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The relationship between economic growth and environmental protection in the provinces of the Mekong Delta, Vietnam today

Nguyen Thanh Hai

Faculty of Political Theory, University of Finance – Marketing, Vietnam

Corresponding author email: nguyenthanhhai@ufm.edu.vn

Abstract---The 12th National Congress of the Party (2016) determined: “To develop harmoniously between width and depth, focusing on developing depth; development of knowledge economy, green economy. Economic growth must be closely connected with cultural and social development, environmental protection, and proactive response to climate change”. Accordingly, the requirement to associate environmental protection with economic progress in a sustainable way is the solution to industrialization and modernization of the country, integration, and development of the country. This article outlines the dialectical relationship between economic growth and environmental protection, thereby proposing solutions to harmoniously combine economic growth with environmental protection in the Mekong Delta provinces today.

Keywords---economic growth, environmental protection, Mekong Delta, Vietnam.

Introduction

Realizing the urgency of protecting ecosystems and improving the polluted environment, in 1972, at the United Nations Conference held in Stockholm, Sweden warned about the negative environmental damage consequences caused by human actions in the process of economic growth and development “people need to be more cautious and wise about the environmental consequences of our actions, if ignored or indifferent, we can cause enormous and irreversible damage to the environment,...” (Vietnam Association for the Protection of Nature and Environment, 2018, p.19).

The 13th National Congress (in 2021) of the Party raised its views on rapid and sustainable development based on: “Fast and sustainable development relies mainly on science, technology, innovation, and digital conversion; It is necessary

to renew thinking and action, actively seize opportunities to restructure the economy, develop digital economy and digital society; To bring into full play the advantages of regions and regions; harmoniously develop 03 economic - social - environmental pillars; creating favorable conditions for people with meritorious services, the poor, the disadvantaged, and the ethnic minorities. The 13th Congress determined the orientation on adaptation to climate change and environmental protection in the period from 2021 to 2030: “Actively and effectively adapting to climate change, preventing, combating and mitigating natural disasters, pandemic; manage, exploit and use resources reasonably, economically, efficiently and sustainably; taking the protection of the living environment and people's health as the top goals; resolutely eliminate projects that cause environmental pollution, ensure the quality of the living environment, and protect biodiversity and ecosystems; building a green, circular, and environmentally friendly economy”.

Accordingly, the guidelines and orientations of our Party and State on economic development with environmental protection in the Mekong Delta provinces have been clarified in the resolutions and policies issued and implemented at all levels and sectors with action plans for the common national strategy towards sustainable development and response to climate change. Besides the remarkable achievements in economic development and environmental protection, currently, the Mekong Delta region still has many major limitations that need to be overcome such as pollution of water sources, soil resources, air, salinization of arable land and climate change causing adverse natural phenomena, etc. The imbalance between economic growth and environmental protection, is a factor hindering economic growth of the region and is an urgent issue affecting the general development of the country.

Research Methods

The concept of economic growth

Economic growth is an increase in the income of the economy in a certain period of time, usually a year (Intermediate Textbook of Political Theory - Administration: Guidelines and policies of the Party and the State of Vietnam on fields of social life, 2017, p.27). The income of the economy can manifest itself in the form of an item or a value. The income of the economy is expressed as a value reflected in the indicators of gross domestic product (GDP) or gross national income (GNI). Economic growth is measured by two indicators. One is the indicator of the growth scale. The second is the growth rate indicator. Therefore, we can see that the nature of economic growth is to reflect a change in the quantity of the economy, not yet a change in the quality of the economy.

The concept of sustainable development

“Economic development is an increase in all aspects of the economy associated with a progressive economic restructuring and improvement of the people's quality of life” (Intermediate Textbook of Political Theory - Action). Main: Lines and policies of the Party and the State of Vietnam in various fields of social life, 2017, pp.27–28). The current economic development of each country is posing a

reality that is the problems that lead to economic development such as the environment, people's living standards, education level, demand satisfaction, etc. In short, it is the sustainable development of each country.

In the 70s of the twentieth century, many countries in the world followed the model of rapid growth, and industrialization without macro planning and disregarding the long-term consequences of economic development. The “bubble” economy has led to very serious damage to the ecological environment. In 1987, the World Commission on Environment and Development (WCED) had a report titled: *Our Common Future*, in which for the first time published the term “Sustainable Development”. In the book *Restructuring Vietnam's economy towards sustainable development*, the concept: is "Sustainable development is a development that meets the current needs of people but does not harm the satisfaction of human needs of future generations" (Thien, 2018, p.44).

The concept of environment

From a philosophical perspective, some authors say that: “Environment is everything outside the body, closely related to and affecting human existence” or “Environment is all the nothing but me” (Ha, 2013, p. 8). Domestic researchers study the environment from different angles. “Environment is a collection of inorganic material components, organisms and people coexisting and developing in a certain space and time. Between them, there are interactions in many directions, which in total will determine the development direction of the entire environmental system” (Ba, 2004, p.9).

Law on Environmental Protection 2005: “Environment includes natural factors and man-made material factors surrounding people, affecting human life, production, existence and development and organisms” (Parliament, 2005, pp.7–8). According to the Law on Environmental Protection 2014, defines “Environment is a system of natural and man-made physical factors that have an impact on the existence and development of humans and organisms”. Based on basic research on environmental issues, the author defines the environment as follows: “The environment is the physical world that surrounds people and people themselves, the factors that affect the environment human life and human society”.

