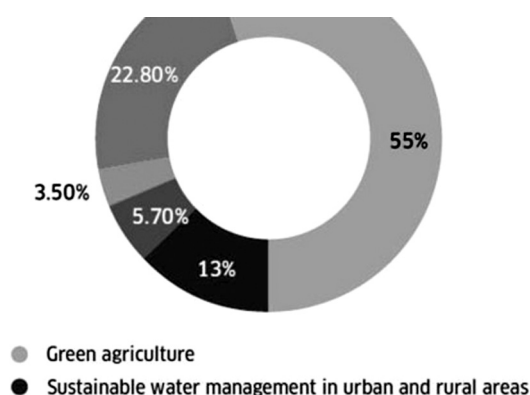
Meanwhile, in order to promote the investment in and use of clean energy among companies and household businesses, HDBank has been implementing solar power financing packages with total funding of up to \$388,5 million. This amount is expected to further increase depending on market demand.

Since launching about a year ago, HDBank's solar power financing program has been well received by the market, according to Mr. Trần Hoài Phương, Deputy Director of the Bank's Commercial Banking Division. "Several solar power projects that are to be connected to the national power grid from the north to the south of Việt Nam and invested by reputable contractors have been financed by HDBank", he said.

HDBank has also been carrying out a special financing scheme for roof-top solar projects, with a limit of up to \$432,000 per project. By joining this scheme, investors not only receive financing from the Bank but can also obtain professional support from its partners in installing, building, and maintaining solar power systems.

In the first half of this year, HD Bank has established 16 partner relationships with such companies around the country, successfully granting credit totaling \$8,6 million for roof-top solar power projects and this will rise over the closing months of the year given the number of loan applications now being processed.

These outcomes from solar power financing have set a solid base for HDBank to aim for the objective of reaching a financing ratio for the clean energy field of 10 - 15 percent of its entire lending portfolio and strongly conveys its commitment to be a "Green Bank" that balances business



growth targets with a responsibility for a sustainable environment, Mr. Trần Hoài Phương added.

Nam Á Bank joined the ranks of the Global Climate Partnership Fund (GCPF)'s international network of partner institutions and received a credit facility and technical support to launch its green lending activities in Việt Nam. Its partnership with GCPF was welcomed by the State Bank of Vietnam (SBV), as it will enable the Bank to become Vietnam's first private commercial bank to launch green lending products for small and medium-sized enterprises (SMEs) and individuals.

This is the first step taken by Nam Á Bank in its "I choose to live green" community project, which began this year, said Mr. Trần Ngọc Tâm, CEO of Nam Á Bank. The preferential interest rate in the program is around 5-6 per cent per annum. "By teaming up with an experienced partner with ample experience in helping financial institutions in emerging economies build up a green lending offering, we are thrilled to lead the way in Vietnam's financial sector by developing a full green lending program", he said.

SUSTAINABLE GROWTH TARGET

The SBV has taken welcome steps to develop Vietnam's green credit market with its successful pilot of the Green Credit Program, according to Mr. Aayush Tandon, Policy Analyst at the Organization for Economic Cooperation and Development (OECD)'s Center on Green Finance and Investment. Green credit is now the largest source of green financing in the country.

Recent figures from the central bank reveal that the credit balance for green projects was around \$10,5 billion as at the end of the first quarter, up 2 percent quarter-on-quarter. Among credit growth figures at the end of 2018, the "green" sector surprised with growth of some 30 percent; higher than other priority areas such as rural agriculture (15,5 percent), SMEs (13,5 percent) and exports (3,5 percent).

Similarly, the SBV's latest survey of credit institutions in the field of green growth and green credit, released recently, showed that awareness among them about green credit has improved significantly. Specifically, 13 credit institutions have integrated the content of environmental and social risk management in the process of green credit assessment, while ten have built credit products and banking services for green sectors and have shown an interest in providing credit for these sectors, mainly for the medium and long-term with preferential interest rates for green projects.

The SBV last year approved a project on green banking development, in which ten or 12 banks will have specialized units on the environment and social risk control, while 60 percent will lend for green projects by 2025. Many local banks have been implementing preferential policies in green credit licensing in order to realize that goal.

