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VIETNAM ENVIRONMENT ADMINISTRATION:

10 years of establishment and development

Radically dealing with seriously polluting public service facilities in the period 2016-2020

Strengthening management of importing scraps for production input

Blue economy in association with marine environmental protection



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Đỗ Thanh Thủy

Tel: (024) 61281438

OFFICE

● **Hà Nội:**

Floor 7, lot E2, Duong Dinh Nghe Str.,

Cau Giay Dist. Hà Nội

Managing board: (024) 66569135

Editorial board: (024) 61281446

Fax: (024) 39412053

Email: tapchimoitruongtcmt@vea.gov.vn

<http://www.tapchimoitruong.vn>

● **Hồ Chí Minh City:**

A 907, 9th floor - MONRE's office complex,

No. 200 - Ly Chinh Thang Street,

9 ward, 3 district, Hồ Chí Minh city

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

Email: tcmtphianam@gmail.com

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Nationwide campaign launched to combat plastic pollution



▲ Officials show commitments at the launch of the national campaign to combat plastic pollution

The Ministry of Natural Resources and Environment launched a campaign on October 12, calling for joint efforts in plastic waste prevention nationwide, in response to the 2018 “Make the world cleaner” campaign.

At the launching ceremony held in Hà Nội, Minister of Natural Resources and Environment Trần Hồng Hà urged agencies, organizations and entrepreneurs of all levels to take action in the fight against plastic waste.

Pollution caused by plastic waste, especially ocean pollution, has become a global issue, he said, adding that reducing the use of plastic waste is an urgent task. Businesses, supermarkets, and malls are recommended to use environmentally-friendly materials instead of plastic products. The Minister also urged experts to enhance research on the development of biodegradable and reusable products.

Domestic agencies and international partners are advised to bolster cooperation and access on the management and treatment of plastic waste, as well as the development of new products. In addition, the media should increase dissemination of plastic pollution risks to try and flip the switch on the popular habit of single-use plastics.

About 60 percent of plastic waste dumped into the sea around the world comes from 6 Asian countries, including Việt Nam, said Mr. Kamal Malhotra, UN Resident Coordinator in Việt Nam. The use of disposable plastics and the limited waste treatment have worsened environmental contamination and community health. Therefore, now is the time for collective actions to tackle one of the biggest global challenges, harnessing collaboration between the Government, businesses and people, he noted.

He suggested the Government issue policies to halt the production and usage of single-use plastics, while the private sector ought to apply new business models to reduce the use of plastic waste, and the public should challenge their widespread consumption of disposable plastic goods.



Trần Hương
(VNA source)



VIETNAM ENVIRONMENT ADMINISTRATION: 10 years of establishment and development



Dr. Nguyễn Văn Tài - Director General
Vietnam Environment Administration

Vietnam Environment Administration (VEA) was established by the Government's Decree No.25/2008/ND-CP by merging Vietnam Environmental Protection Agency, Environment Department and Environmental Impact Assessment and Appraisal Department under Ministry of Natural Resources and Environment (MONRE). The preceding agency of these three departments is the National Environment Agency established in 1992 under Ministry of Science, Technology and Environment. This Agency provided a foundation for the establishment and development of the system of state management for environmental protection from the national to the local levels. It also was the foundation for the current VEA.

Right after the VEA establishment, the Prime Minister issued his Decision No. 132/2008/QĐ-TTg on 30/9/2008 on its mandates, tasks, rights and organizational structure. It has 16 units: 10 administrative and 6 public service units, with nearly 300 staff. The VEA establishment is a significant milestone in the process of planning and upgrading state management agencies for environmental protection, marking the development of environmental sector in Việt Nam.

1.TEN YEARS OF ESTABLISHMENT AND DEVELOPMENT

Over the last 10 years, the VEA has changed its mandates, tasks, rights and organizational structure twice. At present it has 18 units, of which 12 are administrative departments and 6 are public service providers with 536 staff. Among the staff, 26 hold PhDs, 148 have master degrees and 106 have tertiary degrees. The organizational structure has been developed in a direction of simplification, reducing medium staff and met administrative reform requirements. In 2018, three operational agencies were transformed into policy advisory departments. In the meantime, three regional operational agencies in the North, the Centre and Central Highland and the South were upgraded. Three environmental monitoring centres were established in the North, the Centre and the South. This progress promotes regional direction, coordination and operation.

The VEA's mandates, tasks and rights have been constantly improved, completed and better defined to overcome overlaps, gaps and shortcoming in responsibility division among the ministries and localities. The VEA has been assigned a task of performing professional inspection in environmental protection. It has had additional rights of issuing administrative fines; collating and proposing allocation of state budget for environmental protection for

line ministries and localities and providing specific guidance for state management in the areas of environmental impact assessment, pollution control, waste management, biodiversity conservation, environmental health and environmental quality management.

The VEA has advised mechanisms for resource allocation for environmental protection. Since 2006, a state budget for environmental protection (state environmental expenditure) has been given a separate line with no less than one percent of the total state budget expenditure. The establishment of this separate environmental expenditure marked an important milestone for providing resources for environmental activities and supported environmental tasks by line ministries and localities.

Since 2008, the state environmental expenditure has increased step by step. In 2018, it is four times higher than that of 2008. Also, in this period, for the first time the National Assembly approved the National Target Program on pollution remediation and environmental improvement 2012 - 2015. Thanks to this program, resources were mobilized to remedy pollution and improve the environment in polluting craft villages and pesticide stockpiles. Based on this program results, the National Assembly approved the National Target Program for radically dealing with seriously polluting public service facilities for the period of 2016 -2020.



The VEA's international cooperation has been boosted, confirming Vietnam's status and role in implementing international environmental agreements and mobilizing ODA for environmental protection. In the period of 2008 - 2018, the VEA mobilized nearly 800 billion VND from ODA for biodiversity conservation, waste management, pollution control, environmental protection for river basins and environmental monitoring. Resources mobilization from private sector has boosted. Monitoring stations, laboratories, equipment and apparatus, and other supportive conditions for environmental protection have been improved.

Directive tasks have improved and been more flexible to adapt to changed structures of the VEA in different periods. Information technology and e-government have been applied. The VEA has completed a system for a level 3 - 4 online public services with 27 administrative procedures and introduced online directives related to document management and regular video conferencing with its regional units. Cooperative mechanisms among internal and external units have been established. Procedures for handling issues and internal administrative procedures have specified clear responsibilities of organizations and individuals. Staff performance evaluation have been introduced. All VEA's units have developed and applied standard management systems following ISO 9000. In 2012, the VEA's portal received the 3rd award for Asia Pacific Green E-Government.

Committed to the direction of focusing on local levels, the VEA has increased dialogues and communication with localities to timely understand their difficulties and provide assistance. So far over 600 complaints have been resolved (about 90%). An environmental hot line was introduced in 2007 at both national and local levels. Complaints via the hot line were resolved well, with 450 complaints being completely addressed (about 50%). Cooperation with localities in performing state management in environmental protection has been enhanced through inspection and monitoring of large scale environmental protects.

Despite numerous challenges over the last 10 years, the VEA has spared no effort in accomplishing assigned tasks, contributing to improvement in environmental protection. An environmental legal framework has been established with two important Laws: Law on Biodiversity and Law on Environmental

Protection. Other secondary legal documents including 15 decrees, 98 circulars, 13 joint agency circulars, 82 environmental technical regulations have provided a relatively comprehensive legal system. Orientations, viewpoints and directions for environmental protection have been mentioned in the resolutions of the Party's Central Committee and the Polit Bureau as well as in Directives of the Party's Secretariat and other strategies and programs.

Thanks to effective, innovative and compatible management instruments and policies, the state management of environmental protection has gradually changed from passive to active prevention and control of pollution and environmental incidents, pollution remedy, environmental quality improvement and nature and biodiversity conservation. Facing environmental challenges in rapid development stages, the VEA has paid attention to improving strategic environmental assessment, environmental impact assessment and requested for revision and addition of necessary measures to mitigate negative environmental impacts. It has proposed careful considerations about large scale projects with high environmental risk such as Lạch Huyện Port, Thạch Khê Ore Mine, Central Highland Bauxite Mining and Đông Pao (Lai Châu Province) Rare Earth Exploitation Project. It also has recommended no further progress of Đồng Nai 6 and 6A Hydropower Project and Posco Steel protect in Vân Phong Bay (Khánh Hòa Province). Special supervision teams have been established for big projects such as Aluminium Manufacturer in

Nhân Cơ, Tân Rai; Hà Tĩnh Formosa, Lee and Man, Nghi Sơn Oil Refinery Project. Environmental inspection and check have been conducted in 6,400 facilities and industrial parks in the last 10 years, requesting large effluent facilities to install automatic and real time monitoring stations. Environmental monitoring systems have been expanded with over 600 stations nationwide.

Pollution control of important discharge sources such as industrial parks, industrial clusters and craft villages and river basins and urban areas has progressed with over 80% of industrial parks having centralized waste water treatment systems, 85.5% of urban domestic solid waste and 90% of hazardous waste being collected and disposed of properly, and increasing recycled waste. About 12% of municipal wastewater has been treated, increased by 5% from 2010. Pollution remediation has been conducted in 60 pesticide stockpiles, 300 hospitals, landfills and pesticide storage areas and 92% of seriously polluting facilities. Four hundred of chemical and pesticide contaminated sites have been identified.

Nature and biodiversity conservation has continuously received attention which prevented and reduced illegal wildlife poaching and trading, contributing to protection precious genes and species and preventing invasive species. Việt Nam has had 5 ASEAN environmentally sustainable cities, six ASEAN heritage parks, four ASEAN eco-schools, 6 Ramsar sites, 9 world nature reserve and 2 world nature heritage sties.

In the period of 2008 - 2018, the VEA has developed and issued 10 national state



of the environment reports, of which eight are thematic and two are every five year overall assessment of the state of the environment; boosted propaganda campaigns and programs in the forms of contests, communication and education; held important environmental conferences such as National Environmental Conference in 2010 and 2015, virtual national environmental conference in 2016, East Asia and ASEAN Environmental Minister Meetings, researched and developed environmental technologies with 67 ministerial level studies, 47 local studies, 463 projects on environmental services, actively participated in 23 international environmental treaties and hundreds of cooperation projects with other nations and international organizations, issued 155 Environmental Magazines with thousands of articles, news, photos and distributed tens of thousands of publications nationwide.

With its achievements and efforts, the VEA has proudly received the President's 2nd Labour Medal, Prime Minister's Emulating Flag for excellence in environmental protection and MONRE Minister's awards. In addition, VEA staff and units have proudly received noble awards from the party and the state. One staff was awarded the 2nd Labour Medal, two staff awarded the 3rd Labour Medal, 13 individuals and 19 units under the VEA were awarded certificates of merits from the Government and the Prime Minister.

2. DEVELOPMENT OF ROLES AND MISSIONS AND FACING CHALLENGES IN ENVIRONMENTAL PROTECTION IN THE CURRENT PERIOD

Environmental protection plays an important role and is one of three pillars of sustainable development. Recognizing its roles and missions, with the mandate of an advisory body of the MONRE in unifying the state management of environmental protection nationwide, the VEA is implementing measures to contribute to prevention, control and remediation of pollution, conservation of the nature values, environmental protection and sustainable development. To fulfill these missions, it is necessary to be aware of requirements, challenges and difficulties in environmental protection at present and in the coming periods:

- Our nation's environment is facing great pressure from rapid socioeconomic devel-

opment which focuses on wide expansion and overexploitation of natural resources. Many industrial investment projects with large waste sources pose high risks of environmental pollution due to outdated technology, high energy consumption and insufficient attention to environmental protection. Annually there are thousands of projects subject to environmental impact assessment requirements, generating tens of millions of domestic and industrial solid waste, hundreds of thousands of hazardous waste and creating impact on environmental components, creating pressure on investment in infrastructure for environmental protection. Environmental issues are becoming more complicated and accumulating, posing big threats to environmental protection in the coming periods.

In addition, environmental regulations remain insufficient and fail to catch up with changes in practice, markets and requirements of international integration. Law enforcement capacity remains limited while compliance awareness is low. Although they have been upgraded, central and local environmental protection agencies have not been able to meet the practical demand. Cooperation among agencies remains weak at different levels. Gaps and overlaps in responsibility division exist. There is a lack of inter-regional and inter-sectoral cooperation. Human resources for environmental management are insufficient quantitatively and qualitatively. Despite some progress, investment in environmental protection remains modest and insufficient for addressing increasing environmental issues. Social resource mo-

bilization for environmental protection is yet effective. Breakthrough mechanisms for mobilizing the resources are lacking. There is also a room for applying science and technology results in the 4.0 renovation to bring about necessary breakthroughs for environmental protection.

3. ORIENTATION FOR THE VEA OPERATION IN THE COMING PERIOD

To keep up with its achievement, overcome difficulties, challenges and shortcomings to fulfill its tasks and make considerable progress, the VEA needs to develop relevant visions and orientations in the following areas:

- Focusing on advising the direction of improving organizational structure of environmental protection from central to local levels in the new period, towards a model which harmonizes socioeconomic development and environmental protection, in particular for local levels; focusing on capacity building for environmental staff at different levels; and implementing successfully the program "Improving organizational structure and enhancing capacity for environmental staff from central to local levels in the period of 2017 - 2020, visions for 2030".

- Continuing completing and improving environmental regulations and policies; speeding the process of revising the Law on Environmental Protection; establishing comprehensive mechanisms, instruments, measures, technical regulations, protocols and technical cost norms for environmental protection, ensuring approaching to state of the art qualifications in terms of compatibility and unity



with relevant regulations; timely and correctly forecasting environmental issues; and continuing revision to adapt to practical demand.

- Establishing and implementing socialization mechanisms to increase resource mobilization on the basis of partnership among the state, organizations, scientists, businesses and community in environmental protection, to ensure polluters pay principle and environmental beneficiaries pay principle; effectively use investment resources for environmental protection through appropriately allocating state environmental expenditure and prioritized investment.

- Effectively implementing environmental management mechanisms, instruments and measures, particularly pollution prevention and control, waste management and nature and biodiversity conservation; deploying remote prevention mechanisms to control for the transboundary movement of waste, outdated technologies and polluting manufacturers into Việt Nam; increasing investment in environmental monitoring and early warning systems in key economic zones with large emission sources and environmentally sensitive areas; proactively identifying and timely dealing with emerging environmental issues; and responding to environmental and pollution incidents.

- Taking advantages of science and technology achievements in the industrial revolution 4.0 in environmental management; focusing on information technology application, administrative reforms, synchronising and modernising environmental information and database; boosting international cooperation and mobilizing international resources; and studying and proposing mechanisms for sending environmental officers in diplomatic missions■

VIETNAM ASSOCIATION FOR THE CONSERVATION OF NATURE AND THE ENVIRONMENT (1988 - 2018):

Thirty years of proud development

Nguyễn Ngọc Sinh, Phùng Quang Chính, Nguyễn Danh Trường
Vietnam Association for Conservation of Nature and Environment

During its 30 years of development, the Vietnam Association for the Conservation of Nature and the Environment (VACNE) has continued to grow and gather a large part of the community that wants to take action to build a clean environment and promote sustainable development. Many of its activities have been put into practice and been well-received by both the central and local governments. During its development, the association has always created new activities, which focus on work efficiency and performance in the eyes of the community. Besides, the association has strived to grow and overcome challenges with the community in order to protect nature and the environment for the country's sustainable development.

The association was founded on November 26, 1988 under Decision No. 299/CT dated November 23, 1988 by the Prime Minister, formerly known as the Chairman of the Minister Council and organizes its meeting every five years. The number of association members has kept increasing to reach tens of thousands of individual members and 207 institutional members, spanning the fields of science, technology, culture, art, journalism, entrepreneurship and non-governmental activity and including groups of students, war veterans and old people.

ASSOCIATION STRENGTHS: CONSULTANCY, INSPECTION AND SOCIAL CRITICISM

The association is a trusted unit for the community, often providing objective social criticism on environmental issues that are broadly covered by the media. The association has delivered high-quality feedback on many environmental action plans of the nation, local governments and various sectors. The association has also helped the Government develop relevant policies such as Law on Environmental Protection (1993, 2004 and 2014), Law on Biodiversity 2008, Law on Environmental Protection Tax 2910 and other laws on the forestry, fishery and marine sectors.

Though there are various ideas about the Association's activities, a number of its opinions have been well-received and approved, such as its proposal on the Law on Environmental Protection 1993; its 1997 disagreement with Vedan Company as it disposed production wastes into the sea; its opinion urging the re-routing of the stretch of Hồ Chí Minh Route that would have crossed the Cúc Phương National Park in 2000; its proposal to stop implementing the Tam Đảo II project in 2006 and its proposal to prevent Vĩnh Tân Thermal Power Plant from disposing wastes into the sea in 2017.



Besides, the association has used different types of criticism and consultancy to advocate for environmental protection. The association published a book on “Social criticism in natural and environmental protection” in 2008. In 2010, the State ordered the association to re-publish its book, which was amended and supplemented, then the book was used by the Vietnam Union of Science and Technology Associations (VUSTA) as reading material in VUSTA’s training courses. VACNE has also received a lot of feedback from its members and those critics are posted in the two sections - the Environmental Forum and Environmental Talks - on the association’s website at vacne.org.vn.

CHANGED METHODS AND IMPROVED AWARENESS

The members and sub-units of the association have kept writing articles and giving media interviews to raise the public awareness of environmental protection. In each local area, the association often works with local authorities to organize training courses, talks, seminars and workshops to improve the local people’s capacity for environmental protection and develop sustainable communities.

Seizing the trend and opportunity, the association has organized fairs and exhibitions displaying environmental technologies since 2006 to encourage the public applications and technologies that are environmentally friendly. Since 2008, the association has honored companies and businessmen that have performed well in environmental protection. In 2003 - 2014,



▲ The seminar collecting feedbacks to improve the Law on Biodiversity 2008

the association worked with ministries and sectors to launch a national contest on raising students’ awareness of efficient water use and preservation.

The association in 2006 launched its annual “Cycling for the environment” program in which various activities have been held with different topics. Since 2013, the program has been connected to the Vietnam Heritage Tree preservation project and become “Cycling for the environment and heritage trees” program with several big events, such as cyclists traveling from the South and the North to gather in Huế in 2014; and the event “Cycling for environment and heritage trees” to celebrate VACNE’s 30th anniversary in 2018.

SCIENCE SEMINARS LAUNCHED, NEW UPDATES FOR ACADEMIC TEACHING

In recent years, members and sub-units of the association have effectively implemented projects and programs initiated by ministries, sectors and local authorities to make great contributions to the nation’s application of scientific research and development. The scientists of the association have proposed to introduce some important academic content to the education sector such as environmental security; approaching gene sources and the benefits of gene sharing; and the role of the community in environmental protection. Sub-units of the association have also applied successfully The Access Initiative (TAI) launched by the World Resource Institute in Việt Nam.

Since 2008, the association has held some science seminars and workshops, namely “Global climate change and Vietnam’s responses” and “Biodiversity preservation for Trường Sơn Mountain Range”. Besides those workshops, the association successfully advised local authorities to develop



▲ Students and teachers won the 11th National contest on efficient water use and preservation in June 2014



▲ *The recognition of a Vietnam Heritage Tree in Tây Ninh Province*

their bio-diversity preservation plans in locations such as Hà Nội, Cao Bằng, Hà Giang and Đắk Lắk. Each year, the association releases at least one important publication on environmental and natural protection such as the Collection of environmental studies; Việt Nam - Environment and Life; Sustainable development community models; Environmental security; Environmental protection and sustainable development; Community with environment (as a report of TAI implementation in Viet Nam); Bio-diversity preservation for the Trường Sơn Mountain Range; Vietnam Heritage Tree; Green economy and sustainable development in the context of climate change.

REACH OUT FOR PEOPLE'S SUPPORT ON ENVIRONMENTAL AND NATURAL ISSUES

The association is the contact that connects organizations and individuals from inside and outside Việt Nam to share information about natural and environmental protection activities. It has worked with South Korean businesses and organizations in socialized activities to clean dioxin with foreign capital and technology; regularly organized workshops and training courses with partners from South Korea, Japan and China on environmental impact assessment and strategic environment assessment.

The association worked with the South Korea's Human and Environment Forum (HEF) to organise the region's first-ever recognition ceremony for products and

technologies that are environmentally friendly and safe for the community in 2017.

The association has held a number of cross-country cycling tours for environmental protection on big anniversaries between Việt Nam and China, including a Hà Nội - Lạng Sơn - Nam Ninh (China) tour in 2009 and a Hà Nội - Vinh - Vientiane (Laos) ride in 2010.

Some members of the association, who are also members of regional and international organisations such as the Asia Clean Environment (ACE) and the Asia-Pacific Forum for Environmental Journalists, have proactively participated in the region's

scientific studies and projects as well as taken part in key meetings of the regional and international communities such as RIO+20 and COP.

PRESERVATION OF VIETNAM HERITAGE TREES

The Vietnam Heritage Tree Preservation Program was launched in 2010 and has since become a widespread activity, as it has proved transparent and able to meet the demands of people. The programme is not only about the protection of the bio-diversity and the environment but also about boosting local economic conditions, creating new jobs and encouraging local people to preserve their traditions. There have been nearly 4,000 old trees recognised as heritage trees in 54 cities and provinces of the country.

The heritage tree certificate has been granted for many kinds of tree in the farthest mountainous provinces in the North (Hà Giang, Lào Cai and Cao Bằng), in the south-pole island of Côn Đảo, in the Central Highland Region (Đắk Lắk) and on the Trường Sa (Spratly) Islands. Those kinds include the Pơmu in Quảng Nam Province's Tây Giang District



▲ *Field training on dioxin cleaning in A Lưới District (Thừa Thiên - Huế Province)*



and Nghệ An Province's, Quế Phong District; the Shan tea leaf in Yên Bái Province's Suối Giàng Commune, the Vả Temple in Sơn Tây Town (Hà Nội City) and the Xuân Sơn National Park in Phú Thọ Province.

However, the association has to learn from past events to improve its performance, especially when it looks for crowdfunding, provides instruction for local people to take care of the trees, makes connections with other local activities and seeks the agreement of the Government and its agencies on implementing this meaningful program.

PAST EXPERIENCES, MISSIONS AND ACTION PLAN FOR THE ASSOCIATION'S SEVENTH TERM 2018 - 2023

To make good achievements and partly meet the expectations of members, the community and society require the maximum efforts from the association and its own members. In the near future, the association will work to beat its limitations, learn from past experiences and share those experiences with the community. The key leaders of the association must always remain dedicated to its activities under any circumstances. They must look for new solutions and activities that are appropriate and effective and work with local authorities, government agencies, local and foreign non-governmental organizations (NGOs) to strengthen, develop and expand the association operation.

Facing the negative impacts of environmental issues and limitations in the country's environmental management, the association has proposed the plan and missions for its operation in 2018 - 2023:

Promote the culture and tradition of the association, adapt to new changes, make great efforts for natural resource management, environmental protection, climate change responses, green growth and sustainable development, and meet the requirements of its members and other organizations.

Strengthen and develop the association, keep its leaders and members enthusiastic, and gather more members from the community to protect the country's natural and environmental conditions. Keep improving the association operations, expand its influence on all cities and provinces of the country, on the business community and on other stakeholders. Raise the quality of the

operation for the association's sub-units and member organizations. Make sure all activities are complied with the association's regulations and strategies.