The concept of environmental protection

Vietnam Encyclopedia defines: “Environmental protection is a set of measures to preserve, use or reasonably restore living organisms (microorganisms, plants, animals) and environment (soil), water, air, underground, climate,..), research and test equipment using natural resources, applying technology with little or no scrap... to create an optimal space for human life. In addition, the environment also includes the spiritual and cultural conditions that make people's lives comfortable” (Encyclopedia, 2002, p.160).

According to the Law on Environmental Protection 2014, environmental protection activities are understood as: “Activities to preserve, prevent and limit adverse impacts on the environment; responding to environmental incidents; overcome pollution, degradation, improve and restore the environment; rational

exploitation and use of natural resources to keep the environment clean". Environmental protection is accomplished by applying a combination of different measures such as organizational - political measures, economic measures, scientific-technological measures, propaganda and education measures, and measures to protect the environment legal... can be conducted at different levels, including individual, community, local, regional, national, sub-regional, regional, and global levels.

Some theories on the relationship between economic growth and environmental protection in history

Theory of economic growth and environmental protection

Economic growth and environmental protection have a relationship with each other and are considered too many different criteria: GDP growth rate of the country and added value of industries. The ultimate goal of economic growth is to get as high a GDP growth rate as possible. Depletion of natural resources and environmental pollution. The interplay between economic growth and environmental protection issues is considered for each type of environment:

- Natural resources (mineral deposits of all kinds such as iron, coal, oil...). To serve economic development, we humans exploit natural resources to serve as raw materials for industrial production and services. If we over-exploit, natural resources will be exhausted, then in the later stage, the economy will be reduced.
- Land and water resources: Exploiting land and water resources in service of industrial and agricultural production activities, serving people's daily activities. If we over-exploit this resource, along with the use of farming methods, the unreasonable use of chemical fertilizers and pesticides by the people along with the process of urbanization, the Industrial waste and domestic waste will cause soil and water resources to be exhausted, salinization, acidification, leaching, loss of nutrients, soil pollution, water pollution affecting the environment life, human health is not good.
- Exploitation of forest resources for industrial production and daily life, but we over-exploit, do not cultivate, supplement, and effectively manage forest resources will cause forest resources to be depleted and reduced. The coverage will then cause environmental problems such as floods, droughts, running out of raw materials, and economic decline in the later stages.
- Industrial activities, construction, transportation... and also human activities will increase noise making the air environment polluted by smoke, dust, and CO₂ and will directly affect crop and livestock productivity, reduce labor productivity, and especially harm our human health.

Economic growth and environmental protection are related through many different characteristics, and each economic or environmental feature is influenced by many factors, in which the relationship between them is not simple and is becoming more and more complex.

Theory of green economy

The term green economy associated with the context of climate change is becoming more and more obvious, and its negative impact on the implementation of sustainable development is increasing, even becoming an increased risk threatens to disrupt the progress of sustainable development both nationally and globally. That reality requires finding new development management tools and transforming the current development model to solve problems in the development process towards sustainability. The current economic model is being agreed upon and transformed by countries around the world, including Vietnam. In practice management and development strategy planning, there is also a concept mentioned as green growth and this concept also goes hand in hand with the concept of the green economy whose core content is environmentally friendly growth nature, achieving both economic growth and environmental protection at the same time. The green economy not only includes economic goals, but it also extends to include social and ecological goals. Green growth, the green economy is a way to show sustainable development in the context of climate change, with more emphasis on environmental resources. Sustainability of environmental resources and response to climate change is considered the focus of the green economy (Vietnam Association for Nature and Environment Protection, 2018, p.34). It can be seen that historically, there are many theories about the relationship between economic growth and environmental protection that have enriched and deepened the important issue of economic development in each country should be associated with environmental protection issues. Among many of the above theories, the theory of the "green economy" is the latest approach and has profound practical value in the current period of international economic development and integration. The application and development of this theory in practice and research have very important value, contributing to the creation of new perspectives and important new solutions in the process of nation-building in Vietnam today now.

The relationship between economic growth and environmental protection

Stemming from the Marxist-Leninist perspective on the relationship between man and nature is the basis and foundation of the combination of economic growth and development with environmental protection. Man, as conceived by Marxist philosophy, is both a natural entity and a social entity. Humans not only know how to use the available products of nature but also affect nature and improve nature for their benefit. Therefore, nature is also the environment where human life activities, first of all, labor and production activities, and thus, humans maintain their existence and development. Existing in a unified whole, natural, human, and social factors are always closely related and affect each other. Human activity is a regular "metabolic" process between man and nature. Through the production process, humans have impacted nature, exploited the necessary resources from nature, and transformed them to serve the living needs of people as well as the development of society festival. Therefore, production is a characteristic manifestation of the close relationship between nature and society. In that impact, human labor, on the one hand, is the objective standard to distinguish humans from animals, and human society from the animal world; on

the other hand, is the most basic factor creating the organic unity and cohesion between society and nature.

In the process of interaction between humans and nature, humans not only receive from nature the necessary energy sources for their existence and development and society but also discharge into nature the wastes of their activities production and living. In other words, the natural environment is not only a source of living conditions but also acts as a place to absorb wastes discharged by humans. It is impossible to imagine that, if the huge amount of waste produced by human activities and activities, so far, is not treated, but accumulated, then human life will be destroyed.