For example, HDBank has received \$9,3 million in funding from the Japan International Cooperation Agency (JICA) to support SMEs investing in green projects and environmental preservation. The IFC and the Dutch fund FMO have also been in discussions to provide green funding for renewable energy projects, solar energy for households and others. HDBank has at the same time had initial dialogue with international non-profit organizations such as the Global Green Growth Institute (GGGI) and the Clean Energy Investment Accelerator (CEIA) to seek cooperation opportunities with international financial institutions to implement financial support tools to businesses investing in green segments, such as green credit insurance funds or entrustment to finance green projects.

RESTRICTED CAPITAL SOURCES

Recent developments in the green credit market have been appreciable, Mr. Aayush Tandon from the OECD commented. However, banks in Việt Nam are still reluctant to finance green projects, for instance renewable and energy efficiency. This is largely due to limited experience and expertise in appraising such projects. Cost of debt finance is consequently high in Việt Nam. Foreign banks, in theory, can extend finance at cheaper rates to Vietnamese projects but hold back due to high-risk perceptions. It is essential, he said, for domestic banks to become more comfortable with new green technologies to lower the cost of capital and expand the market.

There are other challenges, he noted, not unique to Việt Nam, that need to be addressed for the green credit market to grow, for instance the absence of commonly agreed-up-



on standards and definitions and the measurement of impact. SBV figures also show that funding for green projects remains restricted, with only 24 percent of green projects developed by banks for credit appraisal.

Challenges concerning the longer payback period, sizeable initial investment cost, as well as market risks businesses in green segments face may not, in fact, be much different to businesses engaged in different segments and industries. The real challenge HDBank has been facing in lending to green segments are somewhat similar to others, for instance how to find investors that have the right capabilities and experience and feasible and effective business plans.

Besides green credit, policy interventions to create an enabling environment to lower investment risk will be central to scaling-up green finance in Việt Nam, according to the OECD. Given the scale of investment needed to meet the country's long-term development and climate objectives, it is important to mobilize domestic and foreign private capital. There are multiple tools and techniques available to Governments to unlock private investment, in particular institutional investment.

Mr. Tandon added that targeting institutional investors can be beneficial to accelerate green credit. Institutional investors like pension funds and insurance companies are well placed to hold long-term assets. They can enter the market to refinance operational assets, thus taking them off the balance sheets of short-term financiers like banks, which frees up bank capital for new investments and fosters a sustainable finance ecosystem■

NAM VIỆT (*VN Economic Times source*)

Wind, solar power cannot join national grid

In the two provinces of Ninh Thuận and Bình Thuận, wind and solar power plants are running at moderate level because they cannot provide electricity to the national grid.

In late 2018, in a report to Deputy Prime Minister Trịnh Đình Dũng, EVN mentioned the possibility of electricity outage in 2019. On July 15, EVN said the electricity consumption is at record high because of the prolonged hot spell in the North and Central region. To ensure enough electricity for daily consumption, EVN has to mobilize electricity from oil-run electricity generation units at high costs.

According to the Southern Power Corporation (EVNSPC), the electricity output needed in May was 210.984,657 kWh per day, an increase of 12.19 percent compared with May 2018. The merchandise electricity output is expected to reach 74 billion kWh in 2019, an increase of 10 percent over the previous year.

The electricity used in industries and construction accounts for 59 percent, up by 12 percent.

Traditional electricity sources, generated from coal, gas and hydropower in the south, have been running at full capacity, but the output is still not high enough to satisfy the demand. The Southern region needs electricity transmitted from the north via 500 KV transmission line. In the long term, electricity shortage is likely to occur.

A report released at a recent meeting discussing power projects showed that the electricity shortage would reach 12 billion kwh by 2023. To deal with it, the Ministry of Industry and Trade (MOIT) is considering buying more electricity from Laos and China.

While EVN repeatedly has warned about electricity shortage, many wind and solar power plants have to run at moderate level

According to Ninh Thuận Provincial Director of Industry and Trade Department Đặng Văn Thanh, the 37.6 MW Mũi Dinh Wind Power Plant now runs at 40 percent of designed capacity.

The province has attracted 19 wind power projects with the total capacity of 1.043,61 MW and has licensed 11 projects with total capacity of 630 MW. By June 30, three projects had been put into commercial operation (117 MW). Regarding solar power projects, Ninh Thuận has approved 31 projects with the total capacity of 1.817 MW capitalized at VND 50 trillion. As of June 30, of 15 operational projects (1.063 MW), nine projects had to cut capacity by up to 60 percent to ensure the stability of the transmission line.

