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Environmental Pollution Affects the Quality of Human Life in Vietnam

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Abstract

Environmental quality has always been of concern to the community. In recent years, the pollution problem in Vietnam has complicated developments and is especially evident in large cities such as Hanoi and Ho Chi Minh City. Environmental pollution directly affects human health and becomes a concern of the entire society. Air, water and soil environmental pollution are the most difficult to control due

to many reasons: Human awareness, rapid economic and social development, rural urbanization, and exploitation. In this article, the authors present the situation of environmental pollution in Vietnam in the first two decades of the 21st century. The authors also present some causes and solutions to overcome environmental pollution.

Keywords: Environmental Pollution, Quality of Life, Air Pollution

1. Environmental pollution in Vietnam during the development process

Environmental pollution is the adverse change of natural components in the environment due to external factors, usually caused by humans. Natural components include air, water, soil, living organisms and natural resources. External factors can be industrial wastes, vehicle emissions, household waste, chemical fertilizers, pesticides, radioactive substances, noise, light and heat.

Currently, environmental pollution is divided into 7 types

- Air pollution: This is the air polluted by foul odors, dust, etc.
- Water pollution: Is the state of water being polluted by bacteria, organisms or harmful substances dissolved in water.
- Soil environmental pollution: Is the presence of polluted soil, causing the loss of minerals beneficial to plant life.
- Light pollution: This is a phenomenon of excessive light that affects the lives of animals, plants as well as humans. They often occur in urban areas or light from event lasers...
- Noise pollution: Is the phenomenon of sound being too loud beyond the permissible level. They often come from shops that play music with high-powered speakers, karaoke speakers, etc.
- Thermal pollution: Is excessive heat change, summer becomes hotter, winter colder. Often occurs during urbanization, affecting the ozone layer and ice caps at the poles.
- Visibility pollution: Is the phenomenon of waste and objects being discharged into the natural environment in an illogical way. They destroy the beauty of the city and make people uncomfortable.

The first three types of pollution are becoming increasingly serious and difficult to control. During the development period from the late 20th century and the early 21st century, Vietnam changed very quickly from the country's appearance to the lives of its people. Vietnam is growing stronger day by day, many factories, enterprises, and high-rise buildings are springing up. From a poor country to a developing country, people's lives are improving day by day. According to the Ministry of Natural Resources and Environment, in the period 2016 - 2020, Vietnam has made important developments, achieving impressive socio-economic achievements; Although at the beginning of the term (2016) there were serious marine environmental incidents in four central provinces (Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue), the end of the term (2020) was severely affected by the pandemic. COVID-19 is global, but Vietnam is still in the group of countries with high economic growth in the world. In particular, in the first 4 years (2016 - 2019), our country's economy achieved an average growth rate of 6.8%/year; In 2020, economic growth will reach 2.91%. High economic growth has also put great pressure on the environment due to waste generated from economic development, industrialization, and urbanization activities, and also poses many challenges for work. Environmental protection today and the next period. According to statistics, as of 2016, every year, the whole country "uses"

more than 100,000 tons of plant protection chemicals; generating more than 23 million tons of household waste, more than 7 million tons of industrial solid waste, and more than 630,000 tons of hazardous waste while waste and wastewater treatment is still very limited. According to the Ministry of Natural Resources and Environment, our country's environment is under great pressure from domestic socio-economic development, international trade flows and cross-border impacts. Every year, there are more than 2,000 projects subject to environmental impact assessment reports. Notably, across the country there are currently 283 industrial parks with more than 550,000 m³ of wastewater/day and night; 615 industrial clusters, of which only about 5% have centralized wastewater treatment systems. More than 500,000 production facilities, including many types of production that pollute the environment and have outdated production technology. Over 5,000 enterprises exploit minerals and construction materials; more than 4,500 craft villages. More than 13,500 medical facilities generate more than 47 tons of hazardous waste and 125,000 m³ of medical wastewater every day.

