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Solutions to protect river culture in Vietnam due to climate change

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Abstract

This article delivers several solutions to protect tradition of river culture in Vietnam, especially in the two delta regions in the North (Red river delta) and in the South (Mekong delta). River culture is fading away due to process of urbanization and climate change that are taking place around the globe. In this paper we are examining this process, especially in the context of progressing phenomenon of climate change that poses many threats to national coastal economies.

Keywords: river culture, climate change, Vietnam, sustainable development

1. Introduction

Climate change, first of all global warming and rising sea levels, is now the most serious challenge for humanity in the 21st century. Climate change directly affects the millennium development goals and is called a major challenge for sustainable development. It has been directly impacting on the global socio-economic and environmental life, in recent years many parts of the world have suffered from dangerous natural disasters such as typhoons, floods, rising sea levels and Climatic climate.

Vietnam is one of the countries most vulnerable to climate change, especially the Mekong Delta, which is one of the three world deltas most vulnerable to sea level rise [WB, 2007; Ministry of Natural Resources and Environment, 2008, 2009, 2011]. The Mekong Delta is the last downstream area of the Mekong River basin before flowing to the sea, which is a lowland area, considered the largest wetland in Vietnam. Every year, from August to October, the Mekong Delta region is flooded from the Mekong River, especially the regions of Dong Thap Muoi, the Long Xuyen Quadrangle and the area between the Tien and Hau Rivers. The Mekong Delta is the region most severely affected by climate change

The Institute's studies also show that the impacts of climate change are diverse and complicated, in which water is affected the earliest by this process, water depletion in the river system, downstream of reservoirs across the country in many regions are taking place more and more seriously. The phenomenon of land degradation takes place quickly under the impact of climate change, sea level rise, in which desertification in the South Central provinces and subsidence floods in the Mekong Delta greatly affect overall socio-economic development.

Today, the development of Vietnam's economy has led to serious environmental problems, especially climate change, according to a study by the National Institute of Meteorology, Hydrology and Climate Change, and Global climate change has been and will have a strong impact on water resources in general and river culture in Vietnam in particular.

Because of the importance of protecting river environment before climate change, the authors chose the topic "Solutions to protect river culture in Vietnam due to climate change" as the research topic in this article. The objectives of the study is to understand clearly the relationship between climate change to river environment and culture, the impacts of climate change on river culture here; analyzing and evaluating the current situation of protecting cultural environment in Vietnam today; proposing a number of solutions to perfect the protection of the cultural and river environment in our country.

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2. Theoretical framework

2.1. Climate change

Climate change is a change in physical or biological environment that has significant adverse effects on the composition, resilience or reproduction of natural ecosystems managed or operated by the impacts of socio-economic systems or human health and welfare [Ministry of Natural Resources and Environment (2008, 2009, 2010) Climate change]. The objective causes (due to the change of nature) include: the change of the activities of the sun, the change of the earth's orbit, the change in position and scale of the continents, the change changes of oceanic patterns, and internal circulation of the atmospheric system. The subjective causes (due to human influence) stemming from changes in land and water use purposes and an increase in emissions of CO₂ and other greenhouse gases from production activities. Manifestations of climate change are:

- Global warming and atmosphere
- Changes in the composition and quality of the atmosphere are harmful to the living environment of humans and the organisms on earth
- Sea level rise due to thawing leads to inundation of low water areas, small islands in the sea
- The movement of climatic zones that exist for thousands of years in different parts of the world leads to the threat of life for species, ecosystems and human activities
- Changes in the intensity of the activities of the atmospheric circulation, the water cycle in nature and other biogeochemical cycles.
- Changes in biological productivity of ecosystems, quality and composition of hydrosphere, biosphere and geosphere.

2.2. The impact of river on lifestyle of Vietnamese people

For Vietnamese people, the river has extremely important benefits in daily life as well as in cultural and economic development. Many rivers are the source of fresh water for daily life and life of people. In irrigation works, rivers are an important source of irrigation water for trees and fields, ensuring food for people's lives. Rivers are important sources of energy for hydroelectric projects. The river is also a source of abundant seafood. Every year, rivers and waters in Vietnam provide tens of thousands of tons of fish and shrimp for export to foreign countries and for food needs of the people. Rivers are also an important transport artery for the travel needs of people. Rivers are also a focal point of domestic as well as foreign trade. River ports and seaports are set up to meet the needs of exchanges and trade between regions, and to trade with other countries.

Vietnam has a coast running along the whole length of the country, is a source of salt, a source of minerals for economic development and for essential needs in people's lives. The formation of the delta plains is due to the alluvial deposits of rivers, which is a "gift of the rivers". Every year the alluvial soil of the Red and Mekong rivers has accreted to form more large deltas. (Every year, alluvial deposits of the Mekong River add up to hundreds of meters). In addition to bringing practical benefits in this life, every year, during the rainy season, the flooding rivers cause floods that cause great loss of lives and property.

