

THE BEHAVIOR OF FARMERS IN THE RED RIVER DELTA, VIETNAM TOWARD THE NATURAL ENVIRONMENT

Khuat Thi Vang

PhD student

VNU University of Social Sciences and Humanities

Hanoi, Vietnam;

Lecturer

People's Police University of Technology and Logistics

Bac Ninh Province, Vietnam

Abstract: The Red River Delta is one of Vietnam's first exploited regions with the main form of agricultural production. Because cultivation is inextricably related to natural conditions, inhabitants have lived in harmony with and are reliant on nature since the community began. Farmers' attitudes toward the natural environment have changed a lot due to industrialization, agricultural and rural modernization, and urbanization in the Red River Delta. However, they need to find a sensible solution to the tension between their necessities, the need for a safe, clean environment, and the region's long-term development.

Keywords: Behavior, farmers, natural environment, Red River Delta, and Vietnam.

ПОВЕДЕНИЕ ФЕРМЕРОВ В ДЕЛЬТЕ КРАСНОЙ РЕКИ, ВЬЕТНАМ, ПО ОТНОШЕНИЮ К ОКРУЖАЮЩЕЙ СРЕДЕ

Хуат Тхи Ванг

аспирант

ВНУ Социально-гуманитарный университет

г. Ханой, Вьетнам;

преподаватель

Университет технологий и логистики Народной полиции

Провинция Бакнинь, Вьетнам

Аннотация: Дельта Красной реки является одним из первых эксплуатируемых регионов Вьетнама с основной формой сельскохозяйственного производства. Поскольку земледелие неразрывно связано с природными условиями, жители жили в гармонии с природой и зависят от нее с момента возникновения сообщества. Отношение фермеров к окружающей среде сильно изменилось в связи с индустриализацией, модернизацией сельского хозяйства и сельских районов, а также урбанизацией в дельте Красной реки. Однако им необходимо найти разумное решение противоречия между их потребностями, потребностью в безопасной, чистой окружающей среде и долгосрочным развитием региона.

Ключевые слова: поведение, фермеры, природная среда, дельта Красной реки и Вьетнам.

The Red River Delta is a fertile land formed by the alluvial deposition of the Red River and Thai Binh river system.

Tropical monsoon climate with a dense network of rivers, including downstream of the major rivers (Red River and Thai Binh River) and canal systems, have provided a large amount of fresh water and alluvium for the Red River Delta. The hydrologic and orographic regimes of the Red River Delta make the construction of dykes to prevent flooding, waterlogging, and saltwater intrusion be a top concern for farmers. Those conditions of the natural environment have greatly influenced the habits in production and daily life of the residents at the Red River Delta. In specific historical periods, residents

have different ways of life to adapt and maximize the region's natural conditions, which is evident in how they behave toward the natural environment.

The traditional behavior of the local people towards the natural environment is the attitude of living in harmony with nature. First of all, it is expressed in concepts that are both scholarly and deeply rooted in the folk philosophy of life, such as "heaven and people are united," "heaven, earth, and people get along," etc. At the same time, it is also boldly reflected in their working style, eating, dressing, building, and traveling.

1. Habits in production

At the beginning of history, the period of the vast land, the low population, and the undeveloped workforce, the behavior of residents in the Red River Delta is mainly adapting and taking advantage of nature, like adapting to the tidal and flood regimes for farming.

The region's population rapidly grew in the 15th century, requiring intensive farming, crop production, and land expansion. At this time, residents knew how to maximize the diversity of natural resources to aggressively cultivate, increase crops, and diversify plant varieties, helping to lift crop production to satisfy the region's increasing needs, in addition to enlarging dikes to expand the area.

Since the beginning of the 20th century, residents at the Red River Delta have used many new farming methods and techniques suitable for different environments. With an improved level of awareness and science and technology, they have fully grasped the characteristics of each type of crop and livestock. Thanks to that, they have chosen the most suitable one for each particular place. Moreover, they also actively apply scientific and technological achievements to the production process to reduce labor and raise crop and livestock productivity.

Currently, the process of urbanization in the Red River Delta is taking place strongly. Due to the pressure of high population density and shrinking agricultural land, local people have actively adapted and intensively cultivated rice to a higher level, transforming the Red River Delta into one of the two most enormous granaries in Vietnam. The increase in crop output, diversification of production methods, and cultivation have improved the region's natural resource utilization, resulting in fundamental improvements in agriculture and meeting the demands of societal change in the globalization trend.

Besides the development of agriculture, the history of the development of the Red River Delta also shows the diversified development of handicrafts. There are hundreds of handicraft villages with three main crafts, namely weaving, ceramics, and metallurgy. Crafts have appeared for a long time. They were born based on the region's available resources, and farmers have taken advantage of their spare time to improve their lives.

