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PROMOTING ETHNIC CULTURAL IDENTITY AND DEVELOPING AGRICULTURAL ECONOMY IN THE MEKONG DELTA REGION IN THE CONTEXT OF CURRENT CLIMATE CHANGE

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ABSTRACT

The Mekong Delta of Vietnam is a region heavily affected by climate change. Over the past 30 years, under the impact of this process, the Mekong Delta is facing a great risk to the community's living environment. This requires people in the region to make breakthrough changes in production methods to adapt to climate change to ensure the survival and development of the locality in the future.

KEYWORDS: Ethnic cultural identity; climate change, Mekong Delta.

INTRODUCTION

The Mekong Delta of Vietnam is part of the Mekong Delta with an area of 39,194.6 km². It is located adjacent to the bordering Cambodia to the north, to the southeast. This is a land with a geopolitical position and rich cultural identity. Currently, the Mekong Delta is facing many great challenges, including climate change. Climate change affects all industries, fields, and economic components, especially the livelihoods of rural communities. The overall study of the nature, culture, and people of the Mekong Delta and the influencing factors to build a system of solutions to create a long-term vision for the sustainable development of the region, suitable for and adapting to climate change, is important and urgent in the current context.

1. Impact of climate change on the living environment and development of the Mekong Delta

Up to now, climate change is a global issue. Climate change is understood as the change in climate due to the impact of internal changes in natural conditions and human activities leading to changes in the Earth's atmosphere, including the biosphere, atmosphere, hydrosphere, and lithosphere. The atmosphere is the living environment of humans and society. Thus, the agents leading to climate change have two basic factors: one is the natural change of the natural world; two is the impact of human activities on the natural world.

Scientists have listed the manifestations of global climate change including: rising sea levels; destroyed ecosystems; loss of biodiversity; wars and conflicts; epidemics; droughts; floods; economic losses. All

of the above problems are causing risks to human existence on earth, requiring countries to take actions to limit, prevent, and adapt to climate change in order to protect the human living environment.

1.1. Impact of climate change on natural conditions and resources of the Mekong Delta

Vietnam's Mekong Delta is a region heavily affected by climate change. Due to the region's natural characteristics, the Mekong Delta is suffering from the following main impacts:

Firstly, there are many extreme climate phenomena such as drought, saltwater intrusion, and rising sea levels. If the sea level rises by 100cm and there are no response solutions, it is estimated that the Mekong Delta will be the most deeply flooded area in the country. About 38.9% of the Mekong Delta area will be flooded compared to 17.8% of Ho Chi Minh City and 16.8% of the Red River Delta. [1]. Many researchers believe that if the global temperature increases by 20°C, most of the Mekong Delta will disappear [2]. Accordingly, the agricultural land of the region is shrinking, and the livelihoods and economic conditions of the people are increasingly difficult.

Second, about natural resources. The Mekong Delta has highly few mineral resources. Water is the largest resource of the region. Water resources are a strength that brings many benefits to production, favorable for agricultural development, especially rice production. The Mekong Delta is the largest rice granary in Vietnam, supplying most of the rice for the domestic market and for export. However, currently, the water resources of the Mekong Delta are declining in both quantity and quality of surface water, groundwater and rainwater. Regarding surface water, the amount of water from upstream is more than 475 billion cubic meters per year on average, hydroelectric dams have retained more than 1/3. The results of the Mekong River audit show that the amount of water from the Mekong River from upstream to the Mekong Delta in 2020 decreased by 157 billion cubic meters compared to 2011 [3]. Regarding groundwater resources, Due to polluted surface water and increased groundwater exploitation beyond the self-recharging capacity of aquifers, the groundwater level in the Mekong Delta has decreased by an average of 0.3-0.5m/year. Groundwater depletion is one of the main causes of land subsidence. If this situation continues, most of the delta area may be below average sea level by the end of the 21st century. The Mekong River Commission (MRC) predicts that by 2040, the Mekong will no longer carry alluvium to the sea. Alluvium is blocked, seawater penetrates deep into the rivers, threatening freshwater ecosystems. Water resource depletion also leads to a decline in fish resources, affecting the biodiversity of the land and the livelihoods of millions of people.