It can be seen that the expansion and promotion of human production activities in both scale and intensity... based on the increasing development of social productive forces brought to society great material benefits, such as the number of resources being exploited more and more, the economy growing faster and faster. These are undeniable miracles in the process of conquering and transforming nature for the material benefit of man. But, it is not too extreme to think that, starting from the creation of those so-called miracles, humans and human society at the same time must face potential dangers and dangers opportunity and challenge the grim, if not tragic, of natural "deprivation", and "exploitation" development. In short, the environment is of particular importance to human life, and to the sustainable development of communities and nations. Unfortunately, man is not always and everywhere aware of the irreplaceable role of nature. The ultimate goal of economic growth is to serve the interests and needs of people and human society. Due to the over-exploitation of resources, especially forests, and the process of industrialization, toxic wastes have been released into the environment, affecting the global environment. The greenhouse effect is one of the special phenomena that we often refer to, causing the earth's temperature to warm, melting ice, causing sea level to rise, saltwater intrusion, and land area shrinking according to anomalous weather phenomena appearing with increasing frequency and increasing level over the years. Storms, floods, droughts, acid rain, desertification, salinity, etc. are all caused by climate change. Climate change "is a change in climate caused directly or indirectly by human activity that alters the composition of the global atmosphere and is due to the natural variability of the observed climate in comparable periods" According to the United Nations Framework Convention (1992). According to the IPCC, "Global greenhouse gas emissions equivalent to 50 billion tons of CO₂ in 2013 exceeded the forecast for 2030, 15% larger than the forecast for 2020, far ahead of the projected baseline worst report ever issued" (Loi & Huong, 2015, p.45). The effects of climate change can reduce the economic growth of countries, impacting aspects of society.

Industrialization and modernization are urgent issues for countries that want to rise in this day and age. However, for the process of industrialization and modernization to be quick and safe, the main concern is not economic growth anymore, but environmental issues and sustainable development. If the country grows rapidly but ignores the issues of sustainable development and environmental protection, the country may have rapid economic growth, which is fast but not sustainable and can only solve the immediate needs of the industry

industrialization, modernization, and the consequences will remain behind that process. The process of climate change will reduce economic growth in many different ways. Sea level rise will threaten the existence of island nations, small islands, and even the mainland, disrupt the existing sustainable structure of the coast, and saltwater deeply inundates coastal land areas affecting the natural resources. Groundwater causes a serious shortage of drinking water and production.

Currently, epidemics are occurring more and more seriously. From the end of 2019 to now, the world has witnessed a strong outbreak of a disease called COVID-19, scientists say that the environment and climate in the world today are good conditions for the outbreak of COVID-19 pandemic. The epidemic has a great influence on the economic growth and development of countries around the world, and it also shows the hidden corners of the market economy and the limitations of development in other countries development in the world. Diseases, along with floods and droughts, have made the growth of some countries negative, and at the same time causing damage to the lives and health of people and human society. According to the report of the Intergovernmental Panel on Climate Change, the average global temperature and sea level have increased rapidly over the past 100 years, especially in the last 25 years. In Vietnam, in the past 50 years, the average temperature has increased by about 0.5 - 0.7°C, and the sea level has increased by about 20 cm. The phenomenon of El Nino, La Nina is more and more powerful. Climate change has made natural disasters, especially storms, floods, and droughts more and more severe (Government, 2011).

Too fast economic growth without attention to the environment and sustainable development will lead to social, environmental, and cultural problems that will be lost. If a country has a huge disparity between rich and poor, social security problems are not guaranteed, the environment is severely damaged, and the national culture is lost sooner or later, that country, That nation, no matter how strong its economic potential, no matter how fast its growth is, it will destabilize and collapse quickly. On the contrary, if an economically developed country focuses on the environment and sustainable development, it will create the basic foundations for the process of industrialization and modernization, which is driven by economic growth. Protecting the environment makes countries more conscious of economic development, people's health is guaranteed, and firmly developing social foundations will ensure social welfare and popular culture ethnicity is preserved, maintained, and developed.

Results and Discussions

The reality of economic growth and environment in Mekong Delta provinces

Natural condition

The Mekong Delta includes 12 provinces and one city directly under the Central Government: Long An, Dong Thap, Tien Giang, Vinh Long, Tra Vinh, An Giang, Bac Lieu, Ca Mau, Kien Giang, Soc Trang, and Ben Tre. , Hau Giang and Can Tho City. Currently, the Mekong Delta has a total natural area, including the area of coastal islands, of 40,572 km² (GSO, 2013), accounting for 12.25% of the