2. Daily life

Natural characteristics and adaptation to nature make the difference between the culture of people in the Red River Delta and other regions. Reasonableness (including reasonable eating and accommodation) is considered the most crucial factor in their culture and traditional behavior with nature.

Firstly, it's about food culture.

In the habits of cultivation of the people in the Red River Delta, planting rice and fishing are the two main occupations that produce two main foods, namely rice, and fish. Natural conditions and farming habits have created a culinary culture, especially source of food, closely related to environmental ecology. The local people have made full use of the inherent products of nature.

In addition to using food available in nature, they will prepare dishes depending on the weather and climate. The tropical monsoon climate with two distinct hot and cold seasons has created distinctive features in their food culture. In the hot season, they like "food with cold nature," such as vegetables,

shrimp, crab, fish, etc. To cool the body, they often make boiled food recipes, salads, sour soups, raw vegetables, and sweet soups. On the contrary, in the cold season, they prefer dishes made by stir-frying and frying or adding a lot of oil when cooking soup to retain body temperature. Residents in the Central and Southern regions are accustomed to spicy, sour, and bitter spices that are rarely found in the meals in the Red River Delta. The local people in the Red River Delta, particularly Hanoians, are gourmets who are known for their food choices and processing skill. They always preserve the elegance of someone enjoying the delicious and beautiful when eating and drinking. Hanoians' eating has been elevated to culinary art, demonstrating their behavior rather than simply supplying energy to maintain life.

The drinking style of the residents in the Red River Delta is also diverse, showing harmony with nature because they make use of plants available in nature. For example, the styles to infuse tea have shown the difference in food culture among provinces in the region. In Thai Binh Province, people like to grow tea trees and take the leaves to infuse tea because it helps tea keep its original taste. In areas around Hanoi, people take the tea leaves, use hot water to infuse tea, and add a little ginger to keep the body warm in the winter. In the northern areas of the Red River, people often pound, brew, and dry tea leaves before infusing tea. And in the southern regions of the Red River, people often pound tea leaves before infusing tea. It can be stated that tea is a rustic drink, taking advantage of plants in the garden and a remedy for hot diseases and indigestion. Due to having many cold and wet months in a year, people in the Red River Delta prefer to drink hot, strong tea and consider it a culture that is elegant, slow, and full of character and soul of the region.

Secondly, it's about the architecture of houses.

The architecture of houses of residents in the Red River Delta follows nature. The house's main door usually faces the South, using materials such as cogon grass, neohouzeaua, and bamboo, which are readily available in nature.

Because this region belongs to the tropical monsoon climate, the south-facing door will avoid the cold and dry wind from the North in winter, hot, dry wind from the West in summer, and wind from storms from the East Sea.

The rationality in dealing with nature is expressed through the use-values and convenience of the house. The ideal home is prioritized in the following order of criteria: “The first is near a market. The second is near neighbors. The third is near a river. The fourth is near roads. The fifth is near the place of farming.” Residents in the Red River Delta consider rationality associated with eating, living, traveling, and convenient communication. It also comes from the sedentary lifestyle, especially among farmers with wet rice cultivation.

The adaptation to the natural environment in the living habits of local people is also clearly shown in the selection of building materials and the structural design of their houses.

Materials used to build houses are usually available in nature, creating an ecological landscape environment in harmony with nature. Wooden frame trusses are made up of sapele and bamboo. In Son Tay, walls are made up of laterite. In Nam Dinh and Thai Binh, unburnt bricks are used to make walls. The roof is covered with straw or palm leaves. Farmers in the Red River Delta would like to build their houses in durable and beautiful style but still in harmony with the natural landscape.

Lastly, it's about the traditional costume.

The costumes of the residents in the Red River Delta are an adaptation to the nature of the Northern Delta. It is expressed from the choice of colors and fabrics to the design.

Fabric-making materials are available in nature, such as banana silk, jute silk, hemp, and cotton yarn, which are suitable for hot and humid climate conditions and create unique products. However, the most famous is the material made of silk. People have woven a wide variety of products such as silk, satins, silk textiles, linen, raw silk yarn, and modal yarn. Silk is not only a

domestic garment material but also a precious gift favored by Northern kings. Therefore, the Vietnamese in the Red River Delta are always proud of this rich silk land.

The colors of the costumes also indicate the aesthetic sense of people who live in harmony between nature and the wet rice civilization. The common colors of skirts, pants, towels, and shirts are dark (or black). The dye uses the color of plants in the gardens, such as oak leaves and eagle leaves. They are easy to find and help the color of the clothes last longer. Besides, brown is popular and is a characteristic of Northern clothes. The brown dyed in a lot of water, exposed to the sun for a long time, and pressed into the mud will turn the dark brown. It's close to rural people, who consider "comfort is better than pride" because they are familiar with the hardships in the fields all year round.