According to research by Can Tho University, climate change and global warming will cause sea levels to rise. If the sea level rises by 1 meter, 20% of the delta will be threatened. If the Mekong Delta rises by 2 meters, half of its area will be erased, severely affecting the lives of 15 million people. If development continues at the current rate, 90% of the area will be submerged by 2100.

According to the World Bank, Vietnam will be one of the five countries most affected by climate change, primarily causing environmental fluctuations and ecological crises, which may lead to a number of difficult problems regarding national food security. In the Mekong Delta, the phenomenon

of soil degradation, biodiversity decline, increased salinity, drought, and acid sulfate soil intrusion, and natural phenomena are affecting the lives of people in the region [4]. The above natural fluctuations have warned that the biodiversity biosphere reserve in the Mekong Delta is facing many challenges due to overexploitation to serve socio-economic development. Socio-economic development activities and agricultural production have strongly impacted biodiversity, breaking the natural ecological structure that is highly fertile in this land.

Third, about the environment. Environmental pollution and water pollution in the Mekong Delta are occurring seriously due to the following causes: Food production with pesticides exceeding the permitted level; aquaculture and seafood processing activities creating sludge, wastewater, garbage, waste, and emissions; Waste from industrial zones, medical waste, solid waste, etc. are serious sources of pollution in the region today. As a result, the highest average O³ level in 1 hour is 206g/m³, higher than the average air quality standard in other areas of the country. [5]

1.2. Impact of climate change on economic conditions in the Mekong Delta

The impact of climate change on natural conditions, resources and environment mentioned above has directly affected the economic life of people in the Mekong Delta.

First of all, agricultural production efficiency tends to decline in all three main areas: rice production, fruit trees and aquaculture.

Research by the Vietnam Federation of Commerce and Industry (VCCI) and a group of experts from the Fulbright School of Public Policy and Management (FSPPM) has shown that: The transformation of the Mekong Delta's industrial structure has accelerated in the 2015-2020 period, the absolute GDP of the industrial sector has continued to increase thanks to the rapid increase in labor productivity, but the contribution of industry to GDP has continued to decrease due to the rapid growth of the economy. The growth rate of the industrial sector (about 2.4%/ year) does not keep up with the growth rate of the two industrial and service sectors. Despite being the number one agricultural center in Vietnam and the world, the economic growth of the Mekong Delta mainly comes from the industrial - construction sector with an average growth rate of 8.5 % / year in the period 2015-2020. [6]

Second, Lack of young labor force in the agricultural sector. Due to difficulties in agricultural production with many risks, low economic efficiency, and heavy labor, the young labor force has shifted to other types of labor in the industrial, service, and commercial sectors, which has greatly affected the quantity and quality of agricultural human resources. According to research by author Trinh Duy Luan and colleagues in the proceedings of the scientific conference on Sustainable Development of the Southwest Region in the New Context, Can Tho, 2020, it was shown that: On average, in the period 2011-2019, the rate of trained laborers aged 15 and over was only 11.3%, lower than the Central Highlands (13%), the national average (19.5%), and the Southeast region (24.9%). The rate of unskilled labor is higher than the national rate: 35.9% compared to 33.2%. The rate of

trained workers with degrees and certificates is the lowest in the country: 13.6%, the rate of the workforce with university and post-graduate degrees is also the lowest in the country, only 5.4% [7].

“In terms of society, the unemployment situation in rural areas is a major problem for the agricultural sector, the unemployment rate among working - age people is the second highest compared to other regions in the country, the natural shift of labor causes an imbalance in production resources”. [8]

Third, the quality of agricultural products is difficult to ensure domestic and foreign quality standards due to the impact of environmental pollution, the use of pesticides beyond the permitted threshold, making the quality of agricultural products low. On the other hand, due to the characteristics of production in river conditions, agricultural production is difficult to apply the achievements of advanced and modern science, engineering and technology. This is a huge obstacle in increasing the value of agricultural products in entering the international market.