Also according to Mr Thanh, the existing transmission line in the Province is enough for only 800 MW while the existing wind and solar electricity capacity is already 1,180 MW■

MINH TRANG



IFC CEO strengthens support for Việt Nam's renewable energy development

IFC is pledged to continue working on mobilising finance and unlock private sector solutions to help Việt Nam become a modern dynamic middle-income country and realise its renewable energy goal. The 35MW TTC Phong Điền Solar Power Plant (Thừa Thiên - Huế Province) generates about 60 million kilowatt hours, enough to power about 35.000 homes a year for an official visit today. CEO of IFC Philippe Le Houérou has arrived in Việt Nam on August 9th, 2019. He has met senior Government officials, business representatives and visited projects supported by IFC.

One of Mr. Philippe Le Houérou's stops in the country will be a visit to the first private grid-connected solar farm, the Phong Điền Solar Power Plant, developed by Gia Lai Electricity JSC (GEC) in conjunction with IFC. The Plant generates about 60 million kilowatt hours, enough to power about 35.000 homes a year. It was built in just eight months and under budget - and it came at a significant time for Việt Nam. Việt Nam which has long relied heavily on coal and hydropower, faces a rising demand for energy. Demand in the electricity sector has grown at 13% a year since 2000 and is projected to continue to grow at 8% through 2030.

Renewable energy can contribute to meeting this need and IFC's equity investment in the Phong Điền Solar Power Plant aimed to help spur renewable energy production across the country. IFC invested in GEC, a subsidiary of (TTC Group) in 2016. GEC then owned and operated a portfolio of 15 run-of-river small-scale hydropower plants and hoped to expand its portfolio.



▲ Mr. Phan Ngọc Thọ, Chairman of Thừa Thiên - Huế Provincial People's Committee (middle, top) visits TTC Phong Điền Power Plant

To further support renewable energy projects in Việt Nam, IFC invested \$75 million in an infrastructure-focused listed green bond, issued by a Philippine power company - AC Energy. Its goal is to develop up to 5GW of renewables across the East Asia and Pacific region by 2025. IFC supports AC Energy wind and solar projects in Việt Nam that total up to 360 MW. IFC's investment anchored the \$300 million green bond, helping to mobilize international and institutional financing for use for AC Energy's regional projects.

Mr. Philippe Le Houérou said: "Vietnam's development achievements and its economic rise have been remarkable. The country is now one of the fastest growing economies in the world, with a strong manufacturing base and a young, dynamic workforce. The economy continues to show fundamental strength". "We are committed to continuing our work to mobilise finance and unlock private sector solutions to help Việt Nam achieve its aspirations of becoming a modern dynamic middle-income country". IFC began engaging with Việt Nam in 1992, responding to the country's quest for foreign investment and expertise to help the transition to a successful market-oriented economy.

Apart from supporting renewable energy, IFC has also played a key role in other sectors. These include the first private port project, the first build-operate-transfer power project, the first private leasing company, the first equity fund supporting small and medium enterprises and the first internationally accredited university.

MINH THÀNH (*The Leader source*)



IPU can play crucial role in the transition to a green economy

Developed countries are challenged with imbalance between supply and energy production, especially from renewable resources. In developing countries, the challenge lies in making energy more affordable to people on low incomes.

An Inter-Parliamentary Union (IPU) meeting took place in Doha, Qatar, in April 2019, to promote the role of parliamentarians in advancing the environmental dimension of sustainable development to enhance education for peace, security and rule of law. The meeting followed an agreement between the UN Environment Programme and the IPU to build the capacity of parliamentarians and accelerate the implementation of the Paris Agreement and the nationally determined contributions. UN Environment provided parliamentarians with the basics of the green economy and possible steps to take to enable the transition to a green economy - a possible alternative to the current growth-centric economic model with the objective of effectively dissociating economic growth from environmental degradation.

An issue brief on the green economy - *Shades of Green: An introduction to the green economy for parliamentarians* - jointly drafted by UN Environment and the IPU on the green economy, was

showcased to provide the parliamentarians with the most important elements of the green economy and how they interact with one another.