country's land area. The exclusive economic zone has an area of more than 9 times the land area, approximately 360,000 km², with two sides bordering the East Sea and the Gulf of Thailand, with a coastal length of more than 732 km. The land area of the Mekong River Delta used for agricultural production is currently more than 2.5 million hectares (accounting for about 64% of the total natural area), mainly wet rice cultivation and aquaculture since the beginning of the year freshwater, brackish, and saltwater areas. Based on natural conditions, the Mekong Delta can be divided into 4 regions: The freshwater alluvial area is about 1.5 million hectares, including the land areas along the Hau River, a part of An Giang, Vinh Long, and Dong provinces. Tower and Can Tho City. Salt-affected land: about 0.8 million ha located along the coast, mostly in the provinces of Ben Tre, Bac Lieu, Ca Mau, and Kien Giang, some districts of Soc Trang and Tra Vinh provinces. The cultivation of rice is mainly in the rainy season, in the dry season the soil is salty, and difficult for cultivation, and the yield is low. Acidic soil: Occupying about 1.6 million ha, mainly in the areas of Dong Thap Muoi, Ha Tien, and part of Long My district (Hau Giang). Organic land: about 20,000 hectares, relatively low-lying terrain. In addition, there are sandy soils, red-yellow soils, and erosive soils accounting for about 0.9% of the whole area's land area (Nghiem, & Italy, 2018, p.12). In general, in the Mekong Delta, the land is very favorable for the development of agriculture and fruit trees. In addition to land resources, the Mekong Delta also has marine resources with great potential, and strengths in building national ecological zones, and developing tourism. In the region, there is a diverse forest system with coastal mangroves, primary forests, and Melaleuca forests with a very diverse and rich biological system.

Social and economic conditions

As of April 1, 2019, the population of 13 provinces in the Mekong Delta is 17.3 million people (accounting for 18.0% of the country's population), the province with the highest population in the region is An Giang (1,9 million people) and the lowest is Hau Giang (733 thousand people). The average population density is 423 people/km², higher than the national average (290 people/km²) but much lower than the economic centers of the country (Ho Chi Minh City – 4,363 people/km²). /km² or Hanoi – 2,398 people/km²). Most of the population lives in rural areas (the urban population of the Mekong Delta is 21.7% in 2008 and 25.1% in 2019) and the urbanization rate is lower than the average the whole country (urban population of the country is 29.0% in 2008 and 34.4% in 2019) the population of the Mekong River Delta is classified as young, about 53% of the population in the region is under the age of 20. 20, there are 24.3% of the population from 20 to 34 years old and 22.7% of the population over 35 years old. The dense population and young population structure are very favorable conditions for socio-economic development. The whole region has 131 district-level administrative units, including 14 provincial cities, 11 towns, 5 districts, and 106 districts. There are 1,611 commune-level administrative units including: 1,305 communes, 182 wards, 124 towns (Nghiem, & Y, 2018, p.10).

By the end of 2018, the entire Mekong Delta region had about 10.5 million laborers working in the economy, accounting for 59.1% of the region's population and 19.4% of the national labor force. The average labor force growth rate in the 2009-2018 period was only 0.9%/year, lower than the national average of 1.4% in

the same period stage. The gap in labor growth in the region compared to the whole country has been narrowed as the Mekong Delta is still at the peak of the golden population period, while the whole country has begun to be on the other side of the slope of the economic cycle population period. The total GDP of the whole Mekong Delta in 2018 is 818,523 million VND, an average of 46 million VND/person/year. If compared to the total GDP of the whole country in 2018 is 5,542.3 trillion VND, the GDP in the Mekong Delta contributes about 14.76%, if comparing the per capita income in 2018 Vietnam is estimated at With 58.5 million dong, the income per capita GDP in the Mekong Delta is only 78.17% of the national average. The Mekong Delta has a system of waterways, land, and air transport. The sea route is extremely convenient for exchanges and socio-economic development with Ho Chi Minh City, other provinces in the country, with countries in the region and the world. Waterways account for 60-70% of the region's freight volume (Nghiem, & Italy, 2018, p.10), many of which have been exploited with high economic efficiency. Transport infrastructure development is one of the three breakthroughs to awaken the potential of the Mekong Delta. According to the assessment of the Southwest Steering Committee, the investment in the construction of transport infrastructure in the Mekong Delta has seen many changes in the past time, associated with irrigation and inter-regional traffic, contributing to changing the environment quickly develop the appearance of urban areas, rural areas, and ethnic minority areas, initially meeting the needs of investment, development, and social security.

The reality of economic growth in the Mekong Delta provinces

About the economic structure

Economic structure plays an important role in the economic development of countries. World economic history has shown the need for economic restructuring, and restructuring of economic sectors to suit the actual situation of the country, creating momentum and driving force for the economic development of the economy in particular and the country in general. In the current period, the economic structure in Vietnam has shifted from focusing on agricultural development to developing industry and services. In agriculture, there was also a shift within the industry. In the Mekong Delta, the situation of economic restructuring is happening very quickly. Focusing on the development of industry and services, however, high-tech agriculture is one of the key requirements in the economic restructuring of the region to create a push for the development of industries and services.