Meet the highest requirements on consultancy, testing and social criticism in environmental and natural protection, climate change response, green growth and sustainable development to assist the nation in seizing the opportunities of the Industry 4.0. Regularly satisfy the community's demand for consultancy and social criticism on different means of media and provide consultancy and social criticism services on urgent environmental, natural and climate change issues at the request of the members and Government agencies. In the near future, the association will concentrate on the issues such as the completion of the legal framework, how to mobilize resources from the community, community-based solutions for biodiversity preservation and climate change response, the development of the standardised rural area, green economy development, reduction of waste imports and the demolition of downgraded ships.

Continue diversifying its activities to raise the community's awareness of natural and environmental protection so that activities are appropriate and consistent. Support member organizations to launch environmental media events which comply with current regulations and the association charter.

Promote scientific research and development and technology use among the association's members, sub-units and member organizations to

implement their projects and programs assigned by ministries, sectors, local authorities and international organizations. Regularly organize science workshops on various issues such as the preservation of the Trường Sơn Mountain Range and on climate change and Vietnam's responses, while seeking new topics to discuss. Examine, summarise and modernize other advanced models on natural and environmental protection and climate change response.

Develop the association as a trusted contact of the international community and raise people's awareness on natural and environmental issues. Continue organizing events every two years in Việt Nam on environmental impact assessment and strategic environment assessment with its partners from South Korea, Japan and China. Improve co-operation with international organisations, including the World Wildlife Fund (WWF), the International Union for the Conservation of Nature (IUCN), the Swedish International Development Co-operation Agency (SIDA), the Asia Development Bank (ADB), the German Technical Co-operation Agency (GTZ), the Global Environment Facility (GEF), the Thailand Environment Institute (TEI) and the Access Initiative (TAI).

Strengthen and develop the Vietnam Heritage Tree program. Take care and extend the life of the heritage trees, combine the programme with other activities to help local people earn money for living, develop the tourism industry, preserve the history and culture, and promote the programme as a typical tourism model■



Radically dealing with seriously polluting public service facilities in the period 2016-2020

MSc. Nguyễn Thượng Hiền

MSc. Nguyễn Mạnh Hùng

Vietnam Environment Administration

In the past years, environmental protection has received special attention and direction from the Party, National Assembly and Government. On 3/7/2018, Prime Minister approved a target program on radically dealing with seriously polluting public service facilities in the period of 2016 - 2020 at his Decision No. 807/QĐ-TTg (herein after referred to as the program), to contribute to pollution remediation and environmental improvement and provide a foundation for environmental protection in the coming period.

The goals of the program are treating and remedying pollution, restoring and improving environmental quality in public service facilities, pesticide stockpiles, wastewater from urban town classified from grade 2 and above, to prevent pollution, protect public health and contribute to sustainable development of the country. It is planned that by 2020, pollution from 30 unsanitary landfills specified at the Decision No. 1788/QĐ-TTg will have been remedied to restore and improve environmental quality. Collection and destroying pesticide and packaging will have been conducted at 70 pesticide stockpiles. Three domestic wastewater treatment investment projects will have been started at the urban town classified as grade 4 and above which discharge to the three river basins of Nhuệ - Đáy, Cầu and Đồng Nai.

The program covers the provinces and central cities having seriously polluting public service facilities in the following documents: Prime Minister's Decision No. 1788/QĐ-TTg dated 1/10/2013 on the plan for radically dealing with serious polluters by 2020, Prime Minister's Decision No. 1946/QĐ-TTg dated 21/10/2010 on approving the plan for treating and preventing pollution of pesticide stockpiles, Prime Minister's Decision No. 57/2008/QĐ-TTg dated 29/4/2008 on approving a master plan for environmental protection of the Nhuệ - Đáy river basin to 2020; Prime Minister's Decision No. 1435/QĐ-TTg dated 18/8/2014 on approving the implementation plan for the

master plan for environmental protection of the Nhuệ - Đáy river basin; Prime Minister's Decision No. 174/2006/QĐ-TTg dated 28/7/2006 on approving a master plan for environmental protection and landscape of the Cầu river basin and Prime Minister's Decision No. 187/2007/QĐ-TTg dated 3/12/2007 on approving the master plan for environmental protection of the Đồng Nai river basin to 2020. The program also covers the provinces/cities having new seriously polluting pesticide stockpiles which pose high risks to

human health and socio-economic development of the country.

The program's focal point is the Ministry of Natural Resources and Environment (MONRE). The total budget for the program is 535 billion VND from the central budget (this could be increased when resources are available but will not exceed the level of 4,648 billion VND as specified at the Government's Resolution No. 73/NQ-CP dated 26/8/2016 on approving investment undertakings for target programs in the period 2016 - 2020. Of this total



▲ Pesticide stockpile in Triệu Đại Commune (Triệu Phong District, Quảng Trị Province) in the list of seriously polluting facilities of Prime Minister's Decision No. 1788/QĐ-TTg



budget, the budget for central activities is 42 billion VND (this could increase when resource availability allows, but will not exceed the level of 670 billion VND as specified at the Government Resolution No. 73/NQ-CP). If the resources are not available to allocate for the whole period, the program can prolong to achieve its objectives. The budget from the central budget for environmental expenditure is 493 billion VND ((this could increase when resource availability allows, but will not exceed the level of 548 billion VND as specified at the Government Resolution No. 73/NQ-CP). The ODA and other funding sources will be allocated when available but will not exceed the level of 3.430 billion VND as specified at the Government Resolution No. 73/NQ-CP. When the funding is not enough, the program can prolong and its objectives can be adjusted. The program includes three projects:

1. The project on radically dealing with seriously polluting public service facilities at Decision No. 1788/QĐ-TTg; The main objectives are surveying and assessing scope and extent of pollution by closed unsanitary landfills; developing options and plans for treating, restoring, upgrading or investing in new environmental projects to submit to competent authorities for approval. More specifically, it will develop and pilot test new technologies for treating and restoring environmental quality of some polluting unsanitary landfills for scaling up in the coming period; relocate people living in the polluting areas; separate and prevent pollution, develop protecting system for people and livestock; treat, rehabilitate and restore environmental components (air, water, soil) to meet environmental standards; monitor and supervise environmental quality before and after the project; implement the project following approved items; develop and issue procedures for managing and sustainably operating environmental works after the investment stage, report on the completed activities and send the report to MONRE for inspection and reporting to Prime Minister; supervise the implementation and socio-economic and environmental outcomes of the project and propose scale up plans.

2. The project on treating and restoring environmental quality of some serious polluted areas due to pesticide stockpiles. It has the objectives of surveying and assessing extent and scope of 70 polluting pesticide stockpiles; develop investment projects and submit to competent authorities for approval; develop pollution remedy activities. Similar to the above mentioned project, it covers relocating people living in the polluted areas, separate and prevent pollution, develop protecting system for people and livestock; treat, rehabilitate and restore environmental components (air, water, soil) to meet environmental standards; monitor and supervise environmental quality before and after the project; implement the project following approved items; develop and issue procedures for managing and sustainably operating environmental works after the investment stage, report on the completed activities and send the report to MONRE for inspection and reporting to Prime Minister; supervise the implementation and socioeconomic and environmental outcomes of the project and propose scale up plans.

3. The investment project on constructing three domestic wastewater treatment projects for urban town graded 4 and above which discharge to three river basins of Nhuệ - Đáy, Cầu and Đồng Nai. Under this project, MONRE will lead and cooperate with other agencies to survey, study and develop investment projects for wastewater collection and treatment; seek for ODA funding

and other funding sources after getting approval from Prime Minister; construct wastewater collection and treatment systems meeting environmental regulations; develop and issue procedures for managing and sustainable operating environmental works after investment stages, and report on verifying completed pollution treatment and environmental restoration.

Right after the program is approved by Prime Minister, MONRE rapidly developed an implementation plan. It sent a Circular No. 4237/ BTNMT dated 8/8/2018 to provinces to provide guidance on developing a budget estimation for 2018 - 2019 and financial plan for 2019 - 2020 implement the program. Based on provincial reports, MONRE will share the plan with Ministry of Finance (MOF) and Ministry of Planning and Investment (MPI) before sending to Prime Minister for approval. In addition, to enable early start of the program, Prime Minister directed the provinces having related projects to rapidly implement the program; review and propose subprojects. He also directed ministries and provinces to develop annual and mid term plans to send to MONRE, MPI and MOF as specified in the Law on Public Investment, Law on State Budget and other related legal documents. In the meantime, Prime Minister requested the provinces to review and assess results of the projects under provincial supervisions and regularly report to MONRE the program implementation progress■



Strengthening management of importing scraps for production input

Nguyễn Thượng Hiền

Nguyễn Thành Lam, Nguyễn Đức Thọ

Vietnam Environment Administration

In the past years, in addition to domestic waste recycling and reusing for production input, to meet demands of some industries, the Government has approved the import of scrap with specific conditions under the Law on Environmental Protection and Decree No. 38/2015/ND-CP dated 24/4/2015 on waste and scrap management.

However, when inadequately enforced, the management of scrap import and use can be abused to enable waste transport to Việt Nam, causing environmental pollution. Given that some major scrap importing countries have recently limited and banned their scrap import, a large amount of scraps has shifted toward Southeast Asian markets, including Việt Nam. Due to some loopholes in scrap management procedures, a considerable number of scrap containers have remained uncollected in various Vietnamese sea ports, mostly in Hải Phòng and the New Port in Hồ Chí Minh City. Besides, improper management of scrap import and its recycling and processing technology can pose a risk for Việt Nam of being a dumping site of waste and outdated and polluting recycling technologies.

To increase management of importing scraps for production input, effective implementation of trade safeguards and proactive prevention for mitigating potential pollution, on 17/9/2018, Prime Minister issued Directive No. 27/CT-TTg on some urgent measures for strengthening management of importing and using scrap as production input.

NO PERMITS FOR IMPORTING SCRAPS FOR PRELIMINARY PROCESSING ONLY

Prime Minister has requested the Ministry of Natural Resources and Environment (MONRE) to be accountable for state management of environmental protection of import and use of scrap for production input. The Ministry shall not issue new verifications for meeting environmental



▲ Prime Minister Nguyễn Xuân Phúc chaired the meeting of Standing members of the Government on scrap import issues and solutions on 25/7/2018

requirements for importing scrap (the permit) nor renew the document as well as delegation for importing scrap. It shall consider issuing and renewing the permit for those who can demonstrate the demand for and capacity of using scrap. In the meantime, MONRE shall continue reviewing, revising, completing and submitting to Prime Minister to issue, or issue under the Ministry's mandate environmental regulations related to scrap import toward a direction of increasing environmental requirements for scrap importers. It will not issue the verification for those who import scrap for preliminary processing only and then reselling the materials. Deposits will be applied for scrap before being imported to Việt Nam. It will review international treaties with which Việt Nam is a member; review regulations of managing imported scrap as goods under group 2 to ensure in line with international laws; review, revise, complete and issue national techni-

cal regulations on scrap import for production input to strengthen management of imported scrap quality and facilitate imported scrap inspection. These will be completed in the 3rd quarter of 2018.

In addition, MONRE shall lead and cooperate with other ministries, sectors and localities to conduct comprehensive inspections of issuance of certificates for satisfying environmental requirements (permits) and environmental compliance in scrap import of facilities which have received the certificates, and environmental compliance of organizations who have been nominated to participate in verifying environmental requirements of imported scrap, and strictly handling violations.

PREVENTION OF IMPORTED SCRAP FAILING TO MEET WITH REQUIREMENTS

Prime Minister directed the Ministry of Finance to guide its Custom Agency to



rapidly solve the issue of postponing imported scrap containers from individuals and organizations whose scrap importing certificates and importing quota are still valid; to apply prevention of importing scrap failing to meet the Vietnamese requirements; to guide shipping companies and their representatives to complete e-manifest forms with full information on scrap receivers in Việt Nam (business names, tax file numbers, physical address and the number of scrap importing certificates). The description of scrap containers must be detailed to enable determination of type of scraps permitted to be imported for production input.

The Ministry of Transport directed related agencies to inform port businesses, ship owners, marine transport businesses that they shall only accept the shipment of scrap meeting the Vietnamese environmental regulations and holding valid certificates to prevent the illegal import. Ship and shipping business owners shall hold responsibility for imported scrap failing to meet the Vietnamese regulations. The sea port businesses shall not allow landing of containers without scrap import certificates and deposit for ensuring meeting with the regulations. They shall be responsible for the landed scrap containers.

STRICT CONTROL AND REEXPORT OF WASTE IMPORT UNDER THE NAME OF SCRAP IMPORT

Ministry of Finance cooperate with Ministry of Industry and Trade review and complement regulations on temporarily ceasing

temporary import and re-export and transit of scraps, firmly request for re-export of imported waste under the name of scraps and handing violations.

Ministry of Industry and Trade (MOIT) leads and cooperates with other ministries and agencies to review, issue or propose to issue regulations on temporarily ceasing the temporary import, re-export and transit of scrap into the Vietnamese territory in line with local situations; lead and cooperate the ministries and agencies to research trade safeguard measures in accordance with the World Trade Organization (WTO) related to scrap import; direct its market surveillance agencies to conduct inspections on scrap trade and use; inform scrap importing individuals and organizations through public media; since 1/10/2018, stop the scrap import via road and railways.

MONRE and PPCs only issue and renew scrap import permits when businesses can demonstrate their demand for importing scrap for production input. Scrap import permits and responses to applica-

tions are available in MONRE portal and the national one stop shop portal.

RAPID COOPERATION AMONG MINISTRIES AND LOCALITIES IN IMPLEMENTING DIRECTIVE NO. 27/CT-TTG

MONRE has actively cooperated with ministries and localities to implement Directive No. 27/CT-TTg. More specifically, MONRE has completed an inspection plan on environmental compliance of issuing certificates/permits of importing scrap for production input, as in Decision No. 2534/QĐ-BTNMT dated 10/8/2018.

Inter-agency inspection teams were organized with MONRE as a team leader and participation of the Ministries of Finance, Industry and Trade and Public Security, following the Decision No. 2535/QĐ-BTNMT on inspection of environmental compliance of issuing certificates/permits for scrap import, activities related to import and use of imported scraps and compliance of those who have been issued the permits.

The MONRE has set up a task force to work with General Department of Custom and Provincial Departments of Custom of Bình Dương, Bà Rịa - Vũng Tàu, Bình Định, Cần Thơ, Đà Nẵng, Hải Phòng and Hồ Chí Minh City to conduct an inventory of the remaining containers at the sea ports (according to e-manifest forms) and review lists of individuals and organizations who have filled in e-manifest forms. Based on collected data, with its mandate in scrap environmental management, Vietnam Environment Administration (VEA) has submitted to Minister to



▲ Firmly request for re-export of waste import under the name of scrap import

(Continued page 31)



Blue economy in association with marine environmental protection

Dr. Đoàn Quang Sinh - Director

Hà Thanh Biên

Department of Seas and Islands Exploitation Management

The 8th Plenum of the Party Central Committee promulgated the Resolution on the Strategy for Sustainable Development of Maritime Economy in Việt Nam by 2030, with a vision to 2045, in order to step by step develop Việt Nam into a strong maritime nation; to basically meet the criteria on sustainable development of maritime economy; to form marine ecological culture; to adapt actively to climate change (CC) and sea level rise; to prevent the pollution trend, degradation of the marine environment, coastal erosion and sea intrusion; to restore and conserve important marine ecosystems. The new, advanced and modern scientific achievements have become a direct factor promoting the sustainable development of maritime economy. One of the new and highlighted points in the Strategy for Sustainable Development of Maritime Economy in Việt Nam by 2030, with a vision to 2045, is the development of the “blue economy in association with marine environmental protection. Comparing with the Maritime Strategy of Việt Nam towards 2020, this is a remarkable direction.

After more than 10 years of implementation of the Vietnam Maritime Strategy towards 2020 adopted in the Resolution of the 4th Plenum of the 10th Party Central Committee, Việt Nam has achieved remarkable results. Maritime economy is playing an increasingly important role in the national economy, contributing to ensuring the national defense and security, to strengthen foreign relations and international cooperation in all aspects. However, along with the development in all aspects, there are many difficulties and challenges during 10 years of implementation of the Vietnam Maritime Strategy. Maritime economic development is not harmonized with social development and environmental protection. Marine environmental pollution in many places is serious; pollution of plastic waste has become an urgent problem; marine ecosystems and marine biodiversity has declined; some marine resources have been over-exploited; responding to CC, sea level rise and sea erosion is still limited and inadequate.

BLUE ECONOMY

There are many concepts of blue economy. According to the report "Sus-

tainable blue economy" at the World Ocean Summit 2015, it was defined as follows: "The blue economy is a maritime economy with sustainable development, in which maritime economic activities is balanced with supply capacity of the marine ecosystems continuously". In simple words, the blue economy ensures both economic development and the development of marine ecosystems through the following methods: Reduction of carbon emissions, in-depth growth, natural resources savings and environmentally friendliness...

To look back the Vietnam Maritime Strategy in 2007, it is clear that the thinking of blue economy in new Maritime Strategy has been clearly demonstrated. Particularly, the requirement of "breakthroughs in marine and coastal economy" was stated in the Maritime Strategy in 2007 as follows: Oil

exploitation and processing; construction of coastal economic zones, concentrated industrial parks and export processing zones in association with the development of coastal urban centers". The Maritime Strategy in 2007 focuses on exploiting marine resources such as oil and gas, seafood, etc., while sectors using less resources or renewable resources do not play a major role in the whole economy. The development of "brown economy" in the direction of resource-intensiveness and less technological and knowledge content, partly met the requirements of economic development and production level in the past period; however, it was accompanied by many consequences for the marine environment.

The Strategy for Sustainable Development of the Maritime Economy in Vietnam in 2018 clearly states: "Successful and break-



▲ *The Vietnam Maritime Strategy by 2020 prioritizes the improvement of the legal framework and the development of green growth and environmental protection models*

through developments in the maritime sectors in the following order of priority: Tourism and maritime services; Maritime economy; Exploitation of oil and gas and other marine mineral resources; Aquaculture and seafood harvesting; Coastal industry; Renewable energy and new marine economic sectors". Clearly, the resource-intensive sectors have been reduced in terms of priority and replaced by less resource-intensive sectors such as tourism and shipping. The new point of the strategy is the emergence of aquaculture sector beside seafood harvesting. In the context of declining seafood production, traditional fishing grounds in the country do not meet the demand for exploitation and are under the scrutiny of international attention on illegal fishing. Therefore, promoting aquaculture will be a solution for our country's seafood sector. In addition, the Strategy mentions the renewable energy sector and new marine economic sectors such as wind power industry, oceanic solar power, sea tidal power, exploitation of marine biodiversity resources such as marine medicine, aquaculture and processing of seaweed, algae, sea grasses, etc. These are the sectors using less natural resources or using renewable resources. The new marine economic sectors have high technology content towards sustainable growth. This is a breakthrough of the Maritime Strategy towards the development of blue economy.

The development of the blue economy as defined at the World Ocean Summit 2015 stated the role of conservation and sustainable development of marine ecosystems, as known as development in the direction of ecosystem approach. To implement this, the Vietnam Maritime Strategy by 2020 has identified that the first stage of breakthroughs is maritime management, focusing on completing the institutions on sustainable development of maritime economy, prioritizing completion of legal framework, innovating and developing the green growth and environmental protection model, raising the productivity, quality and international competitiveness of maritime economic sectors, sea and coastal areas; improving overall and unified management mechanism on the sea. The marine-related planning should be reviewed, adjusted, supplemented and revised to ensure the

linkage and synchronism among sectors/localities. Currently, marine management activities such as: Integrated coastal zone management, national maritime spatial planning, master plan for exploitation and sustainable use of coastal resources, etc. all are based on the ecosystem approach. This is a good point for the Strategy for Sustainable Development of Maritime Economy in Việt Nam to be implemented in reality.

OBJECTIVES OF MARINE ENVIRONMENTAL PROTECTION

Marine environmental protection is a key element in the Strategy for Sustainable Development of the Maritime Economy in Việt Nam. One of the viewpoints expressed in the Strategy is marine environmental protection in association with prevention of pollution and environmental incidents, and enhancement of regional and global cooperation. Facing the challenges



of marine environment such as: Oceanic plastic waste, wastewater discharge source from inland, environmental incident..., the Strategy for Sustainable Development of the Maritime Economy in Việt Nam has focused on the orientation of waste control activities at the source. The Strategy has set the targets: Preventing, controlling and significantly reducing pollution of the marine environment; becoming a pioneer in the region on reducing oceanic waste. In coastal cities and provinces, 100% of hazardous wastes and domestic solid wastes are collected and treated to meet environmental standards; 100% of economic zones, industrial parks and coastal urban areas are planned and constructed in a sustainable, ecological and smart manner, adaptive to CC, sea level rise, having concentrated waste water treatment system, meeting the technical regulations and standards of the environment.

The Strategy also recognizes the role of Marine Protected Areas in the creation of healthy marine ecosystems. By 2030, the area of marine and coastal protected areas should reach at least 6% national natural marine area; the area of coastal mangrove forests should be restored at least equal to the level of 2000. This is a big number, because according to the planning of marine protected area system until 2020, the target of protection of only 0.24% of Vietnam's marine area has been set for period of 2010-2015. The number of 6% of the protected natural area of the national marine zone represents the high determination of Việt Nam to preserve the marine ecosystems.

MAIN ADVANTAGES AND CHALLENGES

Completion of the objectives in the Strategy for Sustainable Development of the Maritime Economy in Việt Nam is a very difficult task. In the current situation, the implementation of the Maritime Strategy has the following advantages:

Firstly, the position and role of the sea and islands for economic development and protection of sovereignty has been much better understood by the whole political system, the domestic and overseas Vietnamese people.

Secondly, on the basis of the Vietnam Maritime Strategy in 2007, a system of

policies, laws, state management of the sea and islands has been developed from the central to local levels. It has been completed and working effectively. The current marine management methods are based on the ecosystem approach, cross-sectoral management through legal and policy systems.

Thirdly, our country has favorable natural and socio-economic conditions with potential and advantages for marine economic development towards the development of the blue economy in association with marine environmental protection. Particularly, the position of the coastal areas, islands and archipelagoes allows the development of coastal economic zones and specific island economic zones, linking economy with national defense.

However, along with the advantages, there are many difficulties and challenges, especially the effective development of blue economy in association with environmental protection.

Perceptions of the people, of different levels of Government and sectors, etc. on marine environmental protection has been limited. Especially, the coastal and island infrastructure is poor, backward and fragmented; equipment is not synchronized, of low efficiency and environmental protection is not sufficiently paid attention to.

Marine management is still a new field in Việt Nam, so everything is still very unfamiliar, the human resources on marine are still in shortage and it has not received adequate investment.

Maritime sectors require large amounts of investment capital, with slow capital recovery and high risk rate, and require advanced technology application, so it is difficult to find investors who are sufficiently qualified and enthusiastic.

The situation of CC and sea level rise is unpredictable, the domestic economic situation and the world situation also has many complicated developments, so the implementation of the Maritime Strategy also encountered many difficulties due to the external impacts.