Developing countries are at a disadvantage when it comes to replicating efficient renewable energy technologies due to strict patents by developed countries who own the advanced technologies and lack of finances. There is a need to close the finance gap by encouraging public finance baskets which channel support to utilities, municipalities and households to generate their own energy supply or tap into an existing efficient system of operation. All products need to be more energy-efficient and facilitate lifestyle changes that promote less energy consumption.

At another conference organized by the European Patent Academy of the European Patent Office and co-hosted by the Norwegian Intellectual Property Office, climate change was highlighted as one of the most pressing issues threatening the environment, livelihoods, economies and even lives in the current era. In a bid to curb this, numerous patents to high profile sustainable technologies to effectively mitigate and adapt climate change occurrence were granted, including new designs for turbines, which were inspired by nature and which save energy; innovative ways to store harmful gases and appliances that use less water.

Energy generation was also identified as the lead cause of two thirds of carbon dioxide emissions. According to Mr. Francisco Boshell, an analyst with the International Renewable Energy Agency, renewable energy has increased steadily and in 2012, more investment and new capacity came from renewable energy than fossil fuels. There is, however, a need to integrate technologies that promote the generation of renewable energy in development plans. Domestic power supplies a third of total energy consumption, while industries,



▲ According to the International Renewable Energy Agency, renewable energy has increased steadily



buildings and transport cover the rest. There are huge business opportunities to extend the scope of electric vehicles beyond domestic cars to commercial transport - both land-based and marine - and ultimately to aviation.

UN Environment stressed the importance of ease of access to patents, innovation and green technology. In this respect, the role played by intellectual property and patents was shown to be a hindrance in the non-developed nations. UN Environment partnered with the European Patent

Office and undertook a study which revealed that only 1 percent of all patent applications relating to clean energy technologies worldwide have been filed in Africa, with the vast majority (84%) of these in South Africa. It was also discovered that intellectual property rights were not recognized by many policymakers.

Lack of awareness of green technologies and access to patents is a major hindrance to innovation and it is difficult for less developed countries to seek this kind of support. UN Environment will continue to support parties to tap into and enhance awareness of existing pinnacles of innovation. Countries such as Japan and South Korea are leading the green technology innovations, from which other countries could borrow ideas■

ĐỨC ANH

(UN Environment source)

Red tape hinders growth of Vietnam's wind power industry

Viet Nam has significant nearshore and offshore wind potential but the renewable energy resource hasn't been well exploited partly due to cumbersome administrative procedures, experts said.

Viet Nam, with its long coastline, is one of the nations in Southeast Asia having the potential to produce large amounts of renewable energy. A renewable energy report from McKinsey International Management Consulting Firm showed that Viet Nam has tremendous natural resources: Four to five kilowatt-hours per square meter for solar and 3.000 kilometers of coastlines with consistent winds in the range of 5,5 to 7,3 meters per second - creating opportunities for solar and wind generation in the country. However, Mr. Peter Brun, Global offshore wind segment leader of risk management and quality assurance services provider of DNV GL Certification Organization said, less than 200 megawatts (MW) of offshore wind has been installed in Viet Nam, despite the huge unexploited wind power potential in the country. Viet Nam has much more supplier potential for the wind industry than what is already there and is very well positioned to harvest not only many manufacturing jobs, but jobs in installation and operations and maintenance. However, Mr. Peter Brun said the licensing process in Viet Nam is very complex and at least 29 individual permits, agreements or licenses are needed for utility scale wind farms. There are many Government agencies involved at state and regional level. President and CEO of France-based GE Renewable Energy Jérôme Pécresse shared the same view, saying it takes much time to complete renewable energy projects, especially in wind power. It remains difficult to receive approval for projects, because there remains a number of administrative requirements which must be fulfilled. To deploy a wind power project, it usually takes 4 - 5 months to get an investment license. It then needs at least another two years to implement the project.

Another significant barrier facing investors and developers of wind energy projects in Viet Nam is the lack of available project finance, experts said. Besides, there are several other key changes that should be implemented in order to create long-term, sustainable development in the field. Under the current Law, the Government strictly regulates the retail price of electricity, pursuant to recommendation by the Ministry of Industry and Trade (MoIT) and approval by the Prime Minister. However, Vietnam Electricity (EVN) has absolute discretion to increase or drop the price within a margin of up to 5 percent twice a year without seeking approval from the MoIT or the prime minister when input parameters, such as fuel prices or foreign exchange rates, change significantly. This creates a great deal of uncertainty for investors in the sector. To encourage foreign funding in the field, more transparency in electricity rate forecasting is required.