In recent years, the economy of provinces and cities in the Mekong Delta has continuously grown at a high rate. In 2015, the economic growth rate is estimated at 7.8%. However, the economic structure is still changing slowly, agriculture - forestry - fishery still accounts for a large proportion. In 10 years from 2005 to 2015, the whole region has mobilized total social investment capital of 627,000 billion VND; of which, the state budget is VND 139,000 billion, and the remaining VND 488,000 billion comes from the investment capital of enterprises and other social investment capital, accounting for 77.8% of the total investment capital of the whole society (Dung, 2016, p. 71). According to Mr. Tran Tuan Anh, Politburo member, and Head of the Central Economic Commission, speaking at the seminar

"Socio-economic development in the Mekong Delta to 2030, with a vision to 2045": "Economic growth in the Mekong Delta is maintained at a relatively high rate; GRDP scale of the region in 2020 will reach VND 596 trillion, contributing 11.95% to the total GDP of the country; the structure of the industry - construction and trade in services is getting closer and closer to the economic structure of the whole country" (Bac Lieu Province Electronic Information Public, 2021). The investment environment has been improved, and the competitiveness index (PCI) of the provinces and cities in the region is in the group of good, good, and very good. In terms of agricultural production, due to favorable weather conditions and relatively low flood levels, the target area and productivity of all crops have increased year by year. The industrial production value of the region has increased continuously over the years, the period 2001-2010 increased by an average of 18.8%/year. In 2015, industrial production value reached VND 578,586 billion, up 13.3% over the same period, and the index of industrial production (IIP) was estimated to increase by 8.3% (Dung, 2016, p.75), the period 2010-2015, the region's average economic growth rate reached 11.5%/year. There are 3 to 6 provinces in the Mekong Delta region among the top 10 provinces and cities each year. According to the report of the Southwest Steering Committee, in 2015 the production and consumption of agricultural products in the whole region had a strong change, rice production reached 3.1 million tons, aquatic products reached 3.3 million tons; exports reached 10.9 billion USD, budget revenue reached more than 70 trillion VND (Nghiem & Italy, 2018, p.13). The average agricultural growth rate in the period 2011-2021 of the Mekong Delta is higher than the average growth rate of the whole country, reaching over 10%; the industrial scale is increasingly expanding; industrial contribution to the GRDP of the whole region increased from 15.5% in 2011 to 21.6% in 2020. In the period 2004 - 2020, agriculture in the Mekong River Delta continuously grew and developed rapidly into a modern large-scale commodity production area associated with processing and consumption technology along the value chain. Leading the country in rice, shrimp, pangasius, and fruit production. The region's fisheries have become a spearhead economic sector of the country, always maintaining the country's trade surplus position. Especially, for Dong Thap province, after more than 18 years of implementing Resolution No. 21-NQ/TW and Conclusion No. 28-NQ/TW of the Politburo, Dong Thap province's socio-economic development has made progress development in many aspects, the scale of the economy is increasing day by day. By 2020, GRDP value will reach more than 86,500 billion VND, per capita income will reach 47 million VND (the urban area is 51 million VND, rural area is 45.6 million VND), the growth rate of GRDP the average period of 2015 - 2020 is 6.44%/year (Dong Thap Online, 2021). Growth in the first 6 months of 2020 of the Mekong River Delta reached 2.08%, higher than the national average (1.81%) but the lowest level in many years. The number of newly established enterprises decreased by 2.9% over the same period in 2019, and production and export of some key products such as pangasius, shrimp, and fruit decreased by -39.0%, respectively. -14.5% and 21.0% due to temporary supply chain disruption in the early stages of the outbreak in China.

From the above data, it is possible to see an overview of the economic restructuring of the Mekong Delta over the years. However, in general, it is still necessary to have a sustainable economic restructuring toward long-term development. The economic structure has changed rapidly in a period, but

overall, it is still slow, it is necessary to have appropriate measures and directions. On the other hand, economic restructuring needs to focus on environmental issues and sustainable development. Economic restructuring is the common direction of the Mekong Delta and the whole country, but it cannot be exchanged for the environment. The hasty transition will cause ecological imbalance, and loss of agricultural land, while the application of science and technology is still limited, the service is not professional, causing environmental consequences are issues that still need to be discussed a lot to come up with solutions for the process of economic restructuring.

Regarding mechanisms and policies

For the socio-economic development of the Mekong Delta, the Party and State have issued many policies and resolutions to promote and develop products and improve the people's social life, especially in the rural areas in agriculture such as Decree 109/2010/ND-CP dated 4-11-2010 of the Government on rice export business. This Decree has opened a new direction in the business and export of rice and rice to our country. Strictly regulate the business and export of rice to ensure food security, promote production and development, and encourage the use and application of science and technology in rice production and processing for rice production and processing activities trading and exporting rice. Create a strict legal framework to control the production, processing, and export of Vietnam's rice, ensuring the interests of producers in general and farmers in particular so that they can have peace of mind in the production and consumption of the goods they make, strengthening the people's confidence in the Party's guidelines, the State's policies and laws.

Decree No. 210/2013/ND-CP dated December 19, 2013, of the Government is amended and supplemented with Decree No. 57/2018/ND-CP dated April 17, 2018, on policies to encourage investment enterprises investment in agriculture and rural areas. This Decree has created a legal framework to encourage enterprises to invest in agriculture, especially high-tech agriculture, to invest in rural economic development, and to build agricultural economic zones with many incentives for businesses to invest. Resolution No. 120/NQ-CP on Sustainable Development of the Mekong Delta Adapting to Climate Change, also known as the "Thuan Thien" Resolution, after its promulgation, is considered to create positive changes and strong at all levels, sectors, and localities.

About Human

The Mekong Delta is home to many ethnic groups, of which there are four main ethnic groups: Kinh, Hoa, Khmer, and Cham. The Kinh ethnic group accounts for 92.2% of the total population in the region. The Chinese account for about 6.1%, the Khmer account for about 6.3%, and the Cham has about 14,000 people living mainly in An Giang (Nghiem, & Italy, 2018, p.14). Per capita income in the Mekong Delta in 2015, was estimated at 40.27 million VND/person/year compared to 2014 (38 million VND/person/year), an increase of 2.2 million VND. In 2018, the total GDP of the whole Mekong Delta was VND 818,523 million, an average of about VND 46 million/person/year.