In order to achieve the objectives as set out in the Strategy for Sustainable Development of Maritime Economy in Việt Nam, it is necessary to have a united way of thinking and awareness of the position, role and special importance of the sea to the cause of developing and defending the country. The immediate focus should be on building and improving national and local marine laws, policy system in an interdisciplinary approach for general and integrated management of the sea and islands. Currently, the Government is steering the development of the National Marine Planning. This will be an important tool to concretize the content of the Strategy for Sustainable Development of the Maritime Economy in Việt Nam, especially for the objectives of blue economy in association with marine environmental protection■



90 percent of the planet is breathing in polluted air

Air pollution claims seven million lives a year, United Nations (UN) health experts said, amid new data showing that the problem affects nine out of ten people worldwide.

In a call for Member States to take action urgently, World Health Organization (WHO) Director General Tedros Adhanom Gebreyesus warned that air pollution “threatens us all, but the poorest and most marginalized people bear the brunt of the burden”.

According to WHO’s ambient air quality database, despite some improvements, pollution levels are “still dangerously high” in most parts of the world. This includes “many of the world’s megacities”, according to Dr. Maria Neira, WHO’s Director of the Department of Public Health, Social and Environmental Determinants of Health, who added that air quality levels in those urban centres, exceed WHO guidelines “by more than five times”.

Covering more than 4,300 cities in 108 countries, the data points to an estimated 4.2 million deaths each year caused by outdoor air pollution, with 3.8 million fatalities overall, owing to household pollutants, linked to cooking. More than 90 percent of victims come from low- and middle-income countries in Asia and Africa, followed by others in the Eastern Mediterranean region, Europe and the Americas.

The threat to human health comes from exposure to near-invisible toxins that are present in polluted air as fine particles. These pollutants - some of the most dangerous being sulfates, nitrates and black carbon - penetrate deep into the lungs and bloodstream and cause a range of diseases including stroke, heart disease, lung cancer and other respiratory infections.

According to WHO, global air pollution is linked to inefficient energy use in every sector of human activity: Coal-fired power plants, industry, agriculture and transport. Waste burning and deforestation are additional sources of air pollu-



▲ Coal-fired power plants produce air pollution

tion, as are sand and desert dust.

Inside people’s houses, the main source of air pollution stems from lack of access to clean cooking fuels. It’s a problem that affects more than 40 percent of the world’s population - some three billion people - a situation that the WHO Director General Tedros Adhanom Gebreyesus described as “unacceptable”.

Although there are major gaps on air pollution data from regions including the Western Pacific and Africa - where information was available in only eight out of 47 countries on the continent - the WHO chief noted that the international community was “starting to pay attention and take action” on air pollution, recognizing it as a threat to sustainable development. “The good news is that we are seeing more and more governments increasing commitments to monitor and reduce air pollution as well as more global action from the health sector and other sectors like trans-

port, housing and energy”, he said.

Dr. Maria Neira echoed that message, highlighting “an acceleration of political interest in this global public health challenge”. But she noted that the increased commitment to recording air pollution data to date, had come mostly from high-income countries. Countries that are taking measures to reduce air pollution include India, where one new scheme has provided free gas connections for more than 37 million women, to help them make the switch to clean energy use in the home.

The publication of WHO’s findings comes ahead of the first Global Conference on Air Pollution and Health from 30 October to 1 November, 2018 in Geneva, where the UN Agency aims to push for improved air quality and combat the harmful effects of climate change■

An Vi
(WHO source)



European Commission takes action to protect citizens from air pollution

The European Commission is providing national, regional and local actors with practical help to improve air quality in Europe and stepping up its enforcement against 7 member states who have breached agreed European Union rules on air pollution limits and type approval for cars.

THE COMMISSION IS STANDING UP FOR EUROPEANS' NEED TO BREATHE CLEAN AIR

Commissioner for Environment Karmenu Vella said: "The decision to refer member states to the Court of Justice of the EU has been taken on behalf of Europeans. We have said that this European Commission is one that protects. Our decision follows through on that claim. The member states referred to the Court have received sufficient "last chances" over the last decade to improve the situation. It is my conviction that the decision will lead to improvements for citizens on a much quicker timescale. But legal action alone will not solve the problem. That is why we are outlining the practical help that the Commission can provide to the national authorities' efforts to promote cleaner air for European cities and towns".

Commissioner for the Internal Market, Industry, Entrepreneurship and SMEs Elżbieta Bieńkowska added: "We will only succeed in fighting urban air pollution if the car sector plays its part. Zero emissions cars are the future. Meanwhile, complying with emissions legislation is a must. Manufacturers that keep disregarding the law have to bear the consequences of their wrongdoing".

In a Communication entitled 'A Europe that protects: Clean air for all', adopted today, the Commission outlines measures available to help Member States fight air pollution. The Commission also underlines the need to step up cooperation with Member States by engaging with relevant authorities in new "Clean Air Dialogues" and by using EU funding to support measures to improve air quality.

In addition, the Commission is today referring France, Germany, Hungary, Italy, Romania and the United Kingdom (UK) to

the Court of Justice of the EU for failing to respect agreed air quality limit values and for failing to take appropriate measures to keep exceedance periods as short as possible. The Commission is also issuing additional letters of formal notice to Germany, Italy, Luxembourg and the UK on the grounds that they have disregarded EU vehicle type approval rules.

MEASURES TO FIGHT AIR POLLUTION

The measures proposed by the Commission rest on three main pillars: air quality standards; national emission reduction targets and emission standards for key sources of pollution, for example from vehicle and ship emissions to energy and industry.

To address air pollutant emissions from traffic, the Commission will further strengthen its work with national, regional and local authorities on a common integrated approach for urban vehicle access regulations, under the EU Urban Agenda.

In addition, the Commission has led a wide-ranging reform to ensure that air pollutant emissions from vehicles are measured in real driving conditions (see FAQs).

STEPPING UP ENFORCEMENT

The Commission is taking action to address the significant and persistent exceedances of limit values for two key pollutants with health impacts: Nitrogen dioxide (NO₂), which is mostly a result of road traffic and industry and particulate matter, which is mainly present

in emissions from industry, domestic heating, traffic and agriculture.

The Commission decided to refer France, Germany and the UK to the Court of Justice of the EU for failure to respect limit values for NO₂ and for failing to take appropriate measures to keep exceedance periods as short as possible. Hungary, Italy and Romania are referred to the Court of Justice over persistently high levels of particulate matter (PM₁₀). The limits set out under EU legislation on ambient air quality (Directive No. 2008/50/EC) had to be met in 2010 and 2005 respectively.

This step follows an Air Quality Ministerial Summit convened by Commissioner Karmenu Vella, on 30 January, 2018, as a final effort to find solutions to address the serious problem of air pollution in 9 Member States. The 6 Member States in question did not present credible, effective and timely measures to reduce pollution, within the agreed limits and as soon as possible, as required under EU law. The Commission has therefore decided to proceed with legal action.

As regards the Czech Republic, Slovakia and Spain the measures being put in place or planned, as communicated to the Commission following the Air Quality Ministerial Summit, appear to be able to appropriately tackle the identified gaps, if correctly implemented. For this reason, the Commission will continue to closely monitor the implementation of these measures as well as their effectiveness in redressing the situation as soon as possible.



INFRINGEMENT PROCEDURES ESCALATED FOR 4 MEMBER STATES

The Commission is taking further steps in its infringement procedures against 4 Member States on the grounds that they have disregarded EU vehicle type approval rules. The Commission decided to issue additional letters of formal notice to Germany, Italy, Luxembourg and the UK.

EU type-approval legislation requires Member States to have effective, proportionate and dissuasive penalty systems in place to deter car manufacturers from breaking the law. Where such a breach of law takes place, for example by using defeat devices to reduce the effectiveness of emission control systems, remedial measures - such as recalls - must be ordered and penalties must be applied (Articles 30 and 46 of Directive No. 2007/46 and Article 13 of Regulation No. 715/2007).

The Commission opened infringement proceedings against Germany, Luxembourg and the United Kingdom in December 2016 with regard to Volkswagen Group and sent complementary letters of formal notice in July 2017 requesting further clarifications.

On 17 May 2018, the Commission sent additional letters of formal notice to request more information on the national investigations and legal proceedings related to these infringements. In addition, following the discovery of new cases of engine-management irregularities in several diesel cars (Porsche Cayenne, Volkswagen Touareg and several Audi A6 and A7 vehicles) the Commission asks Germany and Luxembourg, as the competent type-approval authorities, which remedial measures and penalties are envisaged. The Commission is also requesting clarifications from the UK on planned national legislation.

In May 2017, the Commission launched an infringement procedure against Italy for failure to fulfil its obligations under the EU vehicle type-approval legislation with regards to Fiat Chrysler cars. In the meantime, Italy took corrective measures by ordering the Fiat Chrysler Automobiles group to conduct a mandatory recall in the EU. As part of the ongoing exchange, the Commission requests additional information on the concrete corrective measures taken and penalties applied.

An additional letter of formal notice constitutes an official request for information. The Member States now have two months to respond to the arguments put forward by

the Commission; otherwise, the Commission may decide to send a reasoned opinion.

BACKGROUND

In the EU, air quality has generally improved over the last decades, often thanks to joint efforts by the EU and national, regional and local authorities. Yet, the quality of life of many EU citizens remains unacceptably hampered. Air pollution directly causes both chronic and serious diseases such as asthma, cardiovascular problems and lung cancer.

Referrals concern exceedances of air quality standards:

NO_2 :

- Germany - in 26 air quality zones, among them Berlin, Munich, Hamburg and Köln; annual concentrations reported in 2016 were as high as $82 \mu\text{g}/\text{m}^3$ against a limit value of $40 \mu\text{g}/\text{m}^3$ (in Stuttgart);

- France - in 12 air quality zones, among them Paris, Marseille and Lyon; annual concentrations reported in 2016 were as high as $96 \mu\text{g}/\text{m}^3$ (in Paris);

- The UK - in 16 air quality zones, among them London, Birmingham, Leeds, and Glasgow; annual concentrations reported in 2016 were as high as $102 \mu\text{g}/\text{m}^3$ (London).

In total, there are 13 infringement cases pending against Member States (Austria, Belgium, the Czech Republic, Germany, Denmark, France, Spain, Hungary, Italy, Luxembourg, Poland, Portugal and the UK).

Decision on Germany, France and the UK are the first ones to be referred to the Court; all three cases follow Reasoned Opinions communicated in February 2017.

PM_{10} :

- Italy - in 28 air quality zones, including in the regions of Lombardy, Piemon-

te, Lazio and Veneto, the daily limit values have been persistently exceeded, in 2016 on up to 89 days;

- Hungary - in 3 air quality zones, Budapest, Pecs and Sajó valley, the daily limit values have been persistently exceeded, in 2016 on up to 76 days;

- Romania - in the agglomeration of Bucuresti, the daily limit values have been persistently exceeded, ever since the EU Law became applicable to Romania, and in 2016 on 38 days.

In total, there are 16 infringement cases pending against Member States (Belgium, Bulgaria, the Czech Republic, Germany, Greece, Spain, France, Hungary, Italy, Latvia, Portugal, Poland, Romania, Sweden, Slovakia and Slovenia). Bulgaria and Poland have been found in breach of EU legislation by the European Court of Justice, on 5 April, 2017 and 22 February, 2018, respectively.

The decision follows a reasoned opinion sent to Italy in April 2017, an additional reasoned opinion sent to Romania in September 2014, as well as an additional reasoned opinion sent to Hungary in March 2014.

In all cases of exceedance of limit values set by EU Law on Ambient Air Quality (Directive No. 2008/50/EC), member states have to adopt air quality plans and ensure that such plans set appropriate measures so that the exceedance period can be kept as short as possible. Guided by the principle of subsidiarity, EU legislation gives Member States the choice of which means to use to comply with the limit values■

Đức Trí
(EU source)



EU action on plastics

Plastics play an important role in both our economy and our daily lives - but the way plastic products are currently designed, produced, used and discarded harms the environment. The amount of marine litter in oceans and seas is growing, negatively impacting ecosystems, biodiversity and potentially human health. At the same time, valuable material that could be brought back into the economy is lost once littered. The potential economic and environmental benefits of a more resource efficient and circular approach are not realized. The need to tackle these problems and reduce the environmental, economic and social harm is widely recognized.

Being widely available persistent and used for applications prone to littering plastic is the main source of marine litter as it is hardly biodegradable and often causes toxic and harmful consequences. Due to its persistency, these impacts are growing as each year we generate more plastic waste. It is a global problem, as acknowledged by many initiatives worldwide, but Europe is a source and suffers the impact.

In addition to harming the environment, marine litter damages activities such as tourism, fisheries and shipping. For instance, the cost of marine litter to European Union (EU) fisheries is estimated at between 1% and 5% of total revenues from catches by the EU fleet. It threatens food chains, especially seafood.

EU ACTION ON PLASTIC

Europe has a responsibility to deal with its part of the problem, and is committed to act globally. As part of the Plastics Strategy, the European Commission (EC) has committed itself to look into further action to address plastic marine litter that builds on the efforts underway in EU Member States. The problem of marine litter is global by nature, as litter moves in the marine environment, and litter originating from one country can affect another. Joined-up action is needed, also to ensure a single market with high environmental standards and legal certainty for businesses. The EC legal initiative aiming to reduce marine litter is part of a wider, more comprehensive approach, namely the Plastics Strategy, the Circular

Economy Action Plan and the amended waste legislation.

PROPOSAL FOR A SINGLE-USE PLASTIC DIRECTIVE: KEY DOCUMENTS

The Plastics Strategy already tackles the design part of the cycle, for example, through a review of the essential requirements of the Packaging Directive. The Strategy pushes an ambitious approach for plastic packaging recyclability, in line with our revised waste legislation. It also includes a strong response on microplastics, a significant source of marine pollution. The amended Waste Framework Directive has strengthened general principles and objectives; ambitious 2030 recycling targets for municipal waste and plastic packaging are also set; however these cannot be reached without in depth efforts on littering or waste prevention.

The legislative initiative on single-use plastics complements all of these actions on design, recycling and microplastics and goes one step further. The main objective is prevention - reducing plastic marine litter of single-use plastic and fishing gear, e.g.

by market restrictions and producers paying for clean-up. As a result, innovation for new business models (such as reuse models), multiuse items or material substitution will be boosted. In cases where marine litter will still occur, the resulting shift from single-use plastics to reusable solutions and many natural, untreated alternative materials should lead to a reduced environmental impact. The initiative also tackles lost fishing gear because of its direct pathway to the sea. The main objective here is to incentivise bringing all fishing gear ashore and improve its handling there.

The single-use plastics initiative directly addresses the two main sources of marine litter in Europe: Single-use plastics and fishing gear. Together, these constitute 84% of plastic marine litter items, among them the most environmentally harmful items in the marine environment. Non-plastic marine litter is often inert (stone) or biodegradable (paper, wood) and thus, poses a lower environmental threat.

The top 10 most commonly found single-use plastics make up 86% of all single-use



▲ Littering plastic is the main source of marine litter



plastic in beach litter and is responsible for more than half of plastic marine litter. The list is very similar to lists in the US and other countries that consistently find the same plastic products in their marine litter.

Fishing gear (more precisely fishing and aquaculture gear) that is either lost or abandoned, including nets, makes up around a third of beach plastic litter. Abandoned, lost or disposed of fishing gear includes: larger parts of fishing gear (such as pots and traps, nets, or lines) that are voluntarily abandoned on fishing grounds or accidentally lost due to adverse weather conditions, interactions and conflicts between gear users. These may entangle marine life (such as pots and traps, nets, or lines) with worn out material (netting, lines) voluntarily dumped overboard.

Member States are taking national action against single-use plastic. France has banned plastic cups and plates, Italy and France are banning plastic cotton buds, and the United Kingdom (UK) and recently, the Brussels region, both want to ban straws. Other countries like Ireland and Portugal are also considering measures. The EU must act now to ensure these diverse actions do not fragment the single market. Businesses need a level playing field, with clarity and legal certainty.

LEGAL CONTEXT

In 2015, the Circular Economy Package included proposals to modernise the EU waste legislation on which an agreement between the Institutions was reached in December 2017. The new legislation includes general provisions on waste prevention and marine litter.

On 16/1/2018, the EC adopted the "European Strategy for Plastics in a Circular Economy", which recognizes that marine litter remains an issue and that plastic is a significant source of pollution. It confirms, in its action plan, that additional action on fishing gear, including Extended Producers Responsibility and/or deposit schemes, will be examined.

The Common Fisheries Policy Control Regulation contains measures on retrieval and reporting on lost fishing gear, as well as the requirement to mark fishing gear. The European Maritime and Fisheries Fund (EMFF) allows Member States to financially support the collection of marine litter as well as invest in port facilities for waste collection.

EC's 2018 legislative proposal on port

reception facilities includes measures to ensure that waste generated on ships or gathered at sea be returned to land and adequately managed. It refers explicitly to the EC's consideration for further action on fishing gear. On 30/5/2018, the EC adopted a proposal for a review of the Fisheries Control System, which will improve the rules on reporting of lost fishing gear, e.g. through the introduction of reporting and on its retrieval.

PUBLIC CONTEXT

The general public is sensitive to the environmental impact of plastics. Eurobarometer surveys found that European citizens are concerned about the impact made by everyday plastic products on their health (74%) and on the environment (87%). Documentaries such as *A Plastic Ocean* or the BBC's *Blue Planet II* brought the dimension of this global problem to attention of a wider public. 33% of Europeans identified marine pollution as the most important environmental issue.

The implementation of the Plastic Bag Directive shows that restrictive measures can bring immediate results and public acceptance. Its implementation shows that even small levies on light plastic bags (around 0,10 €) can lead to significant reductions in consumption in a short period. In Ireland the introduction of a tax on plastic shopping bags resulted not only in a 90% reduction of plastic bags provided in retail outlets, but also in a marked decline in bags found on beaches, from an average of 18 plastic bags/500 m in 1999 to 5 in 2003.

The public consultation,

that took place between December 2017 and February 2018, received more than 1.800 contributions and showed that both within the wider public and with stakeholders there is an awareness of the need for action on single-use plastics. 98.5% of respondents consider that action to tackle single-use plastic marine litter is "necessary" and 95% consider it "necessary and urgent". More than 70% of manufacturers and more than 80% of brands and recyclers considered action "necessary and urgent". Legal clarity and investment certainty over a unified single market is essential to all businesses involved in the plastic value chain.

EC AWARENESS-RAISING CAMPAIGN ON SINGLE-USE PLASTICS

Despite sincere recognition of the scale of the problem, many consumers still purchase, use, and inappropriately dispose of single-use plastics on a daily basis. To mark the 2018 World Environment Day (5/6), the EC has launched an EU-wide awareness-raising campaign to put the spotlight on consumer choice and highlight individual people's role in combating plastic pollution and marine litter. The campaign is targeting EU consumers, who are aware of the critical situation involving marine litter, but have not yet translated this knowledge into their daily choices. It aims to promote sustainable alternatives to single-use plastics, inviting participants to take action and change their relationship with plastics■

Hoàng Đan
(EU source)



Current status of legal regulations on marine environmental pollution control in Việt Nam

Dr. Bùi Đức Hiền

Institute of State and Law

Since reform and opening up, Việt Nam has issued many legal documents on marine environmental pollution control. These documents provide quite specific information on responsibilities and obligations of entities in the prevention, detection, control and treatment of marine environmental pollution. However, the actual status of marine environmental pollution control in recent years shows that the legal provisions on this issue are still limited and inadequate.

In order to set up a foundation for the implementation of marine environmental pollution control, the current legal regulations can be divided into two groups of technical regulations on marine environmental pollution control including: Groups of environmental technical regulations for seawater and technical regulations for waste and wastewater discharged to the sea. On that basis, in 2015, Việt Nam issued the national technical regulations QCVN10-MT: 2015/BTNMT on the quality of sea water to assess and control sea water quality in marine zone for the purpose of underwater sports and entertainment, aquaculture, marine environmental protection and other purposes; the national technical regulations on waste management to effectively control marine pollution. However, the study shows that most of the technical regulations and standards on waste and wastewater discharged to the sea were promulgated more than 10 years ago; many parameters have been outdated in comparison with the regional and international standards, and do not meet the real needs of marine environmental pollution control. For example, the national technical regulation QCVN10:2008/BTNMT on coastal water quality; the national technical regulation QCVN 11:2008/BTNMT on wastewater from seafood processing industry; the national technical regulation QCVN

38:2011/BTNMT on surface water quality for protection of aquatic life...

Law on Environmental Protection (LEP) in 2014, Law on Natural Resources and Environment of Sea and Islands in 2015, Law on Petroleum in 1993 (amended and supplemented in 2008), Law on Tourism in 2005, Fisheries Law in 2017 and legal documents guiding and regulating marine environmental pollution control have been based on the principle that the preventive measures are the most important instrument to protect environment. However, in reality, there are many shortcomings such as: The list of environmentally-friendly production and business sectors for attraction of investment in has not been formulated as set out in the Sustainable Development Strategy of Việt Nam for period of 2011 - 2020 approved by the Prime Minister in Decision No. 432/QĐ-TTg; Lack of specific

regulations on detecting marine environmental pollution; Lack of tools to assess damages caused by marine environmental pollution...

Specifically, the LEP in 2014 states general provisions on detecting environmental pollution as follows: Environmental monitoring, information on environmental situation, inspection and supervision of environmental pollution, etc., but there are no specific regulations on detecting marine environmental pollution. The Law on Natural Resources and Environment of Sea and Islands in 2015 regulated more specifically in this issue, but in reality, important elements to secure this process are still in shortage, such as: Human resources, financial resources, facilities, science and technology, especially no regulations on the application of the achievements of industrial revolution 4.0. Regarding the information on the marine environment, the



▲ Maritime economy contributes a great deal to the economic development of Việt Nam



new legal regulations mainly emphasize the cooperation and sharing of information on marine environmental pollution, without focusing on the cooperation and sharing of experiences, financial resources, science and technology to create a general basis for effectively marine environmental pollution control. Moreover, the law does not regulate and properly assess the role of the community, the media, the marine-based organizations and individuals such as fishermen, seafarers, maritime forces, etc. in the control and detection of marine environmental pollution, although they are important entities.

According to the laws and regulations, treatment of marine environmental pollution is the responsibility of the waste generator, state agencies and competent authorities. In addition to tackling pollution and restoring the marine environmental status, the entities who violate environmental laws may be subject to legal liability. Depending on the degree of violation of the law, the entities may be subject to different legal responsibilities such as administrative, criminal, civil and disciplinary liability. In recent years, the marine environment in Việt Nam has been severely polluted, and this tends to increase. Meanwhile, the criminal liability for the acts causing environmental pollution, violation of regulations on waste management, destruction of fisheries revenue, etc. have been regulated from the Penal Code in 1999 to the present; even the Penal Code in 2015, amended and supplemented in 2017, has applied criminal liability to legal entities involved in the conduct of environmental pollution, but so far, no individual or organization has been penalized with criminal liability for such acts.