The country currently has 787 urban areas with 3,000,000 m³ of wastewater day/night, but most of it has not been treated and there are nearly 43 million motorbikes and over 2 million cars in circulation. Every year, the whole country uses more than 100,000 tons of plant protection chemicals; generated more than 23 million tons of household waste, more than 7 million tons of industrial solid waste, and more than 630,000 tons of hazardous waste. There are currently 458 waste landfills, of which 337 are unsanitary landfills; there are more than 100 small-capacity household waste incinerators, with the risk of generating dioxin and furan gases.

The situation of forest land conversion, mineral exploitation, hydropower construction, and exploitation of biodiversity resources has led to the narrowing of the area of natural ecosystems, fragmentation of habitats, and biodiversity loss learn.

The Ministry of Natural Resources and Environment assesses that the FDI sector currently plays a major role in Vietnam's exports with about 70% of Vietnam's export turnover and 59% of its import turnover. However, FDI tends to shift capital flows into industries that consume energy, resources, and human resources, and are not environmentally friendly such as metallurgy, ship repair, textiles, footwear, mining, and recycling. Mineral collection not associated with deep processing, pulp production, chemical production, agricultural and food processing...; the goal of attracting high technology, source technology and technology transfer has not been achieved...

The issue of climate change is also considered to be developing faster and more complicated than forecast, affecting many aspects of our country's environment. Environmental issues along the Mekong, Red River, and cross-border rivers are increasingly complex. The construction of hydroelectric projects by some countries on the Mekong mainstream has a great impact on the Mekong Delta.

However, according to the Ministry of Natural Resources and Environment, water sources in some places are polluted, especially in urban areas, around industrial parks and craft villages; Sea water quality is locally polluted in some areas such as coastal waters from Ha Tinh to Thua Thien Hue due to recent environmental incidents. At traffic points,

intersections, construction sites, and construction areas, air pollution shows signs of increasing, especially in large cities. Degradation due to saltwater intrusion, erosion, and desertification occurs in some places and coastal areas; some areas of untreated contaminated land pollute underground water sources. Vietnam is recognized to have high biodiversity with many types of natural ecosystems, rich genetic resources and endemism. However, our country's biodiversity is rapidly decreasing, with a high rate of species extinction.

In urban areas, the main environmental pollution problem is dust pollution due to traffic activities, air and water pollution in some areas with concentrated industries. In river basins and sections flowing through urban areas, especially in areas where industrial parks are concentrated, pollution of nutrients, organic matter and microorganisms has occurred, such as the Nhue River section flowing through Hanoi, Saigon River flows through Binh Duong, City. Ho Chi Minh, Dong Nai River flows through the city. Bien Hoa and Binh Duong province...

In rural areas, pollution mainly occurs in craft villages, industrial sites interspersed in residential areas, production facilities, concentrated livestock farms, farming and mining activities. Minerals, construction materials in surrounding areas, burying and burning household waste, etc. Intensive farming activities with the use of chemical fertilizers and pesticides give rise and increase Increased CH₄, H₂S, NH₃ gases cause environmental pollution, especially in specialized agricultural areas that use fertilizers and pesticides improperly according to technical procedures such as Dong Anh (Hanoi), Hiep Hoa (Bac Giang), Yen Dinh (Thanh Hoa), Central Highlands (Duc Trong, Da Lat city). In addition, land degradation is taking place on a large scale in many rural areas of Vietnam, such as leaching, erosion, fallowing, alumification, salinization, drought, flooding, flash floods and soil erosion.

In our country, there still exist many craft villages operating in production fields with a high risk of polluting the environment such as: Recycling of plastic, metal, lead batteries, cattle raising, and paper production. Dust pollution is a common problem in craft villages producing ceramics, stone processing, and handicrafts such as Bat Trang ceramic craft village (Hanoi). Air pollution still occurs in plastic recycling craft villages such as Trung Van plastic recycling craft village and Vo Hoan plastic recycling craft village (Nam Dinh). Odor pollution, water pollution, and organic matter pollution are concentrated in food processing and slaughtering craft villages. Heavy metal pollution in surface water is occurring in metalworking craft villages and metal recycling craft villages such as Dai Bai bronze casting craft village (Bac Ninh), Yen Binh aluminum recycling craft village (Nam Dinh), lead recycling profession in Dong Mai, Van Lam (Hung Yen).