Summarizing 10 years of implementing the socio-economic development strategy for the period 2011 - 2020, the Party Central Committee pointed out: The Mekong Delta accounts for 19% of the country's population, but by 2019 it only contributed 12% of GDP. Many economic targets have not been achieved as planned, especially the target of GDP per capita and the proportion between economic sectors). [9]

1.3. Impact on production methods in the agricultural sector

Climate change has a comprehensive impact on agricultural production methods in the Mekong Delta. In particular:

The biggest impact is the development of upstream hydroelectric dams, which fundamentally changes the people's production habits and customs. Due to the deep intervention in the natural system, especially water and land resources, traditional agricultural production has been disrupted. Previously, due to the characteristics of the river region, agricultural production practices were seasonal labor, following river water and sea water. Production mainly followed nature. Currently, the irrigation system to prevent floods, freshen water, etc. has forced the water network to be artificially stabilized all year round. This requires farmers to fundamentally change their production practices in the context of changing natural environments under human influence.

The process of saltwater intrusion due to rising sea levels reduces biodiversity, and fruit trees gradually degenerate due to their inability to adapt to water resources. Therefore, improving water resources to maintain and conserve biodiversity and transforming livelihood models is the most important issue for farmers in the Mekong Delta. The Mekong Delta is the country's key rice production region, but farmers find it difficult to escape poverty, develop well-off and sustainably in this situation.

Due to the impact of rising sea levels, agricultural land is increasingly shrinking, and the Mekong Delta's position as the largest rice granary in the country is no longer a comparative advantage of the region.

2. Promoting ethnic cultural identity in agricultural economic development of people in the Mekong Delta to adapt to climate change.

2.1. Characteristics of ethnic cultural identity in the Mekong Delta

Regarding population structure: the population living in the Mekong Delta includes many ethnic groups, of which there are 4 main ethnic groups: Kinh (Vietnamese), Chinese, Cham and Khmer. The Kinh people make up the vast majority, living in most places in the region. The Chinese people are concentrated in the provinces of Bac Lieu, Ca Mau, and Soc Trang. The Cham people live mainly in An Giang. The Khmer people are present in large numbers in the provinces of Tra Vinh, Soc Trang, and An Giang.

Regarding the psychological characteristics of people in the Mekong Delta: The communities have a long-standing tradition of close ties and live together, creating favorable conditions for solidarity and helping each other to develop together.

Regarding religious beliefs: the Mekong Delta is a mixed population with many components of different historical origins; the region has many cultural features and forms of religious beliefs, converging many traditional customs and practices, ethnic cultures. The common characteristic of the people of the Mekong Delta is that they highly value affection in the relationship between people, between people and nature. The simple, honest nature in daily life and the deep love for nature and rivers of the people in the region. In the lifestyle and thinking of the people here, they always show frankness, frankness, chivalry, solidarity; diligence, hard work, and love of labor.

Besides these common characteristics, each ethnic minority in the region has its own cultural identity. Each ethnic group has a social structure with different customs, practices, beliefs and religions: the Khmer live in phum soc, mostly gathered around the Southern Buddhist temple; the Chinese live interspersed with other ethnic groups in the area, associated with commercial areas, temples worshipping Ong Bon, Quan The Am Bodhisattva; the Cham (mainly in An Giang) live in communities associated with mosques (Islam). This residential feature creates richness and diversity in the spiritual life of the region. It contributes to preserving and promoting the cultural identity of ethnic groups, the good values of religion in the lives of people in the Mekong Delta.

Beliefs, customs and festivals The Mekong Delta also has its own characteristics, due to natural and cultural conditions. In terms of beliefs, as a multi-ethnic land, the South is also a meeting place for existing religious beliefs from the North and Central regions, and is also the cradle of new religious beliefs. Therefore, this is the richest land in religious beliefs in Vietnam. Corresponding to the richness

of production methods and beliefs, festivals of the people in the Mekong Delta are also highly diverse, including agricultural festivals; famous people, national heroes; festivals of beliefs and religions.