The compensation for natural resources and environmental damages was specified in Decree No. 03/2015/ND-CP of the Government. The Decree has determined that the responsibility for claiming these damages belongs to the competent agencies, but actually, it has not been effective. Damages on health, life, property and legal benefits of individuals and organizations was stipulated in the Civil Code in 2015, the LEP in 2014, however, until now, no environmental damages claim has been settled in the Court; Current legal regula-

tions also cause difficulties for individuals and organizations in the process of claiming damages because it is difficult to prove the causal relationship between the act of environmental pollution and the damages.

The current environmental laws have specified responsibilities from the Government to the People's Committee of provinces, districts and communes, as well as the responsibilities of the ministries: Ministry of Natural Resources and Environment, Ministry of Transport, Ministry of Construction, Ministry of Defense, Ministry of Public Security ... and Departments, Offices and Divisions on marine environmental pollution control. Despite the participation of many such entities, in recent years, marine environment of Việt Nam has still been polluted. This fact shows that the effectiveness of state management of marine environment is very low. Meanwhile, the monitoring mechanism of the State as well as the community, the media and the press about the activities of marine environmental pollution control is still not effective.

At present, the Law on Natural Resources and Environment of Sea and Islands regulates that the waste sources from inland need to be controlled. However, in the past time, plastic waste on the sea has generated many alarming problems. This indicates that inland waste control has not been properly addressed. There should be more stringent regulations on this issue. The content of sea and is-

lands environmental pollution control as stipulated in Article 43 of the Law on Natural Resources and Environment of Sea and Islands has just stopped at the level of investigation, statistics, assessment and classification of pollution of waste sources from inland. The implementation of measures to limit and control pollution is related to environmental laws and land-based specialized laws. Therefore, the process of marine pollution control from inland is not carried out consistently. Legal policies on marine natural resources and environmental protection play an important role in the development of Vietnam's maritime economy. However, so far, many laws on marine environmental pollution control has exposed the inadequacies and limitations, leading to the increasingly polluted and seriously degraded marine environment. Therefore, in order to strengthen marine environmental protection, it is necessary to study and improve the laws and regulations on marine environmental pollution control. At the same time, the effectiveness of legal enforcement of marine environmental pollution control needs to be improved, and the coordination of marine environmental control with related parties and individuals on the sea needs to be strengthened. The application of new technologies in marine environmental pollution control should also be strengthened■



Regional co-ordination mechanism required to deal with climate change impacts



▲ Mr. Nguyễn Văn Sơn - Deputy Director of Forestry Project Management Unit and the National Director of the ICMP

★Reporter: Can you tell us some results of the ICMP after eight years of implementation?

Mr. Nguyễn Văn Sơn: For the last eight years, the ICMP has raised the awareness of local people and officials in the implementation and management of climate change-related activities, especially in using scientific and technological advancements in agricultural production. At the first stage, the program has helped each province develop plans, manage those plans and share information with others. Local authorities have developed their policies and technical guidances and protocols to boost the efficient use of natural resources in the context of increasing climate change. Government agencies have talked with enterprises, international organizations and people about agricultural and fishery issues. Some public-private partnership (PPP) pilot projects have been implemented and certified to drive forward a sustainable agriculture sector, thus improving the quality and added value of agricultural products.

On the other hand, the program has focused on the evaluation of the impacts on the whole sector by studying experimental models and supporting the use of technology in the development of farming practices that are adaptive to climate change; in the development of a sustainable and competitive aquaculture sector in the Me-

The Integrated Coastal Management Programme (ICMP) for the Mekong Delta coastal region is funded by the German and Australian governments and implemented by the German Development Co-operation Agency (GIZ). For the last eight years, the programme has assisted five Mekong Delta provinces; Kiên Giang, Cà Mau, Bạc Liêu, Sóc Trăng and An Giang, in dealing with climate change and enhancing the region's sustainable development. On the occasion of the province-level ICMP ceremony themed "From innovation to transformation - working for a climate - resilient future for the Mekong Delta" on July 24, the Environment Magazine had a sideline interview with Mr. Nguyễn Văn Sơn - Deputy Director of the Forestry Project Management Unit and the National Director of the ICMP.

kong Delta; in the sustainable use and management of natural resources; in linking local Government-level coastal preservation policies with the national-level policies and in improving the management and operation of irrigation infrastructure and facilities. Since then, the ICMP has made significant impacts on increasing the resilience of the coastal region as it encounters climate change.

Besides, the program has better protected more than seven million residents in the Delta from climate change impacts. It also developed a

regulation co-ordination in the Delta that was approved by the Prime Minister in Decision No. 593/QĐ-TTg and is expected to increase the productivity and efficiency of policies and investment projects in 13 Mekong Delta provinces, thus benefiting more than 17 million local residents. Based on those works, the Delta's community and government may stay united in their transformation, which is challenging but necessary to deal with climate change impacts in Mekong Delta. In addition, the programme has helped bring climate change



▲ The ICMP assists Mekong Delta residents in developing sustainable lifestyles to deal with the effects of climate change



issues in the Mekong Delta to the attention of the global community, luring foreign investors to support a sustainable and prosperous delta region in the future.

★Reporter: Besides those achievements, what problems has the programme encountered so far?

Mr. Nguyễn Văn Sơn: Experimental models have remained small-scale and limited, therefore, we have yet to acknowledge all the impacts, limitations and experiences in order to expand those models. It has remained difficult for the provinces to develop a cross-region working mechanism, which has barely made any breakthroughs. Harsh natural conditions and climate change impacts in the delta have been unpredictable, thus requiring the program's management unit and local authorities to work flexibly to adapt to any external changes.

As the Vietnamese economy has undergone a rough period, it is more difficult for the delta to attract investment to deal with climate change impacts. Besides, the laws on the State budget and public investment, which have taken effects, also make it harder for the region to get access to official development assistance (ODA) funding. Those factors have reduced the chance for regional provinces to set up their budgets and draw external finances.

★What has the management unit learnt over the last eight years to prepare for the next stage of the program?

Mr. Nguyễn Văn Sơn: Firstly, we need to improve the co-operative mechanism among regional provinces in planning and information sharing. We should make cross-province organization focus on only one specific target, then evaluate the implementation process and draw lessons for next activities. The transition of activities from area-focused to impact-focused means all activities are developed based on the field and applicable to all areas. We must stay creative, innovative and co-operative because climate change impacts are often comprehensive; and improve the co-operation between provinces, sectors and regions.

In addition, the program needs to connect sponsors, projects, capital sources and local governments and communities to maximize the use of resources to drive a climate-resilient Mekong Delta.

★As climate change in the delta is becoming more challenging, what is your approach to meet the requirements of the program?

The regional provinces should concentrate on only one target in their cross-prov-



▲ The meeting of the ICMP Management Unit in December 2017 in Hà Nội City

ince mechanism so that they may learn to work more effectively in other activities.

The transition of activities from area-focused to impact-focused means all activities are field-based developed and applicable to all areas. We need to attract other programs and investment projects to promote the results of ICMP. At the moment, Việt Nam and the Mekong Delta in particular have drawn a great deal of attention from foreign organizations that have implemented climate change response programs such as the National climate change programme, the Green Growth Strategy and other local projects. However, those activities are often inefficient due to the lack of co-operation between regional provinces. Therefore, we need to develop a systematic approach to strengthen the link among provinces and regions.

★Reporter: As the regulatory body of the programme, what do you recommend Government agencies should do to enhance the sustainable development of the Mekong Delta as it faces climate change challenges?

Mr. Nguyễn Văn Sơn: We should manage and explore the natural resources in a sustainable way, focusing on efficient use and management of water to reduce the chance of land erosion or landslides and

the over-use of underground water. We must also improve the quality of agricultural products by working closely with private companies and research institutions, making sure those products meet food safety standards. We need to have a mutual agreement on a general planning and development strategy for the whole region via appropriate mechanisms; and we should call for investment and the assistance of international organizations, communities and sponsors.

Following technical assistance project, there should be new investment projects to continue and maximize the work of completed activities. We need to work on the co-operation among existing programmes and projects so that their activities don't overlap and we are able to make the best use of resources to support the Delta region adapt to climate change impacts. Besides, there should be a regional co-ordination regime and additional State budget disbursement for the Delta region so that regional provinces are able to integrate climate change adaptation with their socio-economic development plans.

★Reporter: Thank you!

**Phạm Đình
(Implemented)**



Environmental protection is the key criterion for assessing the quality of new rural development

After 7 years of implementation of the National Target Program on New Rural Development, the rural areas have changed in a positive way and the material and spiritual life of people in many rural areas has been significantly improved. The program has become a widespread movement, creating a positive change in perception in both the political system and the whole society. According to the report of the Coordination Office of the National Target Program on New Rural Development, in many localities, the environmental protection criterion in new rural development has gradually received more concerns and has been improved, and the number of communes meeting the new rural development standards has increased significantly. Statistics show that, by the end of the 1st Quarter of 2018, 3,289 communes (36.84%) in the whole country were recognized to have met the new rural development standards, increased 220 communes (2.47%) compared to 2017.

IMPROVEMENT OF MODEL QUALITY

Previously, the implementation and recognition was based on the national set of criteria for new rural development under Decision No. 491/QĐ-TTg dated April 16, 2009 of the Prime Minister. This set of criteria has been adjusted according to Decision No. 1980/QĐ-TTg dated October 17, 2016 promulgating the national set of criteria for new rural communes in period 2016 - 2020 and Decision No. 558/QĐ-TTg dated April 5, 2016 of the Prime Minister on the criteria for new rural districts and the regulations on the towns, cities under provincial level to complete the task of new rural development. This new set of criteria has many adjustments compared to the previous period, in which the environmental criterion with 5 indicators increased to 8 indicators, with many new contents (related to food safety, latrines, bathrooms, water tanks, environmental protection in livestock production...). Some regulations are also more stringent (percentage of households using clean water and hygienically acceptable water as regulated).

According to the Decision No. 1980/QĐ-TTg, the Prime Minister assigned Ministry of Agriculture and Rural Development (MARD) to study and pilot the new rural models; to propose quality improvement criteria for communes that have been recognized to have met the new rural standards and criteria for the model new rural communes, and to submit them to the Prime Minister for consideration and decision. To perform this task, one of the



▲ Đồng Nai is one of the leading provinces in Vietnam's new rural development movement

issues is to promote the implementation of environmental criterion in the new rural development for districts and communes that have been recognized to meet the standards while this is one of the criteria with the most modest performance in the period 2010 - 2016. The task of new rural development is a continuous and long-term process. In the past time, many localities have taken the initiative in actively promulgating specific criteria and indicators for the model new rural development as the basis for directing, complying with practical conditions and maximizing the advantages of the localities. In Hà Tĩnh, the Provincial People's Committee has issued Decision No. 38/2016/QĐ-UBND dated August 11, 2016 issuing the set of criteria for the model new rural communes of Hà Tĩnh province, in which the environmental criterion has been made more quantifiable (4 indicators). However, compared to the national set of criteria for new rural communes in accordance with Decision No. 1980/QĐ-TTg, the percentage of households using water up to the standard of QCVN 02:2009/BYT is lower (over 55% compared to the national standard of

over 60%). The Đồng Nai Provincial People's Committee has issued a set of criteria for the advanced new rural communes according to Decision No. 3263/QĐ-UBND dated October 7, 2016, in which the indicators have been more quantifiable than the national criteria set for new rural communes (6 indicators). Some other localities, such as Quảng Ninh and Nam Định, have actively studied and developed sets of criteria suitable to the actual situation of the localities, which set higher standards than the promulgated national standards.

In order to have a theoretical basis for study and application in practice, MARD has also implemented a pilot study survey plan on the model new rural communes and districts to have the theoretical and practical bases for the study. Although there are many names of the new rural communes, districts that have met the standards and yet continue to strive, such as "model", "advanced", "sustainable and developed" or "civilized", "worth living", the study and development of models and specific evaluation criteria are necessary to continuously improve the material and spiritual life of the rural population.



Through actual surveys in some districts, communes that have been recognized to have met the new rural standards of MARD in the past time, the results show that the implementation of environmental criterion has many improvements. The villages are not only clean but also beautiful and tidy; pollution control in industrial parks, industrial clusters and production and business establishments has also positive changes; the collection and treatment of waste has gradually come to be in good order. However, the localities are still confused in maintaining and improving the environmental criterion performance; the unclear criteria have affected the setting of targets for the whole province and each district and commune. The implementation of environmental criterion at the time of the survey in many communes that has been recognized to meet the standards in the period 2010 - 2015 has not been up to the requirement as set under Decision No. 1980/QĐ-TTg.

TRANSFORMING THE REGULATIONS INTO MORAL VALUES AND LIFE-STYLE

In order to improve the quality of the implementation of environmental criterion for communes and districts that have been recognized to meet the new rural standards, the National Target Program on the New Rural Development has proposed some contents to be implemented in the coming time. First of all, it is necessary to thoroughly review the implementation of environmental criterion for communes and districts that have been recognized to meet the standards before December 1, 2016. For some indicators that have not met the standards or have not been evaluated in the previous period, the localities need to have a roadmap for the implementation and re-evaluation to meet the requirements of the new period. The evaluation

should be done objectively, without lessening the requirement, not for the purpose of maintaining the number of communes that have recognized to meet the standards by overlooking the indicators of the environmental criterion.

On the basis of the Decision No. 1980/QĐ-TTg, dated June 5, 2018, the Prime Minister has issued Decision No. 691/QĐ-TTg on the criteria for the model new rural communes for the period 2018 - 2020, as a basis for synchronous application nationwide. The Decision specifies the environmental criteria such as: The rate of solid waste to be collected and treated in accordance with the regulations reaches 90% or more; the rate of domestic waste to be classified and applied with appropriate treatment measures reaches 50% or more. There are models of environmental protection (co-operatives, cooperative groups, teams, groups involved in collecting, transporting, treating solid waste, village and public area sanitation; and clubs and propaganda teams on environmental protection)... Accordingly, the provinces and cities should actively study the criteria of the Decision, propose criteria that can be applied to the localities with focus, to resolve pressing problems such as domestic solid waste, domestic waste water, pollution in handicraft villages...

For the localities that have issued the model criteria sets, especially those issuing before the Decision No.691/QĐ-TTg took effect, such as 2 provinces Hà Tĩnh, Quảng Ninh, it is necessary to review to ensure that the model criteria are not lower than the requirements of the Decision. In addition, it is necessary to study and organize the pilot models of new rural districts and communes, in which the implementation of the environmental criterion for the model new rural communes and districts focuses on raising the awareness of the

community on environmental protection; consolidating and developing self-managed teams for the environment tasks. In addition, it is necessary to have pilot models for the good implementation of the indicators on environmental landscapes in the localities, from which to scale up to other communes in the province and/or city. In particular, attention should be paid to the collection and treatment of solid waste, in addition to effective and up-to-standard treatment by the local solid waste treatment systems, the performance quality should be improved by promoting the classification, recycling and reuse of solid waste in order to reduce the amount of waste generated and the amount of waste to be treated - to solve the input issues of the waste management process; To gradually improve modern treatment technology, save costs and minimize the landfilling rate, even to generate power and produce organic fertilizers from the waste treatment process - to solve the output issues of the waste management process...

In addition to the good and sustainable performing of environmental criteria, the localities need to study and propose the environmental criteria of the model new rural communes and districts in the direction of having both mandatory "hard" indicators (such as percentage of waste to be collected and treated, percentage of households using hygienic water...) and "soft" indicators for flexible adjustment of the localities (such as the rate of socialization resources for environmental protection), with the common goal of improving the quality of living environment for the rural population and socio-economic development in association with environmental protection■

Trần Thắng Trung



▲ The model residential area of Hương Trà Commune (Hương Khê District, Hà Tĩnh Province) actively implement the environmental criterion in the new rural development



Meet the first Vietnamese environmental hero winning the Goldman Environmental Prize

Goldman Environmental Prize recognizes grassroots environmental activists for their important achievements in environmental protection. The prize is awarded annually to environmental heroes from six continental regions (Africa, Asia, Europe, Islands and Island Nations, North America, South and Central America). Recently, the Goldman Environmental Foundation had announced seven recipients of the Goldman Environmental Prize 2018. Mrs. Nguyễn Thị Khanh - Director of Green Innovation and Development Center (GreenID) - honored to be the first Vietnamese receiving this prestigious prize. To know more about her contribution to environmental field in Việt Nam, Environment Magazine had an interview with Mrs. Nguyễn Thị Khanh - Director of GreenID.



▲ Mrs. Nguyễn Thị Khanh
- Director of GreenID

★Reporter: *I heard that you had intended to become a diplomat, so why did you choose to work in the environmental field?*

Mrs. Nguyễn Thị Khanh: When I was a child, I was interested in environmental or energy field. Until studying at university, my interest in this field had never stopped. My major was politics and foreign affairs (Diplomatic Academy of Việt Nam). I had dreamed of becoming a diplomat; however, after graduation, I decided to work on community development, conservation of water resources and sustainable energy to have chances to travel to many places in the whole country. When learning about the Kyoto Protocol on the environment, I was inspired by my teacher. The more I learned, the more interested I got. The more I read, the deeper understanding I gained. This inspiration has led me to begin the career on environmental protection activities.

In the process of working on water resource protection from the impacts of hydropower in Quảng Nam Province, I could not help thinking about the people who live in dilapidated houses, with precarious lives and lack of fresh water for daily activities. I wondered: "How can I help the people get out of that situation? How to develop energy with less environmental impacts?". However, so far, hydroelectricity has been almost planned and maximally exploited on the rivers. When studying the National Power

Development Plan for period 2011 - 2020, with a vision to 2030 (National Power Development Plan 7), I saw that the Plan for expansion and development of thermal power has been at the beginning phase. I realized that the damage to society would be reduced if we could intervene right from the early days of thermal power development. Therefore, I, working together with experts and colleagues, studied to find solutions to limit and to gradually replace coal-fired thermal power, towards a greener energy in the future.

★Reporter: *Can you tell us the damage and impacts caused by coal-fired thermal power plants on the environment in Việt Nam?*

Mrs. Nguyễn Thị Khanh: In the world, coal-fired thermal power is seen as a source of fossil fuel-based energy that needs to be reduced due to the serious impacts on the climate, ecological environment and community health. Coal-fired thermal power plants are like a giant water-consuming engine and tem-

perature of water returning to the environment is 7 - 11 °C higher than the input water. This causes the negative impacts on aquatic species. It takes 4,163 liters of water to generate 1 MWh of electricity. For example, if Long An 1 Thermal Power Plant is built, the water consumption in a day will be 3 times more than the system of water supply of Hà Nội City. Ash from thermal power plants is also a major problem, causing water and soil pollution if we do not have a thorough solution. In 2015, thermal power plants emitted about 15.5 million tons of ash to the environment, and the number will increase up to 30 million tons in 2020 and 423 million tons in 2030. This will require an ash storage place for thermal power plants with the area of 20,000 hectares (equivalent to 28% of Singapore's area) and approximately the area for development of 20,000 MW of solar power.

Coal is the most polluting fuel that emits 40% of global greenhouse gases and



is a main cause of air and water pollution. Burning coal for electricity generates carbon emissions and air pollutants such as SO_2 , NO_x , $\text{PM}_{2.5}$. This is one of major causes of serious air pollution and causes an enormous impact on the public health. According to the results of the study on the diffusion model of air pollution from coal-fired thermal power plants in Asia in 2015 by Harvard University (US), the air pollution caused by coal-fired thermal power plants in Việt Nam in 2011 was related to about 4,000 premature deaths and this number will increase by approximately 4 times by 2030 if all coal-fired thermal power plants (as planned) are built in Việt Nam. Under this planning, a large amount of coal to be used in Việt Nam is imported, increasing the country's dependence on expensive imports.

★Reporter: Facing the dangers of coal-fired thermal power plants, do you have any suggestions to promote the sustainable energy development plan in Việt Nam?

Mrs. Nguyễn Thị Khanh: In period of 2013 - 2015, I and many experts and colleagues had conducted studies and held many discussions on the inadequacies of National Power Development Plan 7; the negative effects of coal-fired thermal power plants on the environment, national energy security, livelihoods and sustainable development of the locality; the potential of energy efficiency and evaluation of the power demand under the economic development scenario with annual growth rate of 7%. Based on the results of the studies, in 2015, we proposed that the revised National Power Development Plan 7 (PDP7) should reduce 33% of power demand by 2030 compared to the



▲ Mrs. Nguyễn Thị Khanh and her colleagues visited the LED model in a kindergarten in Hải Hà Commune (Hải Hậu District, Nam Định Province)

original PDP7, of which coal-fired thermal power should be reduced and the development of nuclear power has yet to be necessary, while still able to maintain the national energy security. In March 2016, the Government issued the revised PDP 7, in which about 20,000 MW coal-fired thermal power has been cut off from the National Power Plan and the proportion of renewable energy such as wind power, solar power and biomass power has been increased to 21% of the overall power plan by 2030.

Continuing this effort, in June 2018, GreenID proposed a scenario for clean energy future in Việt Nam to meet the goals of the Paris Agreement on climate change. Accordingly, the Design for a Clean Energy Future in Việt Nam has proposed to increase the proportion of renewable energy from about 20% to 30%; increase the proportion of gas-fired thermal power from 14.7 - 22.8% and reduce the proportion of coal-fired thermal power from 42.6% down to 24.4% of total power generation by 2030. We also proposed the development of rooftop solar power, with the initiative "A Million Green Homes for Vietnam's Prosperity" at the Vietnam Renewable Energy Week 2018.

★Reporter: How do you feel when becoming the first Vietnamese to receive the Goldman Environmental Prize?

Mrs. Nguyễn Thị Khanh: The Goldman Environmental Prize was established in 1989 by civic leaders of San Francisco (US), philanthropists Richard and Rhoda Goldman. The winners are selected by an international jury, from confidential nominations submitted by a worldwide network of environmental organizations and individuals. The winners are announced in every April to coincide with the celebration of Earth Day. The award criteria in priority order includes new achievements bringing about environmental improvement and inspirations to others; community initiatives...

I am honored and also surprised to win this prestigious award. This is an important recognition of the international community for the efforts of environmental protection, clean energy development and reduction of dependence on coal-fired thermal power in Việt Nam in recent years.

★Reporter: Thank you so much!

Vũ Nhung
(Implemented)

In 2011, Mrs. Nguyễn Thị Khanh established the GreenID. GreenID works to contribute to the sustainable development in Việt Nam, Mekong region and is currently on its way to become a reputable Vietnamese NGO and a pioneer in promotion of the sustainable energy sector, etc. She is also a co-founder of the Vietnam Sustainable Energy Alliance, a network of 12 members of local and international NGOs in environmental sector working together on energy issues in Việt Nam and the region.



GREEN ONE UNITED NATIONS HOUSE: A smart ecological design

Located on Kim Mã Street (Hà Nội City), the Green One United Nations House (GOUNH) in Việt Nam was given the Leadership in Sustainable Design and Performance Award in the Institutional Category at the World Green Building Council's biennial Asia Pacific Leadership in Green Building Awards in Singapore on September 6, 2018.

The construction of GOUNH started in 2013 and finished in May 2015. Its opening ceremony was attended by the former United Nations (UN) General Secretary Ban Ki-moon and Vietnam's Deputy Prime Minister cum Minister of Foreign Affairs Phạm Bình Minh. The house was constructed by renovating an old building, which was equipped with smart ecological and green operation systems. As a matter of fact, 16 Vietnam-based UN agencies are working in the building, which has proven an important step in UN Vietnam's united action initiative. That has also helped provide utilities and performance efficiency for the national-level UN operation and reduce the UN's operating expenses in the country.