According to the Vietnam Energy Association, if the country does not increase the share of renewable energy in the sector, the proportion of energy that the country will need to import by 2030 will rise from 3 percent of primary energy demand to as much as 44 percent, instead of the targeted 24 percent. Renewable energy used in Viet Nam currently remains at less than 10 percent■

NAM VIỆT (The Hanoitimes source)



Vân Long Wetland Nature Reserve becomes 2.360th Ramsar site in the world



The recognition was adopted at the 13th Meeting of the Conference of the Contracting Parties to the Ramsar Convention on Wetlands (COP13). The Ministry of Natural Resources and Environment handed over a certificate of recognition of the Vân Long Wetland Nature Reserve (WNR) in the Northern province of Ninh Bình as Vietnam's ninth Ramsar site.

With this recognition, the Vân Long WNR is now the 2,360th Ramsar site in the world. The recognition will help Việt Nam call for international support to research, conserve and sustain the wetland eco-system amid challenges from climate change. The recognition was adopted at the COP13 held at the Festival Arena in Dubai, United Arab Emirates in October 2018.

Vân Long straddles seven communes of Gia Viễn District, Ninh Bình Province and is one of the few intact wetland areas remaining in the Red River Delta. It is centered on a block of limestone karst outcrops that rise from the flat coastal plains of Northern Việt Nam.

Vân Long is not only a natural reserve of wetlands but also a famous place for its cultural relics. In the Vân Long forest, there are 457 species of flora, 8 species have been recorded in Vietnam Red list. Among 39 species of animals, 12 are considered as rare animals such as the langur, the chamois, the Bengal slow Loris, the Asian black bear and the stump-tailed macaque. The forest is also home to the king cobra, the water monitor, the oriental Rat snake, and various lizards, among others. The other eight Ramsar sites in Việt Nam are U Minh Thượng National Park, Tràm Chim National Park, Mũi Cà Mau National Park, Tam Đảo National Park, Xuân Thủy National Park, Ba Bể Lake, Láng Sen Wetland Reserve and Bàu Sấu Wetland in Cát Tiên National Park. ■

QUỲNH ANH (*Hanoitimes source*)

Wetland forest management project launched for Tràm Chim National

A US \$ 625,000 project for ecosystem management at Tràm Chim National Park in the Mekong Delta Province of Đồng Tháp was launched at a conference held by the Vietnam Forest Inventory and Planning Institute (FIPI) in Hồ Chí Minh City on August 5.

Addressing the event, FIPI Director Nguyễn Nghĩa Biên noted that from its source on the Tibetan plateau, the Mekong river flows 4,800 km through 6 countries, including China, Myanmar, Laos, Thailand, Cambodia and Việt Nam, resulting in a unique biotope, biodiversity and fertile delta. The Mekong river basin has attracted more and more public attention since each member country is exploiting the river water resources for its own development purposes, bringing about potential consequences and challenges to one another.

The Tràm Chim National Park, located in the Mekong Delta sub-region and Đồng Tháp authorities have strived for sustainable ecosystem management of the reed fields and wetland areas. Unexpected complications have arisen, however, due to lack of a sustainable and effective management model. The presence of Sarus cranes and other birds in the National Park is decreasing at an alarming rate.

Against this backdrop, the Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (AP-FNet) has agreed to partially fund the "Demonstration project of general management plan for forest ecosystems of the Mekong sub-region". The project, with a total capital of nearly VND 14,48 billion (US\$ 625.330), of which over 70 percent are provided by APFNet and the rest by Vietnamese counterparts, will be carried out by FIPI for a period of 4 years at the Tràm Chim National Park.

The project aims to set up a demonstration model for sustainable general management for wetland ecosystems and forests of the park, contributing to the improvement of the biophysical, economic and social structures and functions in the Mekong basin as a whole. The project is also expected to support the park in improving wetland monitoring capability; building a sustainable forest management plan; reducing human impact on nature by providing local people with substitute means of livelihood; raising public awareness and building capacity for local officials.