On traditional social organization: Traditional social organization of residents is adjusted to natural conditions, The villages of the Mekong Delta are a collection of residents from many regions and many different clans, connected to each other not by family ties but mainly by neighborly ties. The population of each village also changes more frequently, therefore there is no significant distinction between the main residents and the migrants.

2.2. Characteristics of traditional agricultural production practices in the Mekong Delta

Production practices are habits formed in a community of people who conduct production in a certain natural condition. The natural geographical conditions of the Mekong Delta both promote the traditional culture that generations of Vietnamese people carry with them, and determine the way they choose to adapt and respond to nature and society.

First, due to the terrain being mainly rivers and canals, difficult farming conditions have formed in the farmers of the Mekong Delta the qualities of courage, perseverance, hard work, endurance and especially the spirit of solidarity, mutual support and assistance to overcome circumstances and develop the economy together. This is a traditional characteristic that has become the strength of the agricultural production of the region. However, besides that advantage, agricultural production mainly depends on weather and climate conditions, therefore it is organized seasonally, each season has its own food, rotating agricultural products continuously according to the weather and time in a year. This factor has formed a quite typical characteristic of farmers, which is the practice of seasonal production. This custom, on the one hand, creates positive elements in thinking such as understanding natural conditions, knowing how to seize opportunities, choosing the right time to make decisions in agricultural production, but also creates for Vietnamese people the habit of taking advantage, only seeing the immediate, not seeing the long term.

Second, agricultural production is organized in the direction of self-sufficiency. Pure production according to the natural economy is based on the exploitation of available natural resources, simple labor tools, manual labor level, low economic efficiency. Due to the nature of production being self-sufficient, the level of production force is highly low, based on the manual labor of farmers, rudimentary labor tools, therefore the issue of land use is organized in the form of small division, production on the scale of households is mainly. From there, a small, fragmented, small-scale and closed production economy is formed.

Third, The Mekong Delta is a multi-ecological region, including delta ecology, island ecology, and coastal areas. Natural resources are abundant, with water sources and a relatively mild climate, and diverse ecological regions suitable for the development of the agricultural economy. Rich and diverse natural conditions are complex, often encountering natural disasters and enemy attacks such as

droughts, storms, floods, tornadoes, epidemics, etc. In that condition, the agricultural economy depends largely on natural conditions with high risks. Due to this characteristic, the mentality of the people in the Mekong Delta has been formed about passivity, dependence and entrusting their existence to natural conditions, production becomes passive, lacking stability and sustainability.

Due to the natural geographical conditions, the scale of the villages is highly different, therefore the forms of residence are also highly different. The forms of residence of the people in the Mekong Delta include: the form of residence along the river, the form of residence along the canal, the form of residence along the sand dunes, the form of residence concentrated over a large area, formed in a river delta and multi-ethnic, the Mekong Delta has two main characteristics: river delta and cultural acculturation. These natural, social and cultural characteristics form the identity of the people in the Mekong Delta, governing the lives and economic, political, cultural and social factors of the communities in the region. Natural conditions and human identity, cultural characteristics determine human behavior towards nature, and are also components of regional development. Whether that development is sustainable or not depends largely on internal strength, human awareness and the interaction between humans and nature, and on human consensus in implementing behavior towards nature and between humans. Therefore, the psychological and cultural characteristics of people in the Mekong Delta are an important basis for researching and developing solutions suitable for climate change and in the new development context in this region.

3. Some solutions to promote ethnic cultural identity and develop agricultural economy to adapt to climate change in the Red River Delta at present.