The six-story building covers an area of 7.500 square metres and is designed to maximize the working efficiency of the heat and cooling systems. There are several atriums to allow the maximum amount of sunlight and minimize the use of electrical lights. That helps GOUNH save 25 - 36 percent of power consumption for lightening compared to traditional buildings.

To adapt to climate change and protect the environment, GOUNH is made of environmentally - friendly materials such as lead-free paint and wooden materials with low content of easily-evaporative substances. The efficiency of the heat, cooling and power systems is maximized by solar power panels, which creates at least 10 per

cent of the building's annual power consumption. The ultraviolet radiation proof is designed near windows, the front and the back of the building, reducing the amount of solar radiation that directly contacts the house and conditioning the in-house atmosphere. The heat absorption system helps the building re-gain and cool the disposed conditioning air, then re-supply that air into the building. The direct current solar electricity flow is converted into alternating current power to serve the whole building. The lights located near windows can adjust their brightness to suit the level of light outside. Besides, GOUNH is equipped with 408 solar panels that generate at least 110.000

kilowatts per hour (kWh) each year, equal to 10 percent of the building's annual power consumption. This is the first building in Việt Nam that is able to return its surplus power to the national grid and reduce the need for alternate power sources that are less environmentally friendly.

The building is operated on a smart, collective program that is designed to monitor all electrical, heat and mechanic devices. At the central power room, the building manager is able to calculate the power consumption in each part of the building and adjust the power use to the most efficient level.

The operation of GOUNH has shown some



GOUNH is equipped with 408 solar panels



▲ *GOUNH was constructed by refitting an old building to meet green standards*



▲ *Former UN General Ban Ki-moon and Vietnam's Deputy Prime Minister cum Minister of Foreign Affairs Phạm Bình Minh cut the ribbon to open the GOUNH in Việt Nam in May 2015*

positive impacts. Energy use is 28.8 percent less than normal; water use is 42 percent less than normal; 94 percent of the

building structure is made of recycling materials; and 77 percent of roof and sidewalk areas is designed to limit the “heat island” effects. Thanks to those numbers, GOUNH became the first construction project in Việt Nam to earn the Golden and Platinum Lotus certificates in 2014, during its completion stage, and in 2017 respectively. The building also recently won the Leadership in Sustainable Design and Performance Award in the Institutional Category at the World Green Building Council.

It may be said that GOUNH has not only met all the requirements of a green construction project but also shared some valuable practices and experiences in building green projects in Việt Nam. Committed to helping Việt Nam implement its 2030 Agenda for Sustainable Development, GOUNH is assisting Việt Nam to fulfill its targets under the Sustainable Development Goals and convert from using fossil energy sources to more sustained, reliable and modern power■

Nguyễn Việt Cường

Strengthening management of importing scraps...

(From page 13)

sign a Document No. 5087/BTNMT-TC-MT dated 18/9/2018 on the current status of imported scrap backlog at sea ports and propose solutions. The VEA has also submitted to the Minister to issue Decision No. 2606/QĐ-BTNMT on forming a drafting team for developing a Prime Minister's Decision on revising a list of imported scraps. This drafting team has had several working meetings on the draft.

In addition, the Ministry has issued Circular No. 08/2018/TT-BTNMT and Circular No. 09/2018/TT-BTNMT dated 14/9/2018 on issuing 6 national technical environmental regulations on importing scraps for production input (QCVN 31:2018/BTNMT - national environmental technical regulation on imported iron scrap; QCVN 32:2018/BTNMT- national environmental technical regulation on imported plastic scrap, QCVN 33:2018/BTNMT- national technical environmental regulation on imported paper scrap, QCVN 65:2018/BTNMT - national technical environmental regulation on imported glass scrap, QCVN 66:2018/BTNMT - national technical environmental regulation on imported coloured metal scrap and QCVN 67:2018/BTNMT - national technical environmen-

tal regulation on imported high kiln bottom ash scrap).

A list of certified scrap importers has been regularly updated and available in the webpage of MONRE. In the meantime, MONRE has updated documents on lists of imported scrap batches for inspection on its website.

To effectively the Directive No. 27/CT-TTg, in the coming time, MONRE will continue to cooperate with related agencies to implement the following measures: Cooperate with the Government Office to complete Decree on revising the existing decrees on guidance of implementing the Law on Environmental Protection in the direction of ceasing the issuance of permits for trusted parties in importing scrap as specified in the Directive.

The VEA will cooperate with MOIT, professional associations and related agen-

cies in assessing the needs for using scraps as production inputs, potential domestic supply and demand for importing scraps for production, then report to MONRE leaders and Prime Minister for the consideration of revising the list of imported scraps in the direction of not allowing import of scraps having high pollution risks or having considerable domestic stock. It will propose to Prime Minister to issue a shortened list of imported scraps in the 4th quarter of 2018, continue to cooperate with localities to regular update and publicize a list of individuals and organizations issued permits for scrap import, individuals and organizations participating in verifying the environmental fulfillment of imported scraps and notify imported scrap batches in MONRE web portal and a national one stop shop website■



Extending the model of eco-certified shrimp farming in combination with mangrove conservation in Việt Nam

In recent years, the booming development and the lack of planning of the shrimp farming industry have devastated large areas of mangrove forest in Việt Nam. In this context, development of the model of eco-certified shrimp farming in combination with mangrove conservation in Cà Mau Province is a suitable and highly effective solution. The Environmental Magazine has an interview with Mr. Đinh Xuân Lập, Deputy Director of the International Collaborating Centre for Aquaculture and Fisheries Sustainability (ICAFIS) about the results and measures to develop this model.



▲ Mr. Đinh Xuân Lập - Deputy Director of ICAFI

★Reporter: *Could you tell us about the result of the model of eco-certified shrimp farming in combination with mangrove conservation in Việt Nam?*

Mr. Đinh Xuân Lập: The statistics shows that currently, 50 percent of mangrove forest areas in Việt Nam have been degraded due to the destruction for brackish water shrimp farming. Việt Nam had about 408.500 hectares of mangrove forest areas in 1943; however, in 2006, there were only about 200.000 hectares remaining; and the Mekong Delta has been the area with the most severe reduction. With the aim to protect and sustainably develop mangrove forest ecosystem and to stabilize people's livelihoods, since 2000, the Netherlands Development Organization and the International Union for Conservation of Nature (IUCN) have implemented the mangrove forest restoration project through the eco-certified shrimp farming and emissions reduction model (MAM project), piloted in Cà Mau. The MAM project has guided farms to raise shrimp in the natural environment of mangrove forest to minimize the impacts of environmental pollution and diseases on

shrimp. Shrimp are stocked at low density and meet requirement of at least 50-percent mangrove cover. This extensive shrimp farming model has much lower cost than intensive farming model; farmed shrimp will be issued the Naturland Organic Shrimp Certification by German Association for Organic Agriculture. To get this certification, shrimp farms in mangrove forests are required not to use chemicals. Naturland certification is considered to be an effective market-based environmental management system, in which economic, social and environmental objectives are ensured. On one hand, it helps to provide safe shrimp products for users. On the other hand, it protects mangrove forest in the integrated mangrove-shrimp farming areas. Up to now, Cà Mau Province has 21.627 hectares of shrimp farming areas with

Naturland certification; 80 hectares of mangrove forest areas which was destroyed for shrimp farming have been replanted. Thus, the effectiveness of the MAM project is highly evident, expressed in terms of economic value and environmental protection. The organic shrimp farming model has attracted more and more households, supporting farmers in Cà Mau to escape from poverty in a more sustainable manner.

★Reporter: *Could you tell us the advantages and disadvantages when Việt Nam widely applies the model of eco-certified shrimp farming in combination with mangrove conservation?*

Mr. Đinh Xuân Lập: The application of the model of eco-certified shrimp farming in combination with mangrove protection has brought economic and envi-



▲ Shrimp farming in mangrove forest area in Cà Mau Province

ronmental benefits. As a country with over 3.000 km coastline, Việt Nam has favorable conditions to develop this model. This is a new way of doing for people in mangrove forest areas. Mangrove forests are the natural habitat and breeding ground of shrimp and other aquatic species, providing food sources from organic waste, shade and roots for shrimp shelter.

In addition, with the criterion that economic development has to be accompanied by environment protection, many international economic organizations have set more stringent criteria for shrimp producers, processors and exporters. Therefore, farmed shrimp products must meet the requirements of origin traceability and wastewater treatment process... to be exported to other countries. With the advantages of environmentally-friendliness, low costs and high profits, the model of organic shrimp farming in combination with mangrove protection has been chosen by many localities. Through the mechanism of ensuring output consumption, the costs related to the application process of the organic shrimp certification system will be covered by seafood processing companies. At the same time, farmers also receive financial support from seafood processing companies for mangrove protection and development.

However, in addition to the achievements, there are still some difficulties such

as the limited capacity of in applying the international certification systems among small-scale shrimp farmers; the decline in shrimp brood stock quantity in the wild, so the production of shrimp breeding stock for organic and eco-certified shrimp farming areas has been deficient. Some mangrove forest areas have not recovered, so it is difficult to meet the environmental criteria in the process of applying for the certification; the chain production linkage has not been tightened ...

★Reporter: In the future, what solutions will ICAFIS implement to promote this model in Việt Nam?

Mr. Đinh Xuân Lập: Currently, ICAFIS has been cooperating with the Non-Government Organization (OXFAM) in Việt Nam and local partners to implement the European-funded project of "Sustainable and Equitable Shrimp Production and Value Chain Development (SusV)". Throughout

the project, ICAFIS will promote sustainable production models along with natural resources protection, including mangrove forests; enhance the capacity for farmers and community organizations in market-driven production; promote the formation of shrimp chain linkages, thereby sharing the interests and responsibilities of the parties in the production and resources protection, especially in the context of climate change.

In the future, ICAFIS will continue cooperating with the General Department of Fisheries (Ministry of Agriculture and Rural Development – MARD), universities and research institutes to train farmers in localities across the country in improving the quantity and quality of organic shrimp; expand the areas of organic shrimp farming in mangrove forests associated with international certification; build Vietnamese shrimp brand in association with organic products; promote trade and expand the market for mangrove-farmed shrimp products; create equality among enterprises in developing international certification; enhance co-operation and transparency in sharing responsibilities and interests among stakeholders in the shrimp value chain and forest protection; improve legal framework to encourage enterprises and organizations to participate in internationally-certified organic shrimp farming model.

★Reporter: Thank you, Sir!

Châu Loan
(Implemented)



Promoting the development of environmentally friendly eco-agricultural cooperatives in rural areas of Hồ Chí Minh City

Hoàng Thị Thủy

Vietnam Cooperative Alliance

Over the past years, rural areas of Hồ Chí Minh (HCM) City has developed many eco-agricultural production models such as household economy, farms, cooperatives..., achieving high economic efficiency. The development of eco-agricultural cooperative models has created employment and contributed to the efficient use of resources in rural areas.

According to the statistics of HCM City Department of Agriculture and Rural Development (DARD), the city currently has over 25.400 households with more than 72.000 employees joining in the agricultural production. Household economics is considered as a key force in the agricultural sector of the city, accounting for more than 77% of the total production value of agro-forestry-fishery sector, with key agricultural products suitable for urban agriculture such as orchids, ornamental plants, ornamental fish, safe vegetables, dairy cows... However, the majority of farmer households are of small-scale and with a lack of linkages (accounting for 65% households), which leads to the limited quality of human resources and dependence on loans; therefore, farmers' products are without a brand name and are easily bargained for lower prices in the market.

In view of this situation, in order to generate incomes, many farmer households in the city have participated in eco-agricultural cooperative model to form the linking chain among farmers - farms - cooperatives or farmers - farms - enterprises. A survey of 500 farmer households conducted by the DARD in 2017 shows that farmers can enjoy practical benefits by participating in the eco-agricultural cooperative model. Accordingly, the profits for farmers are increased up to 30 - 35% after joining the cooperatives. For an example of safe vegetable production, the farmers participating in the cooperative had an average output value of 873.6 million VND/ha (35.7% higher than the indepen-



▲ Members of Phước An Cooperative packaging fresh vegetable products

dent farmers). In the dairy farming sector, the farmers participating in the cooperative have an average value of 467.4 million VND/year (10.9% higher than the independent farmers). The reason is that the farmers participating in cooperative are guided on cultivation and livestock production process, resulting in higher productivity. In addition, the cooperatives commit to purchase the products with stable prices, freeing the farmers from worries on poor crops or low price.

With the advantages of eco-agricultural cooperative model, HCM City has issued many policies to support the newly established cooperatives such as Decision No. 26/2015/QĐ-UBND dated June 08, 2015 on supporting policies for investment of initial facilities of newly established agricultural and service cooperatives in the city in the period 2015 - 2020. Particularly, the cooperatives registering business activities in the fields of: Cultivation (vegetables, watermelons, various

types of mushrooms, flowers - ornamental plants, orchids, specialized fruit trees, plants for livestock feeding and industrial processes); Livestock (dairy cows, beef cows, pigs, rabbits, earthworms, crickets), aquaculture (shrimps, fishes, clams, cockles, oysters, crabs, eels, frogs, turtles, ornamental fishes), forestry; Consulting, design and construction services of garden; Bonsai plant supply; flower - ornamental plant care services..., will be supported 100 million VND/cooperative.

Together with other economic sectors, the eco-agricultural cooperatives have positively contributed to the process of economic development and have been encouraged to become the leading model of HCM City's agricultural sector. According to the DARD, the city now has 41 eco-agricultural cooperatives with an average of 54 members, 10 workers and 0.6 ha of workshop area per cooperative. Production value generated by the cooperatives' members in 2017 reached



971 billion VND, accounting for about 5% of the total value of agricultural production. Currently, most of the agricultural cooperatives are concentrated in 5 suburban districts including Củ Chi, Hóc Môn, Bình Chánh, Nhà Bè and Cần Giờ. In particular, many cooperatives have become the bridge for farmers to acquire, guide the application and transfer of technical advances into production, promote the conversion of key plants and livestock of the city... At the same time, the cooperatives have also associated with enterprises to consume products made by farmers, both in terms of inputs and outputs.

Typically, Phước An Agricultural and Service Cooperative (Bình Chánh District) was established in 2006 with 7 members and 4.5 hectares of production land. At the beginning, the cooperative encountered many difficulties in terms of capital, land, production process and product consumption. With the determination to produce safe vegetables, members of the cooperative were trained by the Department of Agriculture and Rural Development about safe vegetable production techniques under VietGAP process. To ensure the quality of the outputs, the cooperative established a technical team that was proficient in crop production to inspect alternately all vegetable farms. After over 10 years of operation, the cooperative has grown to nearly 100 members with a total production area of 25.3 ha so far. Currently, with 20 kinds of fruits and vegetables, and the average output of 6 - 8 tons per day with clear stamp of origin, the cooperative is one of the two pioneers participating in the program of traceability for safe vegetables in HCM City. With the strict management process, the cooperative has achieved VietGAP certification on all 25.3 ha of production land for four consecutive years since 2013. The cooperative is also honored to be awarded the "Safe Food Chain" certificate, from production to use for all products. Thanks to the high quality products, competitive price and strong brand, Phước An Cooperative's products have always had an important position in most big supermarkets in HCM City such as: Big C, Co.op-mart, Metro, Vinatex Mart... The average revenue of cooperative reaches 17 - 19 billion VND/year, thus ensuring high income for its members.

Tân Thông Hội Dairy Farming Cooperative (Củ Chi District) with 50 members

established in 1999 is one of the outstanding models. After more than 18 years of operation and development, the cooperative has grown up to 300 members with the charter capital of 5 billion VND. The main activity of the cooperative is to provide input services for its members and purchase fresh cow's milk for supplying to entities in the area such as: Lothamilk Joint Stock Company, CMT Food Company, Anh Hồng Company... Currently, the cooperative has a total of 5,000 cows, of which 2,000 are dairy cows. The cooperative has built 4 milk collection stations, consuming about 30 tons of cow's milk for its members.

From the above achievements, the HCM City agricultural sector is implementing a development plan with a total investment of 2.3 trillion VND for seven typical eco-agricultural cooperatives in five districts of Củ Chi, Hóc Môn, Bình Chánh, Nhà Bè and Cần Giờ. These cooperatives will be invested to build production development infrastructure in association with processing fresh products such as: slaughterhouse, feed processing factory, food processing factory, milk stations, vegetable preliminary processing factory, packaging factory... The city will also support the cooperatives in training human resources, applying new technologies, and gaining skills for applying high technology for cooperatives' members.

To improve the capacity of eco-agricultural cooperatives, the city has deployed many solutions such as: developing markets for products, especially for the products of farmers, cooperative groups and the cooperatives following the safe production process (VietGAP, GloGAP) to enhance

their competition ability in market. On the other hand, the city has policies to support farmers in the agricultural production process, as well as incentive policies for specialists involving in environmentally - friendly eco-agricultural production...; implements policies to encourage farmers to use services of cooperatives through contracts for consumption of safe agricultural products.

In addition, the city will give priority to the development of stable concentrated agricultural production areas, especially hi-tech agriculture, urban agriculture; build an agricultural value chain with diversified and flexible linking forms suitable for the advantages of each area and production area; focus on the production of high-quality seedlings. Besides, the People's Committee of 5 suburban districts are requested to focus on building the selective modern agricultural cooperative models as a basis for replication in the rural areas of the city. Convenience stores are developed to introduce cooperatives' products linked to One Village One Product Program in five suburban districts of the city, with pilot implementation in Củ Chi District, which has the highest number of eco-agricultural cooperatives.

Moreover, the HCM City DARD, the City's Cooperative Union and People's Committees of the districts have promoted communication, raised awareness for farmers on the benefits of participating in eco-agricultural cooperatives. Simultaneously, the People's Committees of the districts have plans to organize workshops, and tours to study agricultural production models in order to replicate the models throughout the city■



WASTE NOT, WANT NOT:

Women leaders in Việt Nam address urban waste through innovation and advocacy

In Hội An City (Quảng Nam Province), a GEF Small Grants Programme project has worked with the local Women's Union to streamline waste management. The project has been so successful that the commune of Cẩm Thanh in Hội An has become an exemplar of strategy for addressing urban waste that is being scaled up at a provincial level.

With over 20 million of visitors per year, the exceptionally well-preserved South-east Asian trading port city of Hội An, a UNESCO World Heritage Site, is left with the gargantuan task of disposing of 27,000 tons of solid waste per year. In 2016 alone, over 21 million tourists visited the City of 120,000 or 175 tourists per resident annually. The booming tourism industry produces approximately 75 tonnes of solid waste per day. Problems relating to insufficient collection and improper disposal of this waste had been festering for years.

As a result, the City's land and streams were increasingly littered, threatening the environment and the health of communities. If not properly contained, eventually the City's waste finds its way to the oceans - creating global environmental ramifications.

ADVOCACY AND ACTION

To address this issue, with the support of the GEF Small Grants Programme (SGP), Hội An's Women's Union created a long-term waste management plan that fosters the sustainable development of the City while preserving its cultural heritage. In 2010, working in close co-ordination with the City's Department of Natural Resources and Environment and the Public Works Company, the Women's Union piloted a project called "Socialization of solid waste management in Hội An".

The project not only successfully established a scheme for collecting, sorting, and disposing of waste in Hội An, but it gave work to a group of poor women, strength-

ening the social fabric of the community. "In addition to managing the waste, this group of women have become proud advocates for the environment", said Ms. Lê Phương Đức, Chair of the Hội An's Women's Union.

"Their contribution to the City is widely recognized, they are very proud of their contribution to protecting the World Heritage Site, their home town. This has given them more confidence to become active in their community, forming environmental protection groups". Ms. Nguyễn Thị Liên, a waste picker, previously found herself unable to get a job, as her ability to do agricultural labor intensive work deteriorated with age. The waste management scheme in Hội An enabled her to find employment suitable to her needs: "My life has changed for the better. Us women are very happy and work hard together. We like our jobs very much".

The project not only successfully established a scheme for collecting, sorting, and

disposing of waste in Hội An, but it gave work to a group of poor women, strengthening the social fabric of the community.

REDUCE, REUSE, RE-CYCLE

Advocacy was another component of the project and proved to be critical to achieving positive environmental impacts. A campaign on domestic waste management at local cultural events, on radio and television - along with a continuous dialogue between the Women's Union and key stakeholders - has reduced the amount of waste that ends up in landfills by more than 70%.

The change created by the project achieved both environmental and development goals. With the support from the SGP, the commune of Cẩm Thanh in Hội An has become an exemplar of strategy for addressing urban waste that is now being scaled up at a provincial level.

Five years later, the project continues to deliver ben-





efits to the women, men, children and visitors to the city, whilst protecting our global environment. Now, the waste is sorted into three categories: recyclable, biodegradable, persistent and disposed of properly.

Biodegradable waste is composted at the household level and then used by local farmers for sustainable agriculture. Plastic, metal and other recyclable waste is collected and sold to recycling facilities, while persistent waste is collected and disposed of by the local government.

GIVING CREDIT WHERE IT'S DUE

A revolving credit scheme gave loans to members of the groups and allowed the waste management program to become viable. These funds allowed for the purchase of necessary equipment including trolleys and bicycles. Under their innovative scheme, the Women's Union increased the amount of recycled waste as well as their own income.

Through the establishment of coalitions and networks, SGP is linking local experiences on chemicals and wastes and contributing to the global policy dialogue, thereby leading to larger policy impacts. Since 1998, the SGP has supported more than 150 projects in Việt Nam ■

Vũ Nhung
(GEF Assembly source)

Conservation organisations urge more penalties for wildlife crime



▲ *Rhino horns*

Sixteen Vietnamese and foreign conservation organizations have called for more administrative punishments for wildlife crime, given their concern about biodiversity loss as a result of unchecked poaching.

Director of the Save Vietnam's Wildlife (SVW) Nguyễn Văn Thái said on November 27, 2018 that the SVW and 15 other conservation organisations operating in Việt Nam have proposed some regulations be issued to protect wild animals in the country. The organizations are concerned about the biodiversity loss mainly caused by illegal trapping, catching and hunting in Vietnamese forests.

He said surveillance and surveys in national parks and protected areas over the last five years show that the population of wild animals has declined considerably. Many animals like tigers, sao la, clouded leopards, binturong, and Chinese pangolins haven't been recorded in the surveys, and they have possibly become extinct.

Patrols also show that illegal traps are still rampant in almost all national parks and protected areas. The exploitation of non-wood forestry products has also partially worsened the situation.

Mr. Nguyễn Văn Thái said more administrative penalties for illegally setting up tents in special-use forests should be added to the draft decree revising the Government's Decree No.157/2013/ND-CP on wildlife protection as this activity is almost always accompanied by logging and wildlife hunting. Decree No.157/2013/ND-CP has already stipulated fines for the carrying of hunting tools, but wild animals are still disappearing, he said, noting that if trapping and poaching are not eradicated, Việt Nam will face the extinction of an array of endangered and rare animals in the near future. Therefore, it is necessary to supplement fines for the carrying and use of hunting tools into forests with banned hunting.