According to the 2014 Labor and Employment Survey Report of the General Statistics Office, labor in the agricultural sector in the Mekong Delta accounted for 50.4% of the total labor force in the economy, the rest were activities in other fields. Structure of rural labor in the Mekong Delta by professional and technical qualifications (2014): No professional qualifications accounted for 93.0%; vocational training: 1.7%; professional secondary school: 1.6%, college: 1.0%, university and above: 2.7% (Hung, 2017, p.155).

It can be seen that the Mekong River Delta has a relatively large population and an abundant proportion of the population of working age, which is a condition for the economic development of the region. Per capita income shows encouraging results in improving people's living, material and spiritual well-being. Due to the diverse and rich transportation system, the exchange and cooperation in all aspects of the social life of the people in the Mekong Delta are quite favorable, creating momentum for the promotion of economic growth. Of the area. However, the young population structure also causes many difficulties. The labor force is abundant but the level of trained labor is still low, which significantly affects the absorption of modern science and technology into production, the high unemployment rate has caused several problems affecting the economic, social, and environmental development.

The reality of the environmental situation in the Mekong Delta provinces

Land environment

In terms of soil pollution, it is understood as all phenomena that pollute the soil environment with pollutant substances. Polluted soils can be classified according to their origin or by pollutant agents. If classified by origin, it will include Soil pollution due to domestic wastes; soil pollution due to industrial waste, and soil pollution due to agricultural activities.

Pollutants of the soil environment have a lot of inputs because they can be caused by natural phenomena or caused by man-made pollution. However, the process of regenerating the soil will take a long time and may not be able to recover. Soil pollution is far different from water pollution, as long as the pollutant stops entering the water environment, the self-motivation of air and water will quickly eliminate or reduce pollution, and land is very this is less likely. If the pollutant component in the soil is too much, people who want to decontaminate the soil will face a lot of difficulties and spend a lot of money and effort, but it may not be possible to restore the original state of the soil. The process of using land in agriculture, aquaculture, industry, urbanization, etc., changes the land, degrades it, and causes environmental pollution. The area under aquaculture has increased rapidly. Along with the process of agricultural production and urbanization in the Mekong Delta, the problem of environmental pollution is very serious, especially soil pollution. Agricultural production in the old style of farming is the excessive use of pesticides and chemicals and stimulants that have made the soil environment polluted and degraded. The agricultural waste has not been fully decomposed along with the slow regeneration of productive land, which has not met the basic requirements in the regeneration process, which has

resulted in a shrinking arable land area. Pollution is now of poor quality, affecting agricultural production and decreasing output.

Green environment

It can be seen that all of the above pollution problems have a direct or indirect impact on the green environment. The polluted land and polluted flooded areas are habitats for many types of green plants, thus greatly affecting the absorption of nutrients by plants, limiting the ability of plants to absorb nutrients growth of green plants. Air waste reduces the ability of plants to photosynthesize, besides in places with heavy air pollution, trees cannot grow.

Ecosystems of coastal mangroves and flooded *Melaleuca* forests in the Mekong Delta have been degraded due to the process of reclamation and development of agricultural cultivation and deforestation for aquaculture. Up to now, the area of forestry land in the region is only about 356,200 ha - of which, natural forest accounts for only about 15% and the remaining 85% is regenerated plantation forest. In the sea and coastal areas, up to 260 species of fish have been recorded and many types of mollusks, and crustaceans... live. However, the ecosystem here has been seriously degraded. On the other hand, because the area of forest land is increasingly giving way to industrial zones, residential areas, resettlement areas, and a series of traffic routes have narrowed and lost forestry land, causing damage to the land serious damage to the green environment. Besides, the phenomenon of over-exploitation of forest resources and human intervention in nature has made the area of protected forests and watershed forests in the Mekong Delta narrow and dangerous chance disappears on the map. These are problems that are seriously affecting the forest ecosystem in the Mekong Delta, adversely affecting people's lives.

Some solutions to harmonize economic growth with environmental protection in the Mekong Delta provinces today

Group of solutions on completing mechanisms, policies and laws to strengthen state management in economic development with environmental protection in the Mekong Delta today

Supplement and complete policies directly related to economic development and environmental protection. Continue to improve several laws such as Law on Land, Law on Water Resources, Law on Forest Protection, Law on Minerals, Law on Biodiversity, Law on Environmental Protection... to suit the situation of growth and development economy, in line with international economic integration commitments towards the efficient use of natural resources. It is necessary to have policies to limit investment and exploitation of natural resources in sensitive areas upstream of rivers, border forests and mountains, land, security and defense buffer zones, islands, etc. maximum licensing acts to exploit natural resources that are in danger of being depleted and are not renewable. In addition to supplementing and perfecting mechanisms and policies, it is necessary to continue to improve the legal system to protect the environment in response to the requirements of sustainable development, which is very necessary for the

current period. The law will create a favorable legal corridor for economic actors, and on the other hand, a tool to handle violations of economic actors themselves. Strengthen the review, re-evaluate and improve the organization and personnel in the performance of the task of natural resource management and environmental protection in both quantity and quality assurance. Strengthening the capacity of officers in law enforcement and inspection, supervision of exploitation, use, and management of natural resources and environmental protection for staff working in the resource sector and environment, customs, coast guard, forest rangers, border guards, etc. are working in remote and isolated areas, where many mineral resources and diverse biological systems are concentrated.