In mineral mining areas, mining activities have been causing many negative impacts on the surrounding environment such as discharging soil and rock and mine wastewater, dispersing waste dust, ore and slag seeping into water sources or emitting dispersed into the environment; changing forest ecosystems, degrading and polluting agricultural land. In addition, many organizations and individuals have not implemented or have not performed well the obligation to improve and restore the environment after mine closure, reducing land use efficiency, especially in areas with many mining mines. Minerals such as Tuyen

Quang, Thai Nguyen, Quang Ninh.

2. Causes of environmental pollution in Vietnam

There are two main causes of environmental pollution: Natural causes and artificial causes. Natural causes are usually less serious than man-made causes. Humans are the main cause of environmental pollution from industrialization, modernization or overexploitation of natural resources.

According to the Ministry of Natural Resources and Environment, the situation of violating the law on environmental protection is complicated. Many industrial zones, clusters, and craft villages have not been invested in building environmental protection infrastructure, causing environmental pollution. Many major environmental incidents with widespread impacts, especially marine environmental incidents in the Central region, have occurred. The cause of the current environmental situation is that Vietnam is in a period of rapid and strong development, the speed of industrialization, urbanization, and development investment is very high, leading to a lot of pressure on the environment while being aware of it., the sense of responsibility for environmental protection of investors, some sectors, government levels, economic organizations, and residential communities is still limited; The situation of focusing on immediate economic benefits and disregarding environmental protection is still quite common. The quality, effectiveness, and efficiency of state environmental management tools and measures are still inadequate and do not meet requirements.

Some industrial parks do not do a good job of environmental protection, causing environmental pollution during operation, negatively affecting communities living in neighboring areas. The causes of environmental pollution in industrial zones can be:

Planning for the development of industrial parks in some localities is still carried out widely while the ability to attract investment capital is low and financial capacity is limited, leading to poor investment in infrastructure construction. Limit. Industrial parks have not given priority to building waste treatment systems. Some industrial parks do not even have waste treatment systems but dump them directly into the environment.

Investors who build and operate industrial park infrastructure are not fully aware of their responsibility to protect the environment according to the law. Awareness of environmental protection among production and business establishments in industrial parks is still limited, many establishment owners do not clearly and accurately understand and do not even update current legal regulations in the industrial park. Environmental protection work.

Many businesses have built waste treatment systems, committed to protecting the environment, but have not implemented them seriously, leading to more serious pollution. Local environmental management boards have not paid enough attention to this issue. Most management boards and industrial parks only focus on investment attraction issues, not paying attention to industrial park environmental management. Inspection and supervision work is still ineffective, agencies are still slow in controlling and encouraging business owners in environmental protection.

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Environmental pollution due to waste from a number of industries such as: Energy, transportation, manufacturing and construction, agriculture, food retail, fashion and technology. These are industries that release waste into the environment, affecting the quality of human life relatively greatly.

3. Some solutions to overcome environmental pollution

To improve the effectiveness of environmental management for industrial parks, in the coming time, it is necessary to focus on the following solutions:

Environmental protection planning, which takes into account environmental protection factors of industrial parks; Encourage businesses to implement cleaner production, save energy, circulate and reuse wastewater, and not discharge waste into the environment; Build a system of environmental criteria to serve the selection of production types and technologies, ensuring the risk of environmental pollution is minimized; Review, evaluate, and adjust currently applied economic tools, taxes, and environmental fees to be consistent with market principles; Mobilizing investment resources for environmental protection infrastructure, modernizing production technology, industrial symbiosis...

In addition, relevant ministries and branches need to review and amend a number of relevant laws, such as the Law on Sanctions of Administrative Violations, the Law on Inspection, the Law on Water Resources, the Law on Science and Technology, Law on Standards and Technical Regulations, Law on Environmental Protection Tax, Law on Investment... to promote the effectiveness and efficiency of regulations in the Law on Environmental Protection.