He added that the organisations also urged stricter punishments for the use of dogs in hunting since dogs can infect natural species with many diseases ■

Nam Hưng
(VNS source)



Global trends in renewable energy investment



In 2017, solar energy dominated global investment in new power generation like never before, according to a new United Nations-backed report, which shows a steady move away from fossil fuel-based power production to “green” power sources. The world installed a record 98 GW of new solar capacity, far more than the net additions of the rest - other renewables, fossil fuel and nuclear, according to the Global Trends in Renewable Energy Investment 2018 report, released by the UN Environment Programme (UNEP) and its partners.

Solar power also attracted far more investment than any other technology, at \$160.8 billion, up 18 percent. A driving power behind last year’s surge in solar was China, where an unprecedented boom saw some 53 GW added - more than half the global total - and \$86.5 billion invested, up 58 per cent. The extraordinary surge in solar investment shows how the global energy map is changing and more importantly, what the economic benefits are of such a shift, said UNEP Chief Erik Solheim.

“Investments in renewables bring more people into the economy, they deliver more jobs, better quality jobs and better paid jobs. Clean energy also means less pollution, which means healthier, happier development”, he said. 2017 was the eighth in a row in which global investment in renewables exceeded \$200 billion - and since 2004, the world has invested \$2.9 trillion in these green energy sources.

Overall, China was by far the world’s largest investing country in renewables, at

a record \$126.6 billion, up 31 percent on 2016. There were also sharp increases in investment in Australia, up 147 percent to \$8.5 billion; Mexico, up 810 percent to \$6 billion; Sweden, up 127 percent to \$3.7 billion.

UN Asia-Pacific Forum adopts declaration to accelerate transition to sustainable energy

Meanwhile, countries in the Asia-Pacific region, which is projected to account for two-thirds of global energy use between now and 2040, committed to accelerate the transition to sustainable energy by scaling up their share of renewables, as a United Nations Forum in Bangkok wrapped up on April 5, 2018.

“There is a palpable sense of the enormous opportunities ahead that can transform the energy scene”, Shamshad Akhtar, the Executive Secretary of the UN Economic and Social Commission for Asia and the Pacific (ESCAP), told the two-day Forum, acknowledging the growing recognition by governments, the private sector and investors, that a sustainable, low carbon energy system is the only option to safeguard the future.

The highlight of the Second Asian and Pacific Energy Forum was the adoption of a ministerial declaration, which lays out a series of actions to encourage the sustainable use of energy, including through greater regional cooperation to facilitate cross-border infrastructure and energy trade to advance the 2030 Agenda for Sustainable Development.

Organized by ESCAP, the Forum provided a platform for governments, the UN system, private companies, international organizations and civil society organizations to review the region’s implementation of Sustainable Development Goal 7 (SDG7) on affordable and clean energy.

Delegates concluded that Asia and the Pacific has made remarkable progress on universal access to electricity, with renewable energy surpassing price benchmarks that were only expected in 2020. However, greater efforts are needed throughout the region to achieve targets on reliance on clean fuel and renewable energy, and energy efficiency■

Gia Linh
(UN source)



ECOBRICKS: Solution for green environment

Phạm Thị Huế

University of Transport Technology

In recent years, several volunteer clubs and organizations have had many initiatives, programs and projects on environmental protection, gradually forming the wave of "green living" among young people. Accordingly, the project to develop one kind of brick from waste plastic materials, called "Ecobricks" has been implemented by a group of young people (students, college students of Lê Quý Đôn, Trần Phú, Amsterdam High Schools, Hanoi Open University...) from the Les Pas Verts Club, which is a solution for the green environment.

Previously, the idea of Ecobricks technology was tested in the Philippines. From the discarded plastic bottles floating on rivers, lakes, and oceans, environmental scientists in the Philippines have turned them into useful bricks, building solid and beautiful buildings such as motels, dormitories or mini-baths. In 2016, Ziggy Gonzales, the owner of the motel chain in Zambales, La Union and Baler in the Philippines learned how to make Ecobricks from discarded plastic bottles on the Internet and decided to apply it. He searched for large quantities of plastic bottles on the beach and began stuffing all the other solids into the bottles and then re-capped the bottles tightly to prevent them from deforming. After successfully self-making bricks from the discarded plastic bottles and building works such as baths, motels, Gonzales shared with the people through a new Initiative called "The Plastics Solution" (solution for plastic waste) in the hopes of helping people realize the importance of environmental protection. Therefore, a plastic bottle or any container can be turned into a brick from recycled plastics. It is possible that all types of bottles, jars, and boxes are used for making recycled bricks, but the 500 ml plastic bottle is most suitable due to its compactness. Within four years (from 2010 - 2014),



▲ Ecobricks are made by the members of the Les Pas Verts Club

the Ecobricks production movement was widely spread to 1,700 schools in the Philippines for students to be aware of environmental protection as well as plastics waste treatment where they live. After that, the recycling of plastic bottles into Ecobricks has been developed more strongly in South Africa, Zambia, the United States (US) and Indonesia, forming the Global Ecobricks Alliance.

In Việt Nam, the Project on Ecobrick production was established by the end of 2017 and was implemented from the end of January, 2018. With the message "For a Future Free of Plastic Waste, Take Action Today", the Les Pas Verts Club of the Water Wise Vietnam (a Volunteer Organization for young people who love the environment sponsored by the US Embassy) has held several media outreach and extracurricular activities such as workshops, ex-

hibition of "Green Living Festival" and the Program on making Ecobricks for students, thus, the number of participants and respondents to the Project is increasing.

The materials for making Ecobricks should be selected, including: The plastic bottles must be dried, cleaned, kept intact, with no punctures or breakage (500 ml - 1,5 l bottle); soft or hard plastic bags, foam boxes, disposable plastic cups, packaging and plastic wrapping paper, straws... To have strong bricks, without breakage or mold growth, the materials must be dry and clean. The way to make an Ecobrick is quite simple: Just open the lid and stuff the plastic waste materials into the bottle. Stuffing the materials into the bottle requires some techniques, since the hard and large materials should be chopped up first. You need a long chopstick



▲ *The house is built of Ecobricks in Philippines*

or stick to stuff and firmly press the materials into the bottle. The bottom of the bottle should be stuffed with soft plastic bags or materials, which is the most effective way to prevent air from getting into the plastic bottle. The tighter the surrounding of the bottle is, the harder and tighter the middle of the bottle automatically is. Once the bottle has been tightly stuffed and firmly re-capped, we have a complete product. At this time, the product is 1.35 times as heavy as the bottle volume in ml (for example, 500 ml bottle with minimum weight of about 180 g, 1.5 l bottle of about 500 g). Small Ecobricks, when compacted, will form large blocks and be used for various purposes such as: tables, chairs, flower beds, bookshelves... Ecobricks meet the standards in terms of hardness, tightness and uniformity in size and can be assembled into tables, chairs and some larger works such as green houses.

Ecobricks are not only simple and cheap to make, but also more efficient than conventional bricks. They are quite solid, even in earthquakes; conventional bricks can often fall apart but the bricks made from plastic bottles will just be slightly shaken, so they are very safe. Hopefully, the Project on Ecobricks production will be widely developed in the community, especially with children, contributing to reducing the plastic waste pollution in Việt Nam■

Work begins on waste-to-energy plant in Hồ Chí Minh City



▲ *The construction of the Tasco Củ Chi waste treatment and recycling factory begins on November 22, 2018*

Hồ Chí Minh City began the construction of a solid waste treatment and recycling factory with capacity able to be raised to meet the demand in Củ Chi District on November 22, 2018. The plant, located at the Tây Bắc solid waste treatment complex, is invested with nearly 1 trillion VND (42.8 million USD) and scheduled to become operational in the next two years. It is designed to handle 500 tonnes of waste per day, and the capacity will be able to increase to meet the city's waste treatment demand.

Mr. Châu Phước Minh, a representative of the investor - Tasco JSC, said the waste-to-energy plant will be equipped with modern technologies to produce high-quality organic fertilizer from organic waste and non-baked bricks from ash. It will also make use of landfill leachate to produce electricity. The factory's design will also be favourable for local residents to visit and examine its activities, he added.

A Finnish waste treatment expert Asko Ojaniemi said environmental organizations of Finland will give advice and technical support to help the plant succeed in turning waste into materials for making different products.

According to the Hồ Chí Minh City Department of Natural Resources and Environment, more than 9,000 tonnes of solid waste are discharged in the city each day, with 76 percent buried, 14.7 percent recycled and 9.3 percent burned.

The city is calling for investment in waste treatment, especially waste-to-energy technologies, so as to reduce the rate of buried waste to 50 percent by 2020 and 20 percent by 2050■

Huy Hoàng
(VNA source)



Việt Nam to work with Japan in marine plastic waste reduction

The official highlighted the effective cooperation between Việt Nam and Japan in sea and island-related issues, saying his administration has drafted possible contents for cooperation with Japan such as sharing experience in management of maritime environment and resources, sea-based economic development and marine science. The agency will soon begin building a project on cooperation with Japan in addressing the problem of marine plastic waste.

According to Japan's estimate, Việt Nam ranks fourth worldwide in the amount of plastic waste dumped into the sea, with about 730.000 tonnes each year.

Mr. Tạ Đình Thi said Japan is one of the countries taking the lead in marine plastic waste treatment, noting that the country has showed their praise and support for the initiative to establish a common cooperation framework in East Asia in handling marine plastic pollution.

At the sixth Assembly of the Global Environment Facility (GEF) which took

place in Vietnam's central Đà Nẵng City in June 2018, the Vietnamese Ministry of Natural Resources and Environment (MONRE) and the VASI proposed a regional project on marine plastic waste, covering contents in which Japan can support the region and Việt Nam in particular.

The VASI has also proposed programs to Japan, aiming to enhance collaboration in science and maritime natural resources survey in Việt Nam, especially in deep and far waters.

Dr. Nguyễn Lê Tuấn, Director of Sea and Island Research Institute under the VASI said Việt Nam has yet to put in place any common framework or specific mechanisms and plans to reduce marine plastic waste. The country also lacks information to assess the

impacts of marine plastic waste on the environment, economy, human health and safety and society in coastal areas. However, Việt Nam has raised various initiatives and made great efforts in this regard recently.

At the GEF6, Việt Nam proposed that East Asian countries build, approve and implement a strategy and action plans on marine plastic waste management in the regional waters; reduce plastic production and tighten the management of the trading and use of plastic products. It also called for applying new technologies to replace plastic products by biodegradable plastics, among others.

The MONRE has assigned the VASI to coordinate with relevant agencies in realizing such initiatives, Mr. Nguyễn Lê Tuấn said, noting that the Sea and Island Research Institute has also proposed a project on assessing plastic waste in Việt Nam, along with countermeasures.

The World Economic Forum (WEF)'s Annual Meeting in Davos, Switzerland in January 2016, heard that by 2050 there could be more plastic than fish in the sea (by weight)■

Phạm Văn Ngọc
(VNS source)



▲ According to Japan's estimate, Việt Nam ranks fourth worldwide in the amount of plastic waste dumped into the sea, with about 730.000 tonnes each year.



Promoting cooperation in the protection of rare and precious wildlife



▲ Mrs. Ioana Dungler
Director of the Wild Animals
Unit at the Four PFI

The transfer, rescue and conservation of wildlife are considered a practical solution that contributes to conservation and sustainable development of biodiversity and precious and rare animal genetic resources. Recognizing this, on August 30, 2018, the Vietnam Environment Administration (VEA) and Four Paws International (FPI) signed a Framework Cooperation Agreement on Endangered Wildlife Protection. On the sidelines of the signing ceremony, the Environmental Magazine interviewed Mrs. Ioana Dungler, Director of the Wild Animals Unit at the FPI, for the conservation of endangered wildlife species in Việt Nam.

★Reporter: *Could you tell us about the FPI?*

Mrs. Ioana Dungler: FPI is an international animal welfare organization founded in 1988, headquartered in Vienna (Austria) and there are representative offices in 14 countries. The objective of the organization is to help animals that are directly affected by humans and kept under inappropriate conditions, through campaigns and projects around the globe. Since 2014, the FPI has collaborated with the Four Paws Viet to build the Bear Sanctuary Ninh Binh in the National Wildlife Sanctuary Park (Kỳ Phú Commune, Nho Quan District, Ninh Bình Province).

In 2017, the Four Paws Viet was officially established, marking the active participation of the organization in protecting wildlife. The FPI is currently making efforts to build a world in which wildlife lives in the wild, without human intervention, and is not caught or spawned for economic gain. No action to protect the wildlife is trivial, every action is meaningful. We cannot recover lost species, but there are many species that are on the brink of extinction, in need of human attention and actions. Do not abet this problem but solve it: Please care and protect the wildlife on the earth.

★Reporter: *Could you introduce some of the projects that the FPI has been implementing in Việt Nam?*

Mrs. Ioana Dungler: By the end of October 2017, the first phase of the Bear Sanctuary Ninh Binh project covering an area of 3.6 hectares had been completed. The sanctuary consists of 2 double bear houses and 4 semi-wild areas, with full items such as quarantine area, technical house, kitchen, cold storage room, isolation station, observation house, houses for raising bears... In addition, there is a veterinary clinic with modern equipment such as ultrasound machine, X-ray machine, microscope, blood test machine and resident veterinarians. On November 6, 2017, the Four Paws Viet successfully rescued the first 3 bears in Ninh Binh Province and moved to the Bear Sanctuary Ninh Binh, marking a milestone in the organization's operations. These are the bears that had been in captivity for nearly 20 years in the Ninh Binh City. Among the 3 rescued bears, two bears had been

in captivity by a household in Ninh Phong Ward, Ninh Binh City for 16 years (since 2001), when they were baby bears weighing only 5 - 6 kg. The other bear was rescued in poor health and lost two front limbs. The veterinarians performed anesthesia, medical examination and transported them to the Bear Sanctuary Ninh Binh.

In order to improve the living conditions of animals, the FPI has also cooperated with the Hanoi Wildlife Rescue Center in Sóc Sơn District. Accordingly, the Four Paws Viet has donated to the Center 1.9 billion VND to build a semi-wild bear house with an area of 1.000 m². The semi-wild bear house accommodates between 15 and 20 bears where the bears are free to explore and play. With the animal welfare being the top priority, the house is designed in a scientifically-sound manner: Closed house with semi-automatic doors and natural space with trees, swimming



pool, toys, etc. The whole bear house is surrounded by a fence system including an electronic protection fence. With this design, the bear house ensures a spacious and safe space for the animals and creates a friendly environment when they come in contact with humans. At present, the semi-wild bear house has 8 individual Tibetan bears taken care of in a enclosed process ensuring absolute hygiene and safety. In the morning, the staff members feed the bears with pumpkin, banana, then clean them up; in the afternoon, they feed them with porridge and release them to the semi-wild area. Instead of just eating two meals and lying down, the bears are now playing, as a result, they will become closer and more friendly to humans. After putting the bears in the cage, the staff clean and inspect the electronic fence.

It can be said that after 3 years putting into use, the semi-wild bear house has brought positive results. Not only has the welfare of the animals increased significantly, but the awareness of the caring staff has also improved. The semi-wild bear house in the Hanoi Wildlife Rescue Center has become the "natural" home of the bears that had been traumatized by trapping and trafficking.

★Reporter: In your opinion, what does it mean to sign the Framework Cooperation Agreement on Endangered Wildlife Protection?

Mrs. Ioana Dungler: Việt Nam is one

of the countries with a great diversity of ecosystems, species and gene sources, especially of precious and rare species. However, this precious resource is being threatened by many factors, in which the unauthorized exploitation, hunting, trading and consumption of wildlife are pressing issues, attracting the attention of the world and is the main cause of the rapid decline of wildlife populations, causing many endangered species to reach the brink of extinction.

In response to this problem, the Department of Nature Conservation and Biodiversity of the VEA has coordinated with the FPI to promote wildlife conservation cooperation, including the signing of the Framework Cooperation Agreement. Contents of the Agreement include: Development of a legal framework for the establishment and management of biodiversity conservation facilities (such as en-

dangered wildlife sanctuaries, rescue centers, zoos ...); Provision of international experience on basic technical requirements for facilities to meet conservation standards (criteria, standards, housing conditions, area...); Development of technical procedures for raising and propagation of endangered species at biodiversity conservation facilities; Research, development of rescue procedures, rapid response and transfer process for biodiversity conservation facilities; Sharing international experiences and proposing mechanisms to manage the exchange, sale, donation and lease of endangered species for the purpose of biodiversity conservation; Research and development of regulations on wildlife breeding, biodiversity conservation facilities, conservation and development of wild species in service of amendments and supplements to the Law on Biodiversity and relevant legal documents...

The signing of the Framework Cooperation Agreement on Endangered Wildlife Protection marks the beginning of the partnership between the FPI and the VEA. In the coming time, the two sides will implement specific actions to actualize the Agreement.

★Reporter: Thank you very much!

Đỗ Hương
(Implemented)



▲ The bear was successfully rescued by the FPI



Nations commit to fight plastic pollution together

To build on the growing momentum around the plastics agenda, UN Environment and the European Commission (EC) jointly hosted an event in 25/9/2018 to launch UN Environment's Global Plastics Platform. Member States, businesses, the EC and UN Environment showcased their initiatives, learned from each other and committed to fight plastic pollution together.

The event, hosted on the sidelines of the UN General Assembly, offered the opportunity for Governments to officially join a "Race to the Top" through the Global Plastic Platform (GPP), a network that will encourage new commitments to reduce plastic pollution and explore innovative ways to change the habits of design, production, consumption and disposal of plastics around the world, supporting the transition to a circular economy.

Many countries across the world have made ambitious commitments to beat plastics pollution during 2018. On World Environment Day 2018, India announced to ban all single-use plastics by 2022. Plastic bags bans have been announced in Chile, Botswana, and Peru, while Nigeria will set up recycling plants across the country, Brazil will announce a new national plan on plastics and Wales will commit to become the world's first "refill nation".

The aim of the GPP is to provide support to countries and cities which made these ambitious commitments, by facilitating the sharing of experiences, the establishment of new policies and inspiration for new commitments.

"The GPP is exactly the kind of initiative we need to bring countries together in the fight against millions of tonnes of plastics that end up in our oceans each year. No one can solve the problem of plastic pollution alone, but together we will fuel global change", Head of UN Environment Erik Solheim said.

EC First Vice-President Frans Timmermans said: "The EC has already taken action to deal with the plastic items we find most often on our beaches, and to transform the business model of the European plastics in-



▲ India announced to ban all single-use plastics in 2022

dustry and reduce economic and industrial waste. But we share responsibility for this planet and its protection with others. A cross-border problem requires multilateral efforts, and that is why I am delighted to partner with UN Environment to tackle the different sources and effects of plastic waste together".

Head of UN Environment Erik Solheim and First Vice-President of the EC Frans Timmermans were joined by renowned marine biologist Sylvia Earle, who underlined the urgent need for bold, decisive action on the plastic pollution that is troubling the world's oceans.

Government representatives and leaders from the public and private sector got to share their experiences, best practices and concerns around the phasing out or regulation of plastic products at the event, moderated by Editor-in-Chief of National Geographic magazine Susan Goldberg. The UN Environment GPP will

build on and further advance the efforts made by the European Union, the G7, the G20, the UN Environment Assembly and existing initiatives and partnerships, such as the Platform for Accelerating the circular economy, supported by the World Economic Forum, the New Plastics Economy of Ellen MacArthur Foundation and the work of the Regional Seas Conventions across the world.

UN Environment has played a leading role in positioning plastics pollution at the top of the global agenda, placing the theme at the centre of the world's attention for World Environment Day 2018. By increasing global awareness and highlighting circular economy as its solution, the issue was propelled it to the top of the agenda for member states, the public and the private sector■

Châu Loan

(UN Environment source)



UNDP announces The Lion's Share Fund to tackle crisis in wildlife conservation and animal welfare

On 21 June, 2018, the United Nations Development Program (UNDP), FINCH and founding partner Mars, Incorporated, announced the Lion's Share Fund, an initiative aimed at transforming the lives of animals across the world by asking advertisers to contribute a percentage of their media spend to conservation and animal welfare projects. "Animals are in 20 percent of all advertisements we see. Yet, they do not always receive the support they deserve. Until now", said Lion's Share Special Ambassador Sir David Attenborough. "The Lion's Share shows that by making a small difference today, we have an opportunity to make an unprecedented difference tomorrow".

The Lion's Share will see partners contribute 0.5 percent of their media spend to the fund for each advertisement they use featuring an animal. Those funds will be used to support animals and their habitats around the world. Mars is the first advertising partner in The Lion's Share.

The Fund, which will be hosted by UNDP, is seeking to raise \$100m a year within three years, with the money being invested in a range of wildlife conservation and animal welfare programs to be implemented by United Nations and civil society organizations. Other partners include advertising network BBDO and leading measurement company Nielsen.

"Wildlife and their habitats are in crisis right now. We are losing species at an unprecedented rate, estimated to be 1.000 times the natural extinction rate. The Lion's Share is an idea that is as innovative as it is simple and which will make a real impact on the future of animals, their habitats and our planet", said UNDP Administrator Achim Steiner.

Chief Marketing and Customer Officer Andrew Clarke at founding partner Mars said the Fund would be a powerful way for business to leave a lasting legacy. "The Lion's Share Fund is exactly the sort of ambitious initiative we need to take in order to ensure we foster a healthy planet on which everyone - including animals - can thrive. For Mars, it's another step in living the commitments of our Sustainable in a Generation plan. We're

passionate about wildlife conservation and maintaining the biodiversity absolutely necessary for our planet. And animals need our help closer to home, too. We urge other companies and brands to join us in The Lion's Share to help build a movement to tackle these critical issues", he said.

Rob Galluzzo, founder of FINCH, who initiated the idea with Film Director Christopher Nelius said: "Nine out of the 10 most popular animals we see in commercials are actually endangered or threatened and they do not always receive the support they deserve. In fact, it's usually the opposite. Christopher had this amazing idea to solve this and we at FINCH set out to make it happen. We have partnered with Clemenger BBDO to bring the concept to life".

The Fund has a joint steering committee that will take decisions on priority programs. The Lion's Share will work to contribute to the Sustainable Development Goals, the UN's universal call to action to end poverty and protect the planet. Supporting animals and helping to conserve their habitats is key to achieving Goal 14, Life Underwater and Goal 15, Life on Land■

Nguyễn Hằng
(UNEP source)





● Prudential Vietnam funds WWF plastic awareness project



▲ Representatives of WWF and Prudential Vietnam join hands to introduce “Building plastic pollution free communities” in Hà Nội and Hồ Chí Minh City

Prudential Vietnam Assurance Private Ltd., and World Wide Fund for Nature (WWF) signed a collaboration agreement on November 16, 2018 in Hà Nội City on the project “Building plastic pollution free communities”.

Prudential will contribute up to 7 billion VND (299.657 USD) for the initiative in the first year and may expand its involvement in the coming years. The investment for the collaboration agreement with WWF is nearly 5.5 billion VND. The project will start in Hà Nội and Hồ Chí Minh City, where the rapid economic development, robust population growth and urbanisation have had serious environmental implications. It aims to find solutions for plastic pollution problems on a large scale.

It kicks off a series of operations aiming at changing the perception of Vietnamese people on plastic consumption and its impact on the environment, ecosystem and human health. It will also launch a chain of activities from Prudential’s Corporate Social Responsibility in the Climate Change Adaptation and Environment Protection strategy from 2018 - 2021.