Another goal of the project is to raise public awareness of wetlands and their conservation and to reduce adverse impacts on biodiversity. The project will also engage local women in activities to improve livelihoods; and provide knowledge on a smart and effective exploitation of the submerged land. ■

CHÂU LOAN



Finding solutions to conserve grey-shanked doucs in Quảng Nam

Quảng Nam Province is seeking sustainable solutions for the conservation of critically endangered primates living in a primary forest, while creating stable livelihoods for farmers in Tam Mỹ Tây Commune - which is home to 50 endangered grey-shanked douc langurs.

An 120 ha-area of acacia log farms provides significant income for 40 households living in the commune, but the development of log farms has pushed the endangered primates to the brink of extinction.

A plan to transform the livelihoods of farmers while promoting eco-tour development, reforestation and gardening has been developed by the local authorities as a measure to restrict human activities around the habitat of the endangered primates. This means that acacia farms will be gradually replaced by native trees or timber that provide food and shelter for the animals. Acacia log farms provide major incomes for villagers living near the mountains of Hòn Dấu, Hòn Ông, Dương Bông and Dương Bản Lầu. The langurs - which were found living in the natural forest area in 1997 - are safe living with the community.

Mr. Võ Ngọc Danh, from Đồng Cổ village, said: "We support the local conservation plan for the endangered species, but we need to adapt to other trades to make a living".

Vice Chairman of Việt Nam Zoological Association, Prof. Đặng Vũ Khôi said small primary forests must be expanded to offer food and safe habitat for the langurs. The species will die out soon due to the rapid development of log farms and harmful human activities in the area. The urgent conservation of the grey-shanked douc langurs and expansion of forests would help Quảng Nam Province set up a unique eco-tour and ecological education and research centre in Việt Nam.

Director of GreenViet Trần Hữu Vỹ said the grey-shanked douc langur species was isolated by surrounding acacia log farms. Log farms separated the green corridor for the langur families for moving for food in natural forest - which supplies 75 percent of food for the primates. The langurs could only live in their 'small houses' (natural forest from 50 m to 150 m wide) on the top of mountains.



▲ A population of 50 langurs is in danger of extinction due to the expansion of log farms and human activities

Dr. Hà Thăng Long, Head of the representative office of the Frankfurt Zoological Society in Việt Nam, who is an authority on grey-shanked douc langur studies, suggested the 25 ha area of natural forest should be expanded from Tam Mỹ Tây Commune to the riverhead forest of Phú Ninh and Trà Bồng in neighbouring Quảng Ngãi Province to create a safe corridor for langurs. He said it naturally helps build up a larger conservation zone for the endangered primates and forest in combination with a rich biodiversity and research centre of langurs.

Around 1.000 grey-shanked doucs were recorded living in forests of five provinces, including Quảng Nam, Quảng Ngãi, Bình Định, Kon Tum and Gia Lai. Gia Lai's National Kon Ka Kinh Park preserves the largest number of langurs. The grey-shanked douc langur - which is listed on the International Union for Conservation of Nature red list as one of the world's 25 critically endangered primates - could be seen in Việt Nam. An area of 150 ha on forest restoration in the area would help establish a conservation site of the langur population.

"The community and the responsible Government administrations should come to an agreement where the acacia plantations in the core zone are "given back" to nature in order to restore the douc habitat. So, the legal owners should be compensated in a good way and the Government administration should ensure a long-term conservation of this area", he said.

He also said local authorities could apply 'rainforestation farming' models in planting different native valuable timber trees, fruit and medicinal plants instead of acacia. Restoration of native trees is needed for feeding langur doucs and human activities and approaching endangered primates should be restricted.

Vice Chairman of Quảng Nam Province Lê Trí Thanh agreed with plans of restoration for a 150 ha forest as a habitat for herds of grey-shanked douc langurs from 2019 - 2028 and the area would be built as a habitat and species conservation area. The Province also plans to include the forest restoration as part of the United States Agency for International Development (USAID)-funded Green Annamites Project.

MAI HƯƠNG (VNS source)



Tây Ninh expands Lò Gò - Xa Mát National Park

The Province of Tây Ninh is asking for relevant authority's approval to merge Chàng Riệc cultural-historic forest with Lò Gò - Xa Mát National Park. The merger aims to improve the value and influence of the Lò Gò - Xa Mát National Park in bio-diversity protection, natural resource development and promotion of national special cultural-historic relic sites in the locality. The merger is expected to promote the preservation and restoration of the local national special relic sites.