3.1. Protect and develop the living environment of the Mekong Delta

Resolution No. 120/NQ-CP dated November 17, 2017 of the Government on sustainable development of the Mekong Delta in response to climate change has determined: Focus on protecting land, water and especially people; focus on preserving cultural, historical values, biodiversity, and ecological environment of the region. [10]

Protecting the living environment of the Mekong Delta is first of all protecting land and water resources by minimizing, preventing and proactively avoiding the negative impacts of climate change. To do this, it is necessary to promote the traditional cultural practices of the people in the region. People who produce agriculture in river conditions have numerous experience in water management and using water resources effectively for production. More than anyone else, they are the ones who understand rivers, the laws of operation and change of rivers, and water resources. In the context of climate change affecting water resources, farmers can proactively adapt to changes in these resources to form new and suitable production practices. Currently, taking care of the "health" of rivers by understanding the natural fluctuations of rivers and developing upstream water storage systems are effective solutions in managing and using water resources effectively for agricultural production.

Soil environment protection is also a top priority issue for the Mekong Delta in the face of climate change. People in the Mekong Delta have always attached great importance to soil resources and paid attention to the alluvial deposits in their fields. Soil improvement has become a custom and habit of hard-working farmers who wholeheartedly care for their livelihoods. Therefore, in the face of changes in soil due to the impact of climate change such as saline intrusion, farmers, with their experience, habits, perseverance, endurance, and overcoming difficulties and hardships, still carry out the process of soil improvement as an inevitable rule of the people in the Mekong Delta. On the other hand, soil improvement in the context of rising sea levels cannot be done by just one individual or a group of individuals. More than ever, the spirit of solidarity among communities in the traditional culture of the people is highly promoted in the process of soil improvement. Taking care of the soil, ensuring the long-term "health" of the soil in flood conditions by depositing alluvium during the flood season and letting the soil rest to ensure soil recovery are creative solutions of farmers in the Mekong Delta today.

3.2. Accelerate and strengthen the connection and infrastructure development for the Mekong Delta region.

Developing a convenient transportation system (highway, high-speed railway, waterway...) between Ho Chi Minh City and the Mekong Delta provinces is a prerequisite solution to develop this land. The Government's action program to implement Resolution No. 59-NQ/TW dated August 5, 2020 of the Politburo on the construction and development of Can Tho City to 2030, with a vision to 2045, has pointed out key projects connecting the region and inter-region, the project to invest in building a large-tonnage shipping channel into the Hau River (phase 2), the project to upgrade the Cho Gao canal, develop Cai Cui port into an international seaport, upgrade Can Tho international airport, etc. It is necessary to seriously and quickly deploy and implement these projects to solve the congestion of goods circulation, save transportation costs, attract foreign investors, attract high-quality human resources, develop tourism, reorganize scattered urban areas, and develop Can Tho City to truly be the center of the Mekong Delta region.

Effectively mobilize capital for socio-economic development. Mobilize capital from many sources: public investment, private capital and especially financial resources to develop green/clean technology or specific funds of the world related to climate change prevention. Orientation towards sustainable development, adaptation to climate change is an advantage to take advantage of these sources, such as: Climate Change Adaptation Fund (AF) managed by the World Bank, Green and Renewable Energy Investment Fund (GEEREF) of the EU Investment Bank... Maximize the geographical advantages of the region to promote international cooperation. The Mekong Delta is located in the center of Southeast Asian countries (ASEAN), in a strategic position along the Southern Economic Corridor of the Greater Mekong Subregion, connecting Vietnam with Cambodia and Thailand. The Mekong Delta also has a large sea area, close to shipping routes and connecting with the rest of ASEAN and the world. Therefore, the Government as well as localities in the region need to be proactive and strengthen bilateral and multilateral cooperation, connecting the Mekong Delta with ASEAN countries and

upstream countries. Take advantage of investment, sharing and support from international partners for the sustainable development of the Mekong Delta.