CEO of Prudential Vietnam Clive Baker said Prudential had nearly 200.000 employees, agents and volunteers from more than 350 offices across the country who would participate in the waste assessment process, as well as long-term planning on plastic waste reduction. Each member would become a project ambassador to inspire change in their family, social circles and community.

“We hope to raise awareness among citizens and change the habit of using plastic products, not only for a clean environment, but also for their own health”, said Clive Baker.

Benjamin Rawson, Conservation and Programme Development Director of WWF Vietnam said consumers were the motivation behind continued plastic production. “In this campaign, we will research the impact of plastic products on human health”, said Benjamin Rawson. “We will share our findings and disseminate the information through community venues such as supermarkets, trade centers and school in order to raise awareness and change peoples’ behaviors”.

According to a study by the University of Georgia in 2015, Việt Nam ranked fourth out of five countries in Southeast Asia, emitting 54 percent of the total annual plastic waste by volume. By the year 2025, there will be nearly one tonne of plastic waste for every three tonnes of fish in the ocean. Plastic waste takes a very long time - sometimes centuries - to decompose. This process creates methane and ethylene, which are two greenhouse gases contributing to climate change■

Đức Anh
(VNS source)

● UNESCO launches environment project in Hà Nội

The United Nations Educational, Scientific and Cultural Organization (UNESCO) and development partners launched the project “For a World Without Waste” in Hà Nội on October 17, 2018. The event aimed to gather UN agencies, government and non-governmental organizations, private sector and students in collective activities to reduce plastic and solid wastes in Việt Nam, mostly in tourist attractions, world heritage sites and coastal communities.

Chief representative of UNESCO Office in Hà Nội Michael Croft highlighted creative approaches to dealing with environment issues, especially creating artworks from wastes to change behaviors toward environment.

General Manager of Coca-Cola Indochina Hiroshi Kanazawa said in early 2018, Coca - Cola announced the global campaign “World Without Waste” with a view to collecting and recycling all cans and bottles it sells globally by 2030. The cam-



paign will focus on the entire packaging lifecycle - from how bottles and cans are designed and made, to how they are recycled and repurposed.

Coca-Cola also partnered with the British Council via a program enabling access to clean water at Ekocenter across the country within two years, focusing on raising public awareness of environment and waste management.

Permanent Secretary of the Hồ Chí Minh Communist Youth Union Central Committee Nguyễn Anh Tuấn said the committee has held specific activities to raise youths' awareness of the environment protection, including the campaign "Let's clean up the sea" attracting tens of thousands of young people, contributing to mitigating waste pollution in Vietnam's beaches.

UNESCO and Coca-Cola will announce recycling art awards to seek creative ideas among youths aged 15 or older in the use of recycled materials. They will also offer a financial aid worth 100 million VND (4.300 USD) to materialize the best ideas■

Nhật Minh
(VNA source)

● Japan supports Việt Nam in pollution control

The Vietnam Environment Administration (VEA) and Japan's Industrial Science and Technology and Environment Bureau signed an agreement on September 4, 2018 to promote co-operation in human resources development in the field of pollution control in Việt Nam. The deal aims to aid Vietnam's personnel development in pollution control and enhance the transfer of technology and the exchange of information and experience between Japan and Việt Nam. It also supports the establishment of an environmental management system in the Southeast Asian country.



Under the agreement, the two sides will share documents on pollution control standards, regulations, and information; exchange specialists; and set up a working group to provide Việt Nam with consultancy in building an environmental management system.

Japan has successfully carried out such projects in Thailand, Indonesia and China and now hopes to assist Việt Nam in this issue through the organisation of training courses in both Việt Nam and Japan, said Tanaka Hideaki from the Japanese Industrial Science and Technology and Environment Bureau■

Trần Tân
(VNA source)

● JICA helps boost green growth on Hạ Long Bay



▲ "Blue sail" label hung on a ship

The Japan International Cooperation Agency (JICA) granted the "Blue sail" certificate to two tourism ships operating on Hạ Long Bay of the Northern coastal province of Quảng Ninh. The recognition is part of a JICA-funded project to boost green growth in Hạ Long Bay through the implementation of sustainable environmental protection and tourism development policies.

The 29 criteria for "Blue sail" label focus on preventing and reducing noise and air pollution, cutting waste and wastewater discharge and protecting biodiversity.

After an assessment, the project's evaluation council decided to grant the "Blue Sail" certificate and label to Âu Cơ ship of the Bhaya Limited Company and Secret Hạ Long ship of the Biển Ngọc Limited Company.

Vice President of the Provincial People's Committee Đặng Huy Hậu said the province has implemented many measures to protect the environ-



ment, including Hạ Long Bay's environment.

The locality is also taking measures to improve the quality of the fleet of tourist ships operating on Hạ Long Bay - a UNESCO-recognized World Heritage Site.

Since the beginning of this year, Hạ Long City's People's Committee has temporarily suspended 36 tourist ships on the bay, while 41 others have been permanently banned. According to the City People's Committee, there are currently 504 cruise ships and 68 high-speed canoes running on Hạ Long and Bái Tử Long Bays ■

Châu Loan
(VNA source)

● VITAS works with WWF to green Vietnam's apparel sector



▲ The Hòa Xá fibre factory in Nam Định Province

The World Wildlife Fund (WWF) and the Vietnam Textile and Apparel Association (VITAS) launched a project on October 26, 2018 to green Vietnam's textile-apparel sector through improving water management and energy sustainability. The two sides will cooperate with multiple players in the sector to promote better river basin governance and contribute to water quality improvement and sustainable energy use.

The project will be implemented from 2018 to 2020 with a vision to transform the textile-apparel sector in Việt Nam through engaging the industry and influencing environmental governance in order to bring social, economic, and conservation benefits to the country.

VITAS Chairman Vũ Đức Giang said the main focus of the project is to improve water and energy efficiency within the sector, thus reducing its impact on the environment. The project will also work with textile-apparel manufacturers

to encourage them to be more active river stewards, practice sustainable energy planning and discuss collective actions to achieve sustainable investment and development in the industry. One important target of the project is influencing Vietnamese textile investors to implement more sustainable practices, he added.

Mr. Marc Goichot from WWF-Greater Mekong said: "For WWF, greening the textile sector in Việt Nam is also a means to achieve our wider goal of addressing river governance and energy sustainability, which are top global environmental concerns". He added that in the long run, the WWF wants to see factories, industrial parks and other factors come together to take more proactive collective actions to address risks and impact beyond their factory fences and more responsibly manage shared resource uses across-sectors.

Key stakeholders in the project include international brands with suppliers in Việt Nam, factories around the country, in particular in the Mekong and Đồng Nai river deltas in areas around Hồ Chí Minh City, financial institutions, development partners and other relevant initiatives. Other partners include the China National Textile and Apparel Council and the Lancang-Mekong Cooperation ■

Bùi Hằng
(VNA source)

● Vietnam Challenge for Environment launched in Hà Nội City



▲ At the event

The Vietnam Challenge for Environment was launched in Hà Nội City on August 24, 2018 as part of an ongoing campaign initiated by the US Embassy to end plastic pollution and keep Việt Nam clean. Co-launched by the US Embassy in Việt Nam in partnership with Hatch and Swiss



EP, the event will match researchers with entrepreneurs and encourage collaboration between universities, the startup community, and the private sector to create sustainable and long-term solutions to treating agricultural, industrial, and household wastes, as well as solving plastic, carbon, and chemical pollution problems.

Mrs. Fenghua Wang, the US Department of State's Regional Public Engagement Officer for Việt Nam, Laos and Cambodia, said through the Challenge, the US Embassy is committed to nurturing viable, sustainable, and scalable solutions to address such challenges. She stressed the need to raise public awareness of environmental protection, which she said, requires the joint efforts of organizations, units, and the community.

The Challenge will take place from August 24 to November 8, 2018, during which researchers and entrepreneurs will present their ideas and explore the open networking space to form high-performance teams. They will have a chance to join an intensive three-day camp to help entrepreneurs discover their key customers and develop their products based on customers' demand.

During the incubation period, teams will regularly meet their mentors and attend workshops to refine their business models to achieve fundable stages by investors. The best 6 teams will receive seed funds, publicity and exposure, and be given the chance to pitch to notable investors■

Mai Hương
(VNS source)

● VEA, Four Paws work to save wildlife animals

The Vietnam Environment Administration (VEA) on August 30, 2018 signed a cooperation pact with Four Paws International (FPI) to protect endangered wild animals. Under the pact, the two sides will exchange experiences and call for technical assistance in the building of new policies towards improving wildlife preservation management in Việt Nam.

Their joint program aims to boost cooperation and mutual understanding between Việt Nam and other countries and organizations in biodiversity protection. It will also work to in-

crease Vietnam's preservation capacity by applying international experiences to the country's policymaking and law enforcement.

Mrs. Ioana Dungler, Director of the Wild



▲ Clouded leopard (*Pardofelis nebulosa*)

Animals Unit at FPI, said the partnership marks a new step for both sides in saving threatened wild animals in Việt Nam.

Previously, the VEA's Department of Nature and Biodiversity preservation had discussed and collaborated with Four Paws regarding wild animal protection. They both wanted to save endangered species by deterring illegal trade, as well as study measures to protect the habitat and recover the populations of key species. They also aimed to improve wildlife knowledge to aid the building of relevant legal regulations.

FPI in Việt Nam was established in 2017. Prior to this, the non-governmental organization had sponsored its Vietnamese partners to build the Ninh Bình Bear Sanctuary. The site now covers 3.6 ha and is capable of taking care of up to 44 bears. The facility has rescued eight moon bears from the practice of bile farming.

In 2015, FPI designed and built a semi-wild enclosure for former bile bears at the Sóc Sơn Wildlife Rescue Centre in Hà Nội City■

Bình Minh
(VNA source)



COMMUNITY - BASED AND PRIVATE PROTECTED AREAS: A new management approach

Vũ Thị Thanh Nga, Hoàng Hồng Hạnh, Hoàng Thị Hiền

Institute of Strategy and Policy on Natural Resources and Environment

The development of community-based and private Protected Areas (PA) is a good trend for conservation work in the world. A study by the International Union for Conservation of Nature (IUCN) in 2014 found that one of the biggest benefits of a community-based and private PA management mechanism is the participation of, as well as the awareness raising for, community and private groups in conservation work. This mechanism helps expand the area and establish corridors of important PA while not requiring large investments from the Government. In Việt Nam, conservation management is currently facing a number of major challenges due to the lack of financial resources commensurate with the values of biodiversity resources. This poses the urgent need for a new management mechanism to mobilize more resources for the conservation from the community and private sector.

INTERNATIONAL EXPERIENCE ON MANAGEMENT OF COMMUNITY- BASED AND PRIVATE PA

There were 12,754 private and community-based PA recognized by IUCN as of 1997. In addition, there are more than 17,500 other sites not listed due to their areas being less than 1,000 hectares. In whatever form, these PA have been managed for the strict protection of resources; the resource exploitation has been also controlled or used for other purposes; and all the PA contribute to the objective of biodiversity conservation in one way or another. Each PA selects its own conservation objective and in most cases, it is concerned with the locality's social, economic, environmental and cultural conditions.

Australia

The Australian Government is aware that, in order to ensure the success of the establishment and management of the National Reserve System, the PA can not only be built on public land, but groups of indigenous peoples, local communities, private landowners and non-governmental organizations also play an important role. The definition of private PA clearly states: "A basic requirement for any area eligible for inclusion in the National Reserves System is that



▲ Cape of Good Hope Nature Reserve (South Africa)

it must meet the IUCN's definition of "a Protected Area", with three general standards applicable in all types of ownership: Valuable, well-managed and well-defined."

In Australia, conservation and land acquisition agreements are the main mechanism used to protect long-term natural property on private land. The states and territories have separate laws that allow the application of different conservation agreements. These agreements are usually made by changing the land type, imposing responsibility for conservation with all future owners of that land. The agreements can only be terminated upon agreement between the landowner and the relevant Minister of the Government. In addition to legal regulations, Australia also has policies to support private PA. For areas of high conservation value included in the national conservation strategy, the Government could support private trust funds of two thirds of the amount for purchasing land to build PA. In addition, depending on the state, the state authority may deduct the land taxes or income tax for

the landowners.

As of September 2013, there are about 5,000 land areas in Australia that can be considered as private PA, with an area of about 8.9 million ha. Of these, more than 4,900 conservation agreements for over 4.45 million hectares and about 140 PA are owned by private trust funds for the remaining 4.59 million hectares. There is, however, a difference between the private PA and the PA managed by the State in Australia: the private PA cannot prevent the State's exploration for or exploitation of minerals in the PA. This is one of the obstacles for private PA in Australia.

South Africa

PA have been used for decades in South Africa as an important tool for preserving the country's natural and cultural heritage. Currently, South Africa has more than 400 terrestrial and 23 marine PA, occupying an area equivalent to 6% of land area and 20% of marine area. Since 2003, the Government of South Africa has made major conservation reforms with the introduction of the PA Act 2003. This Act recognizes



a range of administration types for the PA, varying in purpose and strictness in land use. The Act also allows the private landowners to declare a PA on their own land, as long as there is one competent authority agreeing to designate such a PA. The establishment of private PA is considered as a strategy to offset and support the State-managed PA.

South Africa's private PA include private landowners, businesses, NGOs and churches. Community land is included in this classification even though the land is owned by the State (usually by a public body or a Department under the Ministry of Agriculture, Forestry and Fisheries). These landowners may sublease or conduct business activities in accordance with the regulations on management of the PA and contractual agreement between the landowners and the authorities. The areas are managed in accordance with the regulations on PA in general and under the direct management of the South African Department of Environmental Affairs.

In addition to the PA, there are PA in South Africa that are not managed under the PA Act, but are maintained by the landowners in some form of management to protect the biodiversity. Although these areas do not formally contribute to the conservation, they are also an important component in the landscape conservation and biodiversity management in general.

China

Some prominent private Protected Area models have appeared in China recently. Firstly, there is the Baiyanggou Protected Area, Changping District, Beijing, which is considered to be China's first private Protected Area. The Protected Area was owned by Chang Zhongming, a hotel management assistant in Beijing. In 2015, Mr. Chang paid 32,000 Yuan (approximately USD 4,000) to rent a 10.7-ha forest valley over a 70-year period. However, due to lack of funds, this Protected Area only remained in operation until 2001. Later, the area was transformed into a scenic area and managed by several travel companies. The second most prominent model is the Mingrenshan area, Wenchang City. In 1994, a trader in Hainan Province, Xing Yiqian, rented 66 ha of land in the area. Mr. Xing Yiqian started to buy forest seedlings in the neighboring areas and planted on the leased land. After 3 years, this area became an attractive area for many wild birds. Mr. Xing Yiqian started to set up the operation team and set up his own private Protected Area. However,

Mr. Xing Yiqian also had no money to maintain the site and was forced to resell it. The Wenchang City authority recognized this PA in 1997. In 2000 and 2002, the city also promulgated two other documents to expand the PA to 2,173 hectares, including 38 villages and more than 2,000 households living in the PA. Today, the PA is funded by ecotourism activities, and the local Forest Council also contributes financial and technical support to the area.

Laohegou is the only private PA owned by a non-governmental organization, the Sichuan Nature Conservation Foundation (SNCF). This is a non-governmental organization established by China's top 20 entrepreneurs, beginning capital mobilization to test the China Trust Fund model. In February 2012, SNCF signed an agreement with Pingwu County, Sichuan Province and leased 11,000 hectares of state-owned jungle and surrounding collective forests for 50 years and officially established the Laohegou PA (also known as Motianling Land Trust Reserve). It is estimated that about 10 giant pandas live in the Laohegou area, along with about 200 species of butterflies, 12 species of amphibians, 12 species of reptiles, 188 species of birds and 23 species of mammals.

LESSONS FOR CONSERVATION MANAGEMENT IN VIỆT NAM

From the experience of other countries in the world, the development of community-based and private PA is a new trend that can not only reduce the pressure of government investment in conservation, sustain many different natural resources in a flexible way, but can also bring significant economic benefits from tourism and other supportive

activities to the community and the private sector. With the benefits and likelihood of success of the mechanism, Việt Nam has a good foundation to develop and apply the new mechanism in the current context.

In order to manage and operate the new conservation mechanism, countries shall have a strict regulatory system, but the legal framework must be flexible, for example, based on management agreements that are effective and can vary upon demand. Some countries manage the community-based and private PA in the general PA management system in order to share the benefits and security that the State management system can provide. Meanwhile, some other countries have recognized that the voluntary PA, despite not being part of the formal system, are still encouraged in conservation activities. Thus, in Việt Nam, in applying this lesson, the Government first needs to develop a legal framework that recognizes the concept, role and measures of state management of the community-based and private PA. In addition, a number of other policies are needed to support the formation and development of community-based and private PA such as land-related agreements, technical assistance programs or the formation of Trust Funds. Trust Funds can help mobilize capital resources from businesses, then purchase or receive land (donated by the private sector) to implement the conservation. Such funds may also help to promote conservation measures or agreements and carry out search and transfer negotiation activities when the owners have a need to do so ■



COCA-COLA VIET NAM:

Sustainable development key to success

Sustainable development has become a top priority for all countries in the world and the business community is key to each nation's plans to achieve sustainable growth. Coca-Cola Viet Nam has forged its own path and risen among successful sustainable businesses able to balance performance and environmental protection. To discuss the topic in detail, the Vietnam Environmental Administration Magazine (VEM) speaks to Mrs. Lê Từ Cẩm Ly - Legal and Public Affairs Communication Director - Indochina Coca-Cola Beverages Vietnam Ltd.



▲ Mrs. Lê Từ Cẩm Ly - Legal and Public Affairs Communication Director -Indochina Coca-Cola Beverages Vietnam Ltd

★VEM: Can you tell us about the operation of Coca-Cola Việt Nam and the firm's sustainable growth targets in Việt Nam?

Mrs. Lê Từ Cẩm Ly: Coca-Cola was first introduced to people in Atlanta, Georgia, US in 1886 and became attractive for its smell and colour. Since then, the product smell and colour have been preserved by the people who have whole-heartedly produced, distributed and promoted the product in the world market. For that reason, Coca-Cola has gained a name for itself as the world's top beverage brand.

After nearly 100 years, Coca-Cola took its first steps in Việt Nam in February 1994 with initial investment of US\$ 163 million following the US decision to remove trade sanctions imposed on Việt Nam. Coca-Cola quickly established three associate companies in all three regions of Việt Nam. The northern association company was the co-operation between Indochina Coca-Cola with the Vietnam Food and Agriculture Co (Vinafimex), which was founded in August 1995. The southern association was Coca-Cola Chương Dương, and the central one was Coca-Cola Non Nước (founded in January 1998). In October 1998, the Vietnamese Government allowed associate companies to become 100 percent foreign-owned businesses, helping Coca-Cola purchase the counterpart capital from Vietnamese partners to fully control the three associate firms. In 2001, the three associate companies completed the process of turning into foreign-owned businesses with US \$ 350 million worth of capital investment from Coca-Cola.

At the moment, Coca-Cola Việt Nam creates 4,000 direct jobs and helps generate 6 - 10 times

that number in indirect jobs from its supply chain. Being positioned in the non-alcohol sector, Coca-Cola Việt Nam has introduced many products in various segments from soft drink (Coca-Cola, Sprite, Fanta) to mineral water (Dasani) and energy drinks (Samurai, Aquarius). Huge market demand for those products helps Coca-Cola Việt Nam earn trillions of dong in revenue each year though the selling prices are just thousands of dong. In 2015 and 2016, the revenue of Coca-Cola reached nearly VND 7 trillion and its post-tax profit hit VND 500 billion each year. The company in these two years paid more than VND120 billion worth of corporate tax each year.

The sustainable development targets of Coca-Cola Việt Nam so far have come from the practical needs of the local authorities and people, ranging from demand for clean energy, water and responses to climate change, to responsible production, job creation, social equality and raising benefits for

women. Based on these principles, the company has created its "share value policy" that focuses on four key factors: Water, women, improvement of living conditions, and management and recycle of plastic wastes. Striving to achieve those targets, Coca-Cola Việt Nam was honoured among the top four sustainable enterprises in 2017 by the Vietnam Chamber of Commerce and Industry (VCCI) and among the top five enterprises with the best working environment by Anphabe.

★VEM: What are the firm's initiatives in collecting and recycling cans and bottles sold in Việt Nam?

Mrs. Lê Từ Cẩm Ly: We acknowledge plastic waste is quite worrisome for the environment. At the beginning of 2018, Coca-Cola announced that the company by 2030 would collect all cans and bottles it sells for recycling under the "Design, Collect and Co-operate" strategy. This is part of the company's comprehensive plan named "A world without waste".



There are some initiatives that Coca-Cola has been implementing in Việt Nam to realise its global sustainable growth plan such as:

Zero waste to nature: This aims to reach four goals in resolving plastic waste problems; planning the development of sustainable business models; developing the value chain based on the circular economy model; and proposing policies for the development of the Vietnamese circular economy. Coca-Cola Việt Nam is now working with VCCI and other partners to test new production methods for the plastic industry in 2018 - 2022. Then, the pilot results are expected to become the foundation for other industries such as steel, cement, glass, wood, agriculture and cattle farming, thus forming step-by-step the sustainable circular economy and constructing an official recycled material market in Việt Nam.

“Fostering creativity for recycling awareness” is a project that’s undertaken by Coca-Cola Việt Nam and UNESCO. The project will start its pilot phase at the Cù Lao Chàm Marine Park and surrounding areas of the Hội An Ancient Town - a city that was recognized as UNESCO World Heritage Site in 1999. The pilot phase focused on raising public awareness (until 2010) and helping people turn their awareness into real actions in collecting, recycling and re-using solid and plastic wastes. At the same time, the project also created a network of activities to collect and recycle wastes such as discussions and practices in collecting wastes and cleaning the sea. EKOCENTER - a Coca-Cola Việt Nam community-supporting unit - would help expand the scope of those activities to other provinces and districts after the test in Hội An City.

★VEM: What has Coca-Cola Việt Nam done to become a top business that makes the best use of renewable energies and protects the environment?

Mrs. Lê Từ Cẩm Ly: Coca-Cola Việt Nam plans to minimise production impacts on the environment and promote the circular economy through some activities such as reducing the use of water, energy and packages and using recycled plastics. By 2020, the company targets to cut 25 per cent of the impacts made by its carbon footprint in its value chain; curb the amount of used water from 1.8 litres to 1.68 litres per each litre of soft drink produced; reduce the amount of used energy from 0.44 mill joule (MJ) to 0.40MJ per litre of soft drink produced; and cut the amount of used packages such as bottle, cap, can, label and carton box.



▲ Mrs. Lê Từ Cẩm Ly represents Coca-Cola Việt Nam to receive the 2017 Sustainable Business Award from VCCI

Seizing the global trend in environmental protection, Coca-Cola Việt Nam has made a huge investment in research and development of new facilities and technologies, which are environmentally - friendly, for its three factories in Hà Nội, Đà Nẵng and Hồ Chí Minh City. Coca-Cola has recently spent nearly US\$ 5 million to develop a smart warehouse and upgrade the waste water treatment system by equipping the system with membrane bioreactor technology for its Đà Nẵng factory. In addition, Coca-Cola Việt Nam has approved a number of sustainable energy programs such as promoting the use of natural gas and biomass energy for all factories to reduce the consumption of fossil energy, and applying a solar energy system to boil water.