In addition to perfecting policies and laws on environmental protection, it is necessary to focus on the following tasks:

Urgently organize environmental protection planning for the period 2021 - 2030, vision to 2045 and provincial plans, including planning for development of industrial parks. Strengthen environmental monitoring and warn of environmental pollution in areas with many industrial parks. Promote inspection, examination and handling of violations; promptly remedy the violation. Apply strict sanctions to industrial parks that do not comply with environmental protection regulations.

Ensuring the establishment and development of industrial parks complies with the planning approved by competent authorities; Resolutely not allow the expansion of existing industrial parks, or invest in new local industrial parks when there are industrial parks with low occupancy rates; Do not issue investment licenses for secondary projects when the industrial park does not have technical infrastructure for environmental protection.

Balance resources to support investors in developing technical infrastructure systems inside and outside industrial parks; Have policies to encourage investors and mobilize

other legal capital sources to invest in building industrial park infrastructure, including centralized wastewater treatment systems. Increase operating capital for the Vietnam Environmental Protection Fund in the direction of investing and building environmental protection projects in industrial parks in localities with difficult economic and social conditions. Organize and implement policies to develop local eco-industrial parks. Closely monitor waste generation from industrial parks and waste sources with high risk of causing environmental pollution from industrial parks.

Guide and require investors to develop industrial park infrastructure in complying and fully implementing measures and commitments on environmental protection;

Strengthen domestic and international cooperation to exchange experiences in managing and protecting the industrial park environment; Mobilize investment capital and international aid capital to implement solutions for sustainable development of industrial parks, focusing on replicating the eco-industrial park model.

Strengthen propaganda and dissemination of laws on environmental protection; have solutions to mobilize community participation in environmental protection and encourage socialization of environmental protection activities.

Recently, to reduce pressure from the process of socio-economic development, leaders of provinces and cities proactively implemented measures and solutions to protect the environment. In particular, environmental protection in production and business activities is paid attention, led and directed by provincial leaders.

Departments, branches and localities coordinate to inspect and supervise the activities of production and business units. In addition, people in the area promote their role, regularly monitor, supervise and feedback information to management agencies to improve environmental protection in the field of production and business.

During operations, businesses uphold their roles, responsibilities and proper awareness, strictly comply with the provisions of law on environmental protection, contributing to making this work gradually fall into order.

When operating, industrial parks must install automatic wastewater monitoring stations and transmit data to the Department of Natural Resources and Environment for monitoring and supervision.

Recycling and reuse are important solutions to reduce waste. Encourage the use of recycled and reused products in both daily life and production processes.

Organic waste, such as food scraps, plant clippings and organic fertilizers, can be processed through natural decomposition. This process naturally decomposes organic waste into nutrient-rich fertilizer. Encouraging the use of natural compost in horticulture and agriculture helps reduce waste and provides natural fertilizer to the soil.

Non-organic waste, such as plastic, metal and paper, needs to be processed effectively. Proper disposal helps reduce the negative impact on the environment. Non-organic waste disposal methods include recycling, thermal processing, and reuse. The application of advanced technology and proper recycling processes helps reduce the amount of non-organic waste. This also saves natural resources.

Toxic wastes, such as industrial chemicals and pesticides, require special handling procedures. This is to ensure safety for the environment and human health. The treatment of

hazardous waste must comply with national regulations and standards on environmental protection. This may include recycling, sterilization, or safe packaging for transport to special waste facilities.

Growing concern about waste issues has prompted the adoption of regulations and policies on waste management. Organizations and governments have introduced tough regulations on waste treatment, recycling and disposal. This is to ensure compliance and reduce negative impact on the environment.

Businesses play an important role in waste management. Implementing effective waste management measures not only helps reduce costs. This also creates a positive image for the business. Business owners need to invest in advanced waste treatment technology and create a sustainable foundation for their business operations.

Community participation also plays an important role in waste management. Educating the community about recycling, waste separation and treatment awareness can promote behavioral change. This creates awareness about the importance of protecting the environment. Activities such as competitions, mentoring programs and participation in waste management projects can also stimulate community engagement and support.

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