Along with facilitating management and restructuring of the forestry sector and focusing resources for the sustainable development of Lò Gò - Xa Mát National Park, the move also aims to help improve livelihood for rural and border communities. Lò Gò - Xa Mát National Park has a total area of 19,210 hectares, spanning over Tân Bình, Hòa Hiệp, Thạnh Tây and Thạnh Bình com-



munes in Tân Biên District. Meanwhile, the 10,812 - hectare Chàng Riệc cultural-historic forest lies in Tân Lập and Thạnh Bắc communes in the same district. ■

BÌNH MINH (VOV source)

Management Board tries to keep Côn Đảo National Park clean

The area in the Southern Province of Bà Rịa - Vũng Tàu has suffered pollution from aqua-exploitation activities that saw waste released into the sea threatening bio-diversity. The rapid development of tourism on the island in recent years has also seen an increase in waste.

Deputy Director of Côn Đảo National Park Management Board (NPMB) Trần Đình Huệ said in the past six months the National Park's forest management division had conversed with thousands of residents and tourists to raise public awareness of environmental issues. His staff had monitored seawater every two weeks over the past six months measuring temperatures, pH levels as well as collecting 854 cubic metres of garbage.

The NPMB plans to work with relevant agencies to raise public awareness and strictly deal with violations. Climate change and human activities are putting coral reefs under great pressure, leading to a decline in coverage and coral bleaching. Therefore, the NPMB had co-operated with Nha Trang Institute of Oceanography to recover and develop the coral population over an area of 40 hectares since 2018.

The project runs from 2018 to 2020 with an estimated budget of 1,4 billion VND

(60,000 USD) in three areas of Côn Đảo where coral reefs have been slow to recover: Đất Dốc, Hòn Tài and Bãi Cảnh. It aims to transplant 2,500 branches of coral over a total area of 3 ha.

The first phase of the project focuses on offering training to the local community to improve their awareness of marine protection and coral recovery techniques; recovering 1ha of coral with more than 1,500 coral branches transplanted. In the second phase, another 2 ha of corals will be recovered.

Deputy Head of the National Park's forest management division Nguyễn Văn Trà said illegal hunting, killing and selling meat and turtle eggs was still a problem. In an attempt to fix the situation, the National Park deployed a project to save turtle eggs and baby turtles to recover the turtle population.

The project aims to strengthen protection of mother turtles, hatchlings and eggs on spawning grounds, minimising the disadvantages of natural and human influences, their reproductive capacity in conservation stations and some monitoring sites, and studying the ecological characteristics to better preserve them.

As a result, 257 turtles were chipped when they came to nesting sites to give birth for the first time, 81,137 baby turtles were released into the sea. By 2018, there were 180 volunteers together with the forest ranger force to monitor and safely remove 128,629 eggs and release 62,217 baby turtles into the sea.

Côn Đảo National Park covers a total area of 19,998 ha (including 16 islands and islets) comprising of forest and forestland of 5,998 ha, biodiversity marine protected area of 14,000 ha. The management also covers 20,500 ha of marine buffer area. ■

VŨ NHUNG (VNS source)

Preservation of the red-shanked langurs (*Pygathrix nemaeus*) in Sơn Trà Peninsula, Đà Nẵng



Sơn Trà Nature Reserve brings together a rich, diverse and lively ecological treasure, full of attractions for tourists with the mysteries of natural forests. It is very exciting for the tourists to see the red-shanked douc langurs whenever they have the opportunity to visit the beautiful Sơn Trà Peninsula. The red-shanked douc langur species was discovered in 1969, with five distinctive colors on the body, honored by the International Wildlife Conservation Organizations as "the primate queen". This species is in the list of group IIB, which is considered as endangered in Vietnam Red Book. It is listed as a protected animal species by the International Union for Conservation of Nature. However, the negative impacts from the nature as well as illegal hunting and habitat-destroying activities are making the number of this "treasure" significantly reduce. Therefore, the City authority has been implementing sustainable conservation strategies to preserve the habitat, minimizing the damaging impact on the growth and development of the langurs. Visitors and tourists, who are able to see and monitor the activities of the langur family firsthand, will appreciate the importance of conservation of this animal species. The Vietnam Environment Administration Magazine (VEM) would like to introduce some pictures of the red-shanked douc langurs in Sơn Trà Peninsula, Đà Nẵng by Thanh Hòa - Vietnam Pictorial.



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