★VEM: As one of the sustainable multinational corporations in Việt Nam, what has the company done to assist local firms with their sustainable development course?

Mrs. Lê Từ Cẩm Ly: As we plan to share experiences and are willing to develop further together, Coca-Cola Việt Nam always helps small- and medium-sized enterprises (SMEs) to improve their corporate governance and competitiveness and develop a circular economy.

In 2017, Coca-Cola Việt Nam co-operated with the US-ASEAN Business Council (USABC)

and VCCI’s Vietnam Business Council for Sustainable Development (VBCSD) to implement the project “Assistance for Vietnamese SMEs towards sustainable development”. The project aimed at helping Vietnamese SMEs enhance their work flow, improve competitiveness to join the global value chain, and become partners and suppliers in the global ecosystem of multinational corporations like Coca-Cola. Through the project, 8 SMEs have become Coca-Cola’s suppliers.

Besides, Coca-Cola Việt Nam has made US\$100,000 worth of investment in training for local businesses to improve their capabilities and skills to meet the requirements of supply chain, creativity, trade and social responsibility in the industry 4.0.

Coca-Cola Việt Nam has also worked with the Vietnam Women Entrepreneur Council (VWEC) and the Vietnam Women’s Union (VWU) to organise e-learning courses at EKOCENTER offices. Through the training, the company has shared its experiences with thousands of female trainees and supported them to start their own businesses to improve living conditions, create more jobs and develop local regions’ economies.

★VEM: Thank you!

Hương Mai
(Implemented)



ANIMAL WELFARE: The advancement of interest in animal welfare

Đào Đức Văn
Animals Asia

Animal welfare is simply understood as the well treatment of animals, so that animals can have a good physical and mental state, and avoid pain, regardless of animals being raised for food, production assets, pets, or captive wildlife. Accordingly, there are 5 standards to ensure the animal welfare including: Not being left to starvation; not being physically and mentally uncomfortable; not being in pain, injury or illness; in freedom of expression of instinctive behaviors; not being afraid or anxious.

THE WORLD APPROACH TO THE ANIMAL WELFARE

There are three approaches to the animal welfare in the world (mainly Europe and North America):

Morally speaking, animals are considered living spirits that have souls and feelings, so humans need to treat animals with humanity. There is a connection between the abuse of animals and the development of violent, aggressive behaviors in the family and society. Therefore, humane treatment with animals will help form good personality and humanity in humans, especially for children.

Scientifically speaking, animals, especially mammals and birds, are living creatures with a central nerve system, so they have a biological perception of pain, hunger and happiness or sadness. Humans should treat animals well to reduce pain and create comfort for them, so that they can express their natural behavior.

Legally speaking, animals are human-owned, so humans can make decisions about production, exploitation, research, etc., to serve different purposes of humans. In this perspective, animals nurtured and maintained by humans can be exploited appropriately; for wildlife, it is limited, or prohibited in catching, treating them brutally and over-exploiting which leads to ecological damage.

From the above-mentioned approach, animals with good welfare conditions will feel comfortable and give maximum productivity. In contrast, if the welfare is not



▲ The Animals Asia workers are taking care of the bear

guaranteed, it will make animals more susceptible to diseases and reduce productivity (growth rate, milk yield, conception rate ...), causing losses to farmers. Therefore, the animal welfare is considered as a solution to ensure animal health and improve animal productivity. In addition, the animal welfare not only is meaningful for the animals themselves, but also has practical benefits for humans, the environment and the society.

THE ANIMAL WELFARE IN VIỆT NAM

In Việt Nam, the concept of animal welfare is relatively new to farmers, while animals are the food and income sources of the people. In the present context, bringing animals to nature will be a step to promote Vietnamese agriculture to be more competitive with other countries in the world.

At present, in fact, there are many serious issues on the animal welfare for all three groups of animals including domestic animals, farm animals and wild animals. Some

species in the three groups are being treated badly, not ensured of the minimum needs to maintain their natural instincts. Animal abuse during slaughter and transportation has not been controlled. Recently, the Australian Government has restricted live cattle exports to Vietnam after the brutal slaughter of cattle in slaughter - houses was declared by a group of animal activists. According to the Animals Australia survey, only two out of 13 slaughterhouses in North and Central Việt Nam meet Australian standards on the animal welfare.

However, recently, the protection of animals in Việt Nam has also changed considerably. There are more and more domestic and international animal rescue organizations being put in operation; thematic seminars and workshops on animal protection have been held regularly and achieved positive results. Many festivals of killing animals brutally have been condemned by the public, which has sparked a movement to protect animals.

From the legal perspective,



the animal welfare has been paid attention to, as evidenced by the Law on Veterinary Medicine No. 79/2015/QH13 (effective from July 1, 2016), for the first time including the concept of "animal welfare" and the regulations on animal disease prevention and treatment. Specifically, Article 21 of the Law provides: "Organizations and individuals engaged in livestock production, aquaculture production, and using of animals, shall: Carry out the appropriate management, care, raising and transportation according to specific type of animals; Reduce the pain and fright, and treat the animals humanely during the raising, culturing, transporting, slaughtering, health care and scientific research; Any organizations/individuals raising animals for ornamental purposes or for biodiversity conservation shall take care of and raise animals, promptly provide animals with prevention and treatment for animal diseases according to the regulations in this Law".

One of the new points of the proposed draft Law on Livestock Production also mentions "welfare for animals". The Draft provides: "Welfare for animals is a requirement that people must meet so that the animals shall have the best conditions for their behavior, be adequately provided with food, water, disease prevention and treatment during the process of raising and minimizing fright and pain in transportation and slaughtering". In order to ensure the welfare of animals in raising, organizations and individuals engaged in livestock production must meet the following requirements: "To have raising facilities, space, area suitable for animals; animals must be provided with adequate hygienic food, water, disease prevention and treatment in accordance with the regulations on veterinary". In slaughtering, the slaughterhouses must have a hygienic place where animals are kept while waiting for the slaughter and animals must be provided with adequate drinking water; must not be beaten, tortured; the slaughterhouses must limit fright, stress, pain for animals; not let them witness the slaughter of peer animals.

It can be seen that the introduction of regulations on the animal welfare into the legal documents is in line with international integration and the development of a sustainable and professional livestock sector. This is considered as a clear step forward for the interest in the health and welfare of animals ■

Green Office initiative to help reduce greenhouse gas emissions



▲ Illustrative image

Viet Nam could cut down 6 percent of its greenhouse gas emissions through the implementation of the Green Office Initiative, the Asian Institute of Technology in Viet Nam (AIT-VN) said at a workshop in Hà Nội on November 7, 2018. Green Office is an environmental management system for offices, focusing on changing awareness and behaviours amongst office workers towards sustainable consumption practices. This is a continuous process to improve issues in order to reduce operational costs and the environmental impacts of the organizations, resulting in financial benefits and a friendly, healthy working environment.

AIT-VN Deputy Director Nguyễn Thị Bích Hoa said that the initiative is suitable for all office types and scales. Mrs. Nguyễn Thị Bích Hoa stated AIT-VN hopes the Green Office Initiative will be carried out at other organizations and enterprises, with its criteria included in policies and assessment guidelines related

to environmental protection in Viet Nam.

According to Mrs. Hoa, during the implementation of the "Upscale and Mainstream Green Office Lifestyles in Viet Nam" project at 11 organisations and offices in Hà Nội, Đà Nẵng City and Hồ Chí Minh City, the initiative proved effective in reducing negative environmental impacts and greenhouse gas emissions, as well as in saving operation costs.

Among these 11 units, the TUV NORD Vietnam Co., Ltd. recorded a greenhouse gas emission rate of up to 25.8 percent; the Siam City Cement Vietnam Co., Ltd. at 20 percent; Cao Thắng Technology College at 15.8 percent. Among the key domains of consumption such as electricity, water, paper, office equipment and waste management, sectors such as electricity and waste hold the most potential in greenhouse gas emission reduction, with the rates of 10.92 percent and 4.13 percent, respectively ■

Hồng Nhung
(VNA source)



TURNING E-WASTE INTO GOLD:

The untapped potential of African landfills

Thanks to rapid changes in technology and falling prices, millions of tons of high-tech electronic devices are becoming obsolete in the developed nations every year, making electronic waste (e-waste) one of the top environmental challenges of the 21st century.

E-waste is defined as what remains of mobile phones, computers, personal stereos, fluorescent and incandescent light bulbs, as well as large household appliances such as television sets, refrigerators, washing machines, air conditioners and more.

Speaking at the Earth Innovation Forum on September 5, 2018 in Tallinn City (Estonia), Director General of Home Appliance Europe Paolo Falcioni said, “Five million tonnes of electronic equipment in Europe is generated as e-waste. Out of the five million, four million tonnes of the e-waste is recycled. Of those, 3.5 million tonnes become secondary raw materials. The rest of the e-waste is not traced”.

It is probable that this untraced waste ends up in Africa. An article published by the Environmental Health Perspectives shows that each month 100.000 used personal computers arrive at the Nigerian port of Lagos alone. Ghana also faces challenges in managing the e-waste imported. E-waste generally ends up in landfills, the largest one being in Agbogbloshie, a commercial district near the centre of Accra.

E-waste management has become a major challenge facing many African countries because of lack of awareness, environmental legislation and limited financial resources. Open dumping, burning and landfilling are the predominant disposal methods used in Africa, with potential serious implications for human health and the environment. Heavy metals and other hazardous substances found in electronics contaminate groundwater and pose other environmental and public health risks. Computers contain heavy metals such as lead, cadmium and mercury, brominated flame-retardants, Polyvinyl Chloride (PVC) and sometimes Polychlorinated Biphenyls (PCBs).

Modern electronics can contain up to 60 different chemical elements including base

metals such as copper and tin, special metals such as cobalt, indium and antimony and precious metals like silver, gold and palladium. Although some chemicals present in electronic components are hazardous, many have economic value. Precious metals such as gold can be extracted from mobile phones, as each one contains an element of this precious metal. There is untapped potential in Africa in recycling mobile phone elements in this way, with most of the projects being based in developed countries.

Beside metals, mobile phones also contain valuable materials such as plastics, glass and ceramics. With the creation of a circular economy, these waste materials could be turned into secondary raw materials that can be used as valuable inputs in different companies. Such recycling opens a great opportunity for innovation, increased productivity and economic growth.

New and innovative solutions are needed to integrate the informal e-waste recy-

cling sector across the continent into sound sustainable e-waste management strategies. Recycling would have a positive impact on metal resources hence protecting the environment from unsustainable mining.

The Ghanaian government has taken a significant step towards the proper management of e-waste. The construction of an integrated e-waste recycling facility, at Agbogbloshie, is scheduled for October, 2018. One of the components of the project is the establishment of a network of collection centers to provide a continuous supply of raw materials to sustain the operations of the facility. This ambitious project is expected to create over 22.000 self-sustaining jobs for Ghanaian youth.

Key trading associations will be funded to support research in academic and research institutions. The funds will be used to offer incentives for collection, transportation and disposal of electrical waste, promote public education on the safe disposal of electrical and electronic



▲ E-waste is defined as what remains of mobile phones, computers, personal stereos...



waste and on the negative effects of electronic waste.

The Ghana project shows the potential for investment in Africa in waste management. Investing in technology and education is essential to build capacity in Africa to effectively manage e-waste and bring forth innovative solutions in e-waste management. Building capacity also supports policymakers in enforcing legislation that ensures that e-waste is properly disposed of, and that recycling is done in a manner that protects the environment.

Through its Switch Africa Green project in Ghana, UN Environment, jointly with the Environmental Protection Agency and in partnership with Ghana National Cleaner Production Centre, implemented a project on electronic waste and developed the Ghana e-waste model that formed the basis for the Hazardous and Electronic Waste Control and Management Act (2016). This led to the Government of Ghana to prepare for the setup of an e-waste recycling plant at Agbogboshie. UN Environment continues to support African governments to tackle the issue of e-waste management. Value in e-waste can be extracted in a way that supports the local economy and protects people's health and the environment■

Bình Minh
(UN Environment
source)

Renewable energy development is fundamental for a green future

Nguyễn Thu Hà

Green Innovation and Development Centre

Adopting renewable energy sources and boosting energy efficiency are strategies for the energy industry to meet rising demand, cut coal imports and improve the Việt Nam's social, environmental and economic conditions. However, public awareness regarding renewable energy has remained modest, especially among people living in the rural and mountainous areas and islands where power is limited. Therefore, those communities require special attention to narrow the development gap between them and urban areas.

To promote the use of renewable energy and energy efficiency in general in Viet Nam via building the capacity of social and professional organizations and individuals in the local area, the Green Innovation and Development Centre (GreenID) has carried out the E-Enhance project with a focus on local civil society, professional organizations and individuals. The project is funded by the European Union (EU) using non-refunded ODA capital and

will be implemented over four years between August 2017 and August 2021 by GreenID and the Germany Independent Institute for Environmental Issues (UfU) with total value of 685,326 euros. The EU will provide a non-refunded amount of 600.000 euros and the rest will be funded by GreenID and UfU.

Themed "Sharing and growing towards a green future", the E-Enhance project focuses on training courses and seminars on renewable energy and energy efficiency; communicating and installing renewable energy and energy efficiency models; and doing activities on renewable energy and energy efficiency. Based on basic and advanced training courses, civil society and professional organizations will learn about new findings in the field and adopt renewable energy and energy efficiency technologies. The project will also finance local people as they apply the sustainable energy model at their houses and public places. Acknowledging the demand of local people for consistent, affordable power in areas with modest



▲ Participants during the training course for teachers on sustainable energy, carried out at Cù Pui Commune (Krông Bông District, Đắk Lắk Province)



power grids and many poor households, the project has prioritized supporting the local community as they produce their own power in order to meet basic living conditions.

A key task of the project is to promote the use of renewable energy and energy efficiency in the school. Therefore, the “Green School” program is designed with two main components: Green energy and green living. In each of the two components, there are many sub-components that are implemented synchronously in following stages: learning material development, school selection, at-school plan implementation and holding educational activities to improve students’ awareness... The “Green school” initiative will be piloted in at least 10 schools in the North before being carried out in other provinces. Teachers and students will not only improve their awareness and actions about renewable energy and energy efficiency but also help the school reduce power costs and develop an environmentally - friendly operating model.

Over the last year, GreenID has worked with the Đắk Lắk Department of Industry and Trade to hand over an integrated solar-powered clean water and electricity system to the people of Ea Rốt Ward at Cư Pui Commune, Krông Bông District. The system has installed capacity of 6.24 kilowatts (kW) to 24kW, using solar power panels to provide energy for daily activities and power an on-site Reverse Osmosis drinkable water filter. The system is designed to generate 20 kilowatts per hour (kWh) each day for 20 households to light up their homes and produce 700-1,000 litres of clean water each day for the whole ward. The remaining electricity, if unused, will be stored in the battery for local people to use for different purposes such as increasing light at night. When the demand for power increases, the system capacity can be adjusted to meet that demand. This is the first model that has integrated clean water filtration and power generation for the local area. It has opened a new direction for local authorities to resolve two essential matters of ethnic minority people in the Central Highlands region and drive them towards sustainable development.

In addition, GreenID successfully launched an exhibition, and at the same time a gameshow, at the Lý Thái Tổ Statue, Hoàn Kiếm Lake, Hà Nội City, which was a



▲ A group of students make a presentation on their idea of solar power panels during the launching ceremony of the Green School program

part of the event “The European Village”. The exhibition attracted nearly 200 visitors, including 80 who competed in the Green Challenge, and more than 100 children and young people that jointly drew two pictures with total length of 14 metres themed “Green energy - Clean atmosphere”. GreenID also organized a training course on renewable energy and energy efficiency for more than 35 local officials coming from the provinces of the Central and Central Highlands regions; two advanced teacher training courses on renewable energy and energy efficiency for 26 trainees coming from 12 cities and provinces across the country. These training courses focused on sustainable energy and solutions to promote the public’s broad practice of renewable energy and energy efficiency. More especially, the launch of the “Green Star Club” and the programs “Learning about air pollution” and “Starting green school” were carried out at Đoàn Thị Điểm lower

and upper secondary schools in Hà Nội. In each program, the students were provided with knowledge and understanding about air pollution and energy saving. They also participated in highly interactive games to develop their critical thinking. The programs were carried out to raise awareness among Hà Nội’s students and motivate them to acknowledge the meaning of sustainable energy, and help them protect the health of themselves and of their families from air pollution. When implemented, the programs were designed to help students maximize their participation and exchange their opinions with specialists and teachers.

It is hoped that the early results of the project will help raise awareness about using sustainable energy sources for the community, thus further developing the renewable energy sector, achieving green economic growth, reducing greenhouse gas emissions and making the country more sustainable■



Bái Tử Long National Park conserves rich biodiversity values

Bái Tử Long National Park in the Northern province of Quảng Ninh has proven to hold significant biodiversity values, with great efforts having been made to conserve them.

Mr. Phạm Xuân Phương, Head of the Marine and Wetland conservation division at the Vietnam Environment Administration (VEA), said that Bái Tử Long National Park owns prominent natural values in the Northeast of Việt Nam, including high biodiversity, pristine landscapes, and a clean environment. It was recognised as an ASEAN Heritage Park on September 30, 2016.

The park, founded in 2001, covers more than 15,780 ha in the Minh Châu, Hạ Long and Vạn Yên Communes of Vân Đồn District, including 6,125 ha of over 80 islands and islets and almost 9,660 ha of sea surface. It is one of the seven national parks in Việt Nam with both forest and marine ecosystems.

As of December 2017, 2,235 creature species were found in this park, including 992 terrestrial species and 1,243 marine ones. Up to 108 of them were named in the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN) and the Vietnam Red Data

Book. The park is home to a diversity of ecosystems such as the tropical broadleaf evergreen forest on earth and limestone mountains, freshwater springs, coral reef, mangrove forest, seaweed and littoral zone.

Its outstanding biodiversity values are reflected through three aspects, including representation, as seen in the aforementioned representative ecosystems. Bái Tử Long also boasts ecological integrity - a unique case among national parks in Việt Nam and the world since its ecosystems remain almost untouched, while ecosystems around the globe have been facing severe fragmentation.

Another outstanding aspect is the uniqueness, which can be seen most clearly in Trà Ngộ Lớn Island. This island has a special geological structure as its Northern area, com-

prised of more than 400 ha, forms with earth mountains and the Southern area, over 1,100 ha, limestone mountains. These two earth and limestone mountain ecosystems are joined by “tung” (expanding valleys inundated by the sea) and “ang” (sunk cluster depressions) which also harbour a mangrove forest ecosystem that was assessed as the most unique in Southeast Asia by experts of the ASEAN Centre for Biodiversity.

With such biodiverse treasures, the management and protection of natural resources and the environment have been named the leading tasks in Bái Tử Long National Park. Biodiversity surveys of marine ecosystems have been conducted annually to monitor their development, while the seawater environment has also been analysed to serve the management work.

The park has carried out several scientific studies and gained initial economic benefits such as those on the farming of “hai sam trang” (*Holothuria scabra*, a species of sea cucumber), “sa sung” (*Sipunculus nudus* Linnaeus, 1766, a type of marine worm) and “ngao o vương” (*Periglypta puerperal* Linnaeus, 1771, a species of clam).

Various communication activities have been implemented to raise public awareness of wildlife



▲ A lake in the dry season in Bái Tử Long National Park



conservation, including the publication of books, newspapers and leaflets; organising contests and meetings; opening a community-based education centre and a biodiversity museum; and encouraging aquaculture farmers and fishermen to commit to environmental protection regulations and methods.

Meanwhile, a plan on sharing interest in the sustainable management, exploitation, and development of natural mollusc resources in the wetland areas of Bái Tử Long National Park has been carried out for nearly five years, helping to ensure the maintenance of both the environmental conservation and stable livelihoods for locals. The density and reserves of the marine species in this project has increased four- or five-fold. Local residents' income has become



▲ A *Lonchura punctulata* bird in Bái Tử Long National Park

more stable, about 6 - 7 million VND (250 - 300 USD) per capita per month. The park's management board is

expanding the plan to all littoral zones and more marine species of Bái Tử Long■

Quỳnh Như

Biodiversity corridor to be built in central provinces



▲ Illustrative image

The second stage of a pilot project in the central provinces of Quảng Nam, Quảng Trị, and Thừa Thiên - Huế will create a biodiversity-preservation corridor in order to restore and maintain the connectivity of the ecological system spanning Việt Nam, Laos and Cambodia. The project will be carried out in 35 communes of six districts in the aforementioned provinces, which will be surrounded by protective and special-use forests. The project should

benefit nearly 15.500 households, 85 percent of which are made up of ethnic minorities.

The short-term goals of the project is strengthening the capacity of communes, districts, and provinces in planning a biodiversity corridor; restoring and planting more forests to increase

coverage; offering solutions to create livelihoods and fulfill millennial development goals; contributing to reducing poverty; and improving the lives of ethnic minorities.

Over 10.000 ha of natural forest will be restored, while at least 12.200 ha of forest will be inspected effectively to protect 112.000 ha in core areas of the biodiversity corridor. The project's management plan is expected to be devised and implemented next year■

Nam Hùng
(VNA source)

Northern Vietnam helps preserve prehistoric plants in East Asia

Scientists have found that Northern Vietnam is one of the areas most populated by prehistoric plants in East Asia, containing species which have been around from some dozens to hundreds of million years ago.



▲ Hoàng Liên Sơn mountain rangel

The findings were part of a study carried out between 2016 and 2018 by 45 international scientists from nine countries, including those from the Southern Institute of Ecology of Việt Nam.

The experts collected data on fossil samples and the current population distribution of 433 ancient plant species, thus going on to discover their distribution fluctuations over the years. The research identified the most important sites for prehistoric flora as the forest and mountain areas in Southwestern China and Northern Vietnam, as well as a number of Chinese localities that share a border with Việt Nam, like Guangxi, Guangdong and Hunan.

The climate history of the location, not covered by ice and boasting topographical diversity, have played a key role in helping these plants survive the

Last Glacial Maximum - the most recent of which was about 20.000 - 26.500 years ago when ice sheets were at their greatest extent - and continue to exist until today.

Scientists projected that by 2070, the land mass populated by such plants might be extended, however, the forested areas that once housed the largest part of their population will decline. The southeastern part of China's Yunnan province and Vietnam's Hoàng Liên Sơn mountain range are the most important locations for their future existence.

Unfortunately, about 73 - 80 percent of the highly-populated prehistoric plant-

ed areas are not included in the protected networks. As such, there is a need to establish more conservation sites in mountainous areas across Hoàng Liên Sơn range and Northern border provinces, as well as China's southeastern area, its delta in Sichuan Province, and the northern part of Yunnan.

In particular, experts suggested that Việt Nam make mountainous and forest areas of Hoàng Liên Sơn, Tây Côn Lĩnh and Con Voi (Elephant) mountains and Cao Bằng Province part of its national park system■

Phương Linh
(VNA source)



Center of Global Green Network HẠT NHÂN CỦA MẠNG LƯỚI XANH TOÀN CẦU

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