Group of solutions on development, promoting international cooperation in efforts to overcome the impact of climate change, environmental pollution is the driving force for sustainable economic development in the Mekong Delta today

To grow quickly and effectively, it is necessary to have policies to improve the level of science and technology in the country. To do so, it is necessary to promote the human factor in science and technology and at the same time increase the transfer of domestic technology outside, absorb and apply scientific and technological achievements in the world. The issue of technology transfer needs to be done by many different methods to select the most effective, advanced, and new technologies. Those methods are foreign direct investment, technology import, and procurement of new equipment, using non-exclusive technology.

Developed countries in the process of technology transfer often offer policies to export technology and machinery at a moderate level, not the best technologies and machines that the country owns. Therefore, in the process of importing technology and machinery, Vietnam needs to proactively request advanced technologies, and pay attention to standards, technology suitability, and socio-economic efficiency association of imported technologies, prioritizing environmentally friendly technologies and minimizing environmental pollution. On the other hand, we have policies to attract investment and capital sources from countries around the world, but we also need to be selective. In the past, we have rolled out the red carpet for foreign investors to enter Vietnam massively and without selectivity, thus leading to a series of consequences. Foreign enterprises investing in our country bring with them old machinery, equipment, and technologies that are no longer in use or restricted in the home country, making our country at risk of becoming an industrial waste dump of the country developed countries. Due to outdated technology, the main focus is still on the exploitation of natural resources, along with the failure to treat industrial waste and discharge it directly into the environment. Therefore, it has destroyed the environment, causing environmental pollution of land, water, and air, such as the 2016 Formosa incident, mass fish deaths in Vung Ang (Ha Tinh) then spread to the waters of other provinces neighboring provinces cause serious pollution to the marine environment, affecting the lives of more than 200,000 people, including 41,000 fishermen, in addition to many other typical environmental pollution cases across the country.

The Party and State should have policies to support and encourage domestic and foreign organizations and individuals to invest in the development and application of environmental scientific achievements in economic development preferential policies for enterprises and individuals operating in the field of environmental protection. Recently, the Government has just issued Decree No. 66/2019/ND-CP on the conservation and sustainable use of wetlands. Accordingly, the State encourages domestic and foreign organizations and individuals to invest in biodiversity conservation. The Decree clarifies three principles of conservation and sustainable use of wetlands:

The conservation and use of wetlands must be carried out on the principle of an ecosystem approach, ensuring the integrity of the structure, function, ecological characteristics, and biodiversity of the wetlands. Strengthen the role and participation of communities living on and around wetlands and stakeholders in the conservation and sustainable use of wetlands. Ensure a fair and reasonable benefit-sharing mechanism in terms of rights and obligations among stakeholders in the use of wetland ecosystem services. Diversifying investment financial sources and promoting international cooperation for economic development, environmental protection, and climate change response in the Mekong Delta today. The document of the 12th Party Congress has determined the direction of perfecting FDI policies as follows: Reviewing and amending laws and policies to strongly attract FDI, especially projects with high technology and friendly environment, products with added value and high localization rate, joining production networks and global value chains to promote economic restructuring.

To enhance the attraction of FDI with high technology, environmentally friendly, and labor intensive. Encourage investment in building infrastructure and supporting industries, renewable energy, new materials, electronics, information technology, plant varieties, livestock, human resource training, and health care high-quality health... has a flexible mechanism for specific projects. To encourage the establishment of research and development centers for foreign-invested enterprises in Vietnam. In order to attract and use "green" FDI resources effectively, in the coming time, Vietnam in general and the Mekong Delta in particular need to adjust the orientation of policies to attract FDI as follows:

Firstly, priority should be given to attracting FDI in industries and fields of high and advanced technology, environmentally friendly technology, clean energy, renewable energy, manufacturing medical equipment, supplying healthcare services, education, and training, high-quality tourism, financial services, and development of modern technical infrastructure; high-tech agricultural production, smart agriculture, especially new industries based on industry 4.0. To attract FDI, it is necessary to ensure a balance between export growth and investment in the development of value-added products and services, using the majority of domestic raw materials, developing supporting industries, and training human resources domestic human resources to meet the requirements of industrialization and modernization.

Secondly, about partners, it is necessary to focus on attracting FDI investment, especially multinational corporations associated with domestic enterprises to form and develop clusters of industry linkages according to each value chain. In the

current period, it is necessary to continue to attract FDI into industries where Vietnam still has advantages such as textiles, footwear, agriculture... At the same time, focusing on stages of creating high added value, associated with intelligent production processes, automation, especially high-tech agriculture.

Thirdly, attracting FDI must be suitable with the advantages, conditions, development level, and planning of each locality in the regional linkage, ensuring the overall efficiency of the economy - society - environment. For sensitive areas and areas related to national defense and security, border areas, and sea areas, the attraction of FDI needs to ensure national defense, security, and sovereignty first.