3.3. Synchronously implement solutions on human resource development for the Mekong Delta region.

It is necessary to increase investment in all aspects to develop Can Tho University according to the model of a key national university in the Mekong Delta. Currently, the limitation of the Mekong Delta is human resources, as well as education, science and technology. A densely populated area with an abundant labor force and agriculture as the main driving force, it is necessary to have a university with worthy investment, a regional agricultural research institute. When developing the university according to the model of a national university, agricultural sectors become member universities, investing in research institutes... the university will be a place to attract scientific and technological resources of the region, of Southeast Asia, and a center to provide high-quality human resources for the entire region. Conclusion No. 28-KL/TW of the Politburo emphasized: "Building Can Tho University into an excellent university in training, scientific research and technology transfer". Internationalization of education is also an important solution for high-quality human resources. In addition, it is also necessary to invest in further development of Can Tho University of Medicine and Pharmacy, colleges, vocational schools... Invest in and upgrade the Mekong Delta Rice Institute, Southern Fruit Institute into continental research facilities. There is a mechanism to support the development of private universities. Development in the region to contribute to solving the human resource needs for sustainable development of the Mekong Delta region.

3.4. Develop a strategy to ensure water security in the Mekong Delta.

The need for a strategy to solve the water supply problem for the region is also one of the issues of particular importance in the Southwest region today, such as: The Government needs to pay more attention to some issues, such as: Making a master map of water resource zoning, water supply zoning; Building a regional water security strategy whose main content is to preserve water resources; providing water for daily life and production; prioritizing water allocation in normal and drought and water shortage situations; protecting water sources, restoring polluted or degraded, depleted water sources to ensure the function of water sources; preventing and overcoming the consequences of damage caused by water. The strategy must propose solutions to supply water in drought and salinity conditions, such as: researching and building seasonal water storage areas, developing flood water storage areas at the source; perfecting the irrigation system and works to proactively control the quality of water sources for agriculture and seasonal freshwater and brackish aquaculture; Actively store water locally using irrigation canal systems and built regulatory works; flexibly convert the function of the flood-prevention dyke-sluice system into a saltwater intrusion prevention dyke-sluice system; apply technology to filter fresh water from seawater.

CONCLUSION

Formed on a river and multi-ethnic region, the Mekong Delta has two main characteristics: river delta and cultural acculturation. Human identity and natural conditions of the region are the elements that make up the development of the region. Whether that development is sustainable or not depends largely on the internal strength, human awareness and the interaction between humans and nature, and on the consensus of humans in implementing policies and strategies for sustainable development of the region. In the context of complex climate change and strong economic development, promoting the positive elements of human and natural identity, limiting difficulties and challenges, contributing to social stability towards sustainable development of the Mekong Delta is a practical, objective and urgent issue.

REFERENCES

- [1]. Ministry of natural resources and environment (2016), summary of climate change and sea level rise scenarios for Vietnam, p. 24.
- [2]. Brian Eyler (2019), *The Last Days of the Mighty Mekong*, Women's Publishing House, Hanoi, p. 371.
- [3]. Luan Dung (2021), Mekong River audit discovers many dangers, <https://tienphong.vn/kiem-toan-song-me-kong-phat-hien-nhieu-nguy-hai-post-1373015.tpo>
- [4]. Thiennhien.net (2018).
- [5] The figures are based on a recent study by the authors: Bang, HQ, Khue, VHN, Tam, NT and Lasko, K (2018), Air pollution emission inventory and air quality modeling for Can Tho City, Mekong Delta, Vietnam. *Air Quality, Atmosphere & Health*, 11(1), pp.35-47.
- [6]. VCCI (2022), Fulbright, Annual Economic Report of the Mekong Delta in 2022, Can Tho University Publishing House, p. 36.
- [7]. Trinh Duy Luan and colleagues (2020) Groups of indicators for sustainable social development in the Southwest region, proceedings of the scientific conference Sustainable development of the Southwest region in the new context, Can Tho.
- [8] VCCI (2022), Fulbright, Annual Economic Report of the Mekong Delta in 2022, Can Tho University Publishing House, p. 5.
- [9]. The Party Central Committee (2012), Conclusion No. 28-KL/TU dated August 14, 2012 of the Party Central Committee on directions, tasks, and solutions for socio-economic development and ensuring national defense and security in the Mekong Delta region for the 2011-2020 period
- [10]. Government (2017), Resolution No. 120/NQ-CP dated November 17, 2017 of the Government on sustainable development of the Mekong Delta in response to climate change.

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