Thus, living in harmony with nature is the most intelligent and most appropriate behavior of the people in the Red River Delta with the natural environment. Over thousands of years, the way to behave in harmony with nature has shown valuable positive aspects, that is, making people live closely to the nature, respect, and protect the balance of natural ecosystems and environmental landscapes, have the ability to observe, think, and rely on nature to restore their strength.

3. The change in behavior towards the natural environment of the residents in the Red River Delta in recent years

Currently, the Red River Delta is considered one of the regions with a high rate of urbanization and the highest population density in the country. These things have created a lot of pressure, especially the exploitation of natural resources to meet people's needs. Almost natural resources have been exploited to develop agriculture, industry, and services. In particular, many kinds of resources have been over-exploited, leading to depletion, environmental degradation, and an increase in environmental pollution.

By 2020, the Red River Delta “had about 800 concentrated industrial clusters in operation. In which 300 industrial clusters were operating, and 500 ones were undergoing basic construction under the planning.” [3] Concentrated industrial clusters are an important factor, creating a driving force for the region’s socio-economic development and turning the purely agricultural area into a critical economic region with the second-highest growing economy in Vietnam. However, the concentration of industrial clusters and rapid urbanization in recent years has seriously affected the region’s ecological environment.

Rapid urbanization along with high population density make the area of agricultural land in the Red River Delta decline sharply. Besides, the beneficial factors to the ecological environment such as clean water, vegetation, and trees are decreasing. In contrast, the factors causing environmental pollution, such as dust, industrial wastewater, and industrial waste from industrial parks, hospitals, and schools, rise dramatically. The pollution increase is common in big cities, typically Hanoi and Hai Phong.

Along with establishing and developing new industrial clusters, traditional craft villages in the Red River Delta are still valued and developed. It has created many jobs and increased income for workers. However, production activities in these traditional craft villages have adversely affected the living environment and rural landscape and caused pollution. For instance, waste is not treated but is discharged directly into ditches, ponds, and lakes. Moreover, toxic emissions from coal-fired furnaces and vehicles have seriously polluted the environment, affecting the quality of life of residents and the sustainable development of the region.

4. Perspectives and some solutions for promoting a lifestyle in harmony with nature in the Red River Delta currently

To build and maintain a new mode of behavior that is both in harmony with the natural environment and under the development of the times, ministries

and ministerial-level agencies in the region should develop a system of standards for behavior with the natural environment and ensure the following basic principles.

Firstly, man is a product of nature and is always closely associated with nature. Therefore, special attention must be paid to the relationship between man and nature and the general sustainable development of the whole region. Every citizen has the right to live freely, to get rich justly, and to be equal in the natural and social environment, but he must take responsibility for protecting the environment and developing the environment sustainably for future generations.

Secondly, to ensure sustainable development in the Red River Delta, each resident needs to rationally exploit and use natural resources, protect the living environment, and prevent environmental pollution caused by toxic wastes in production activities and daily life. At the same time, it is indispensable to actively innovate to create alternative materials to build a green economy.

Thirdly, in the industrialization, modernization, urbanization, and construction planning of concentrated industrial zones and large residential areas, it's crucial to consider natural conditions to limit adverse environmental effects. Besides, it's necessary to ensure that all residents enjoy the maximum benefits from socio-economic development.

Fourthly, it is promoting a lifestyle that takes advantage of nature and responds appropriately to nature. It is vital to focus on developing education in the whole region and educating people on environmental issues. Since then, each individual, enterprise, and community can be aware of their role and responsibility in environmental protection and sustainable development in the Red River Delta.

Lastly, enhancing the role of socio-political organizations such as Farmer's Union, Ho Chi Minh Communist Youth Union, Women's Union, Young Business People Association, etc., in the region in building a green

economy and replicating examples is an urgent task. Moreover, it is advisable to encourage the association of enterprises with scientists and farmers to deploy, demonstrate, test, and put innovations into production. Applying scientific and technological achievements in the Fourth Industrial Revolution in the production and maximizing forces in the rapid, sustainable and robust development of the Red River Delta also play a significant role.

In summary, the Red River Delta plays an essential part in the development of Vietnam. Since ancient times, the local people have tried to work and live in harmony with nature. Nowadays, before industrialization, modernization, and urbanization, their behavior with the natural environment has also changed a lot. Thus, ministries and ministerial-level agencies in the region must have master plans to bring an increasing quality of life to residents and the sustainable development of the Red River Delta.

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