Fourthly, there are mechanisms and policies to actively support the development and enhancement of Vietnamese enterprises to be able to compete with foreign enterprises, promote the development of supporting industries and create linkages, spreading between FDI enterprises and domestic enterprises.

A group of solutions for applying green technology in the development of high-tech agriculture in the Mekong Delta region

Currently, high-tech agriculture is the top priority of the Mekong Delta in the economic development of the region. The application of high technology in agriculture has promoted clean agricultural production, toward sustainable development. This is a new direction for sustainable economic growth in the region. Green technology is now considered a driving factor in sustainable economic growth in every country, including Vietnam. The application of modern, environmentally friendly science and technology is a new direction for our country's agriculture, and this is also a breakthrough in the economic development strategy of the Mekong Delta.

For sustainable development and environmental protection, it is necessary to apply green technology and biotechnology in production to increase productivity and protect the environment. The current era of the fourth industrial revolution allows the application of information technology and digital technology to all stages of the production process. Large sample fields have developed very strongly, including the application of modern scientific and technological achievements from production to processing. This is a solution and a vital breakthrough for the development and economic growth of the Mekong Delta in the future in the face of strong natural and social changes that bring and need to be addressed must act now.

Conclusion

Economic growth and environmental protection are two important factors of sustainable development, there is a dialectical relationship between them. Environmental protection is the basis and foundation for sustainable economic growth and reasonable economic growth is the goal and motivation for environmental protection. At present, resolving the relationship between economic growth and environmental protection is an urgent requirement for countries, for Vietnam in general and the Mekong Delta provinces in particular, on the road to

economic growth development and international integration. To harmoniously combine economic growth with environmental protection in the current Mekong Delta provinces, the author gives some historical and current views as arguments to offer solutions aiming at the goal of sustainable economic development, a green economy for the Mekong Delta today, contributing to the economic development, and building socialism of the country in general. Groups of solutions aimed at the important issue of environmental protection and response to climate change in the economic development of the region. To ensure sustainable economic development, all levels, sectors, and the whole people must join hands and participate, so then the proposed solutions can be successfully implemented for the cause of industrialization and modernization of the country.

References

- Ba, H.L. (2004). Environment. Ho Chi Minh City: Vietnam National University Ho Chi Minh City.
- Dong Thap Online. (2021). Rapid and sustainable socio-economic development in the Mekong Delta. <https://www.baodongthap.vn/kinh-te/phat-trien-kinh-te-xa-hoi-vung-dong-bang-song-cuu-long-nhanh-va-ben-vung-102547.aspx>
- Dung, N.Q. (2016). Economic, social and environmental effects of the “large sample field” model in the Mekong Delta. Hanoi: Political Theory.
- Electronic Information Publication of Bac Lieu Province. (2021). Workshop on "Socio-economic development in the Mekong Delta to 2030, with a vision to 2045". <https://baclieu.gov.vn/vi/-/h%E1%BB%99i-th%E1%BA%A3o-ph%E1%BB%83n-kinh-t%E1%BA%BF-x%C3%A3-h%E1%BB%99i-v%C3%B9ng-%C4%91%E1%BB%93ng-b%E1%BA%B1ng-s%C3%B4ng-c%E1%BB%ADu-long-%C4%91%E1%BA%BFn-n%C4%83m-2030-t%E1%BA%A7m-nh%C3%ACn-%C4%91%E1%BA%BFn-n%C4%83m-2045->
- Encyclopedia Volume 1. (2002). Hanoi: Encyclopedia Dictionary.
- Exposto, L. A. S., & Januraga, P. P. (2021). Domestic waste characteristics and the management systematic review. *International Journal of Health & Medical Sciences*, 4(2), 253-259. <https://doi.org/10.31295/ijhms.v4n2.1731>
- Government (2011). Decision approving the National strategy on climate change. Hanoi.
- Ha, L.T.T. (two thousand and thirteen). State of Vietnam with the issue of environmental protection in the process of industrialization and modernization of agriculture and rural areas. Hanoi: Politics - Administration.
- Hung, N.T. (2017). Solutions for developing hi-tech agriculture in the Mekong Delta today. Hanoi: Main argument.
- Intermediate Textbook of Political - Administrative Theory: Directions and policies of the Party and State of Vietnam in various fields of social life (2017). Hanoi: Main argument.
- Loi, N.T., & Huong, V.T. (2015). Sustainable development in Vietnam in the context of globalization, international integration and climate change. Hanoi: National politics – the truth.
- National Assembly. (2005). Law on Environmental Protection and Decree guiding its implementation. Hanoi: National politics – the truth.

- Nghiem, B.V., & Italy, D.T. (2018). Provincial Party Committees in the Mekong Delta lead the restructuring of the agricultural economy in the current period. Hanoi: Political theory.
- Thien, T.D. (2018). Restructuring Vietnam's economy towards sustainable development. Hanoi: Social Science.
- Vietnam Association for the Protection of Nature and Environment. (2018). Green economy for sustainable development in the context of climate change. Hanoi: National politics – truth, Hanoi.
- Widana, I.K., Sumetri, N.W., Sutapa, I.K., Suryasa, W. (2021). Anthropometric measures for better cardiovascular and musculoskeletal health. *Computer Applications in Engineering Education*, 29(3), 550–561. <https://doi.org/10.1002/cae.22202>