2.3. River culture

Talking about river culture, it is impossible not to mention activities on the river such as: water puppet show, western floating market, traditional folk music. Floating market on the river is a typical cultural feature of the southern river regions. Floating markets are very famous such as Cai Rang and Phung Hiep floating markets in Can Tho; Long Xuyen floating market in An Giang. On the floating market, the scene of buying and selling takes place with hundreds of busy boats. People use a long pole, hanging items to sell on that pole as a sign.

If the market on the ground sells anything, the floating market sells it. The bustle of floating markets is not inferior to those on the ground, as well as offers to bid accompanied by smiles of warm water and hearts to cool the hearts of buyers. If in the southwestern river region, sailing on the river and listening to amateur music is a form of entertainment on the river characterized by the Southern region, in the North, the typical cultural feature of the river areas is Water puppet art. The puppet show is almost available to all ethnic groups, while the water puppet show is unique in Vietnam. The art of water puppetry is dating from the Ly period (1010-1225). Traces of water puppetry still recorded in many places. The Northern Delta has many ponds and lakes. The surface of the ponds has become a stage for water puppetry. The audience seat is the lawn around the lake. In the villages, water puppetry is often performed on New Year's occasions or during festivals. Each puppet is a folk sculpture. Puppets made of wood, covered with a layer of paint, impervious to water. Artists when performing must immerse in water to control puppets. The accompaniment is percussion, including drums, mule, la la. The most typical navigator is Uncle Teu with a round body and an optimistic witty smile. Opening, Mr. Teu appeared cheerfully and mischievously as the head teacher. In the water puppet treasure, there are 30 traditional repertoires and hundreds of newly built repertoire that have captivated both domestic and international audiences.

3. The reality of protection of river culture due to climate change in Vietnam

3.1. Situation of environmental pollution of rivers and water in Vietnam today

Currently, environmental pollution is a hot topic in the newspapers and it has received a lot of attention from people, in particular, water pollution in Vietnam has been increasing. Through the media, we can easily see images, as well as articles reflecting the current state of the environment. Although departments and unions strive to protect the environment, protect water resources. It seems that it is not enough to improve the pollution situation which is becoming more and more serious. The increase in atmospheric temperature makes the climate of regions in our country heat up and end in combination with a decrease in rainfall makes more areas drier. In 2010, temperature is likely to increase about 0.3 - 0.50C and sea level increases by 9cm. Areas with increased temperatures include the highest is the Northwest, Northeast and North Central Mountains, with the annual average temperature increase by about 0.1 - 0.30C / decade. Compared to today, in 2070, the flow river / year varies from +5.8 to -19% for the Red River and from +4.2 to -14.5% for the Mekong; Exhausted flow

varies from -10.3 to -14.5% for the Red River and from -2.0 to -24, 0% for the Mekong; current flood flow varies from +12.0 to 0.5% for the Red River and from +15.0 up to 7.0% for the Mekong. Saline water intrusion can encroach inland to 50 - 70km, destroying and destroying many freshwater species, 36 nature reserves. Of which, there are 8 national parks, 11 nature reserves will be in the reserve area flooded. Ecosystem is also negatively impacted; in 2 delta areas Red and Mekong River, coastal and forest ecosystems will suffer greatly harm [8].

3.2. The consequence of environmental pollution in Vietnam

The planning of urban areas has not been associated with the issue of waste treatment, wastewater treatment, etc., which is still outstanding, so in big cities, industrial parks, urban areas. Environmental pollution is at an alarming level. It is estimated that out of 183 industrial parks in the country, over 60% of industrial parks do not have a centralized wastewater treatment system. In urban areas, only about 60% - 70% of solid waste is collected, infrastructure for drainage and treatment of waste water and waste can not meet the requirements of environmental protection. Most of the wastewater is contaminated with grease, cleaning chemicals, dye chemicals, etc., and has not been treated directly into natural rivers and lakes. An example has been concerned by the public, the Thi Vai River case is contaminated by chemicals discharged from the factory of Vedan for 14 consecutive years.

Global climate change is causing global warming every day, resulting in countless consequences such as melting ice, rising sea levels, storms, floods, and other potential natural disasters for large-scale devastation such as earthquakes, tsunamis, droughts, etc. All contribute to the consequences of food shortages and a range of human and livestock diseases.

According to scientists, it is the people with their industrial production and daily activities that are one of the main causes of global warming and the greenhouse effect [2].

Water pollution in urban areas is most evident in Hanoi and Ho Chi Minh City. In these cities, domestic wastewater does not have a centralized treatment system but directly discharges into receiving sources (rivers, lakes, canals, ditches). On the other hand, there are many manufacturing facilities that do not treat waste water, most hospitals and large medical facilities do not have wastewater treatment systems. A large amount of solid waste in the city cannot be collected which are important sources of water pollution. At present, the pollution in canals, rivers and lakes in big cities is very heavy [9].

Pollution of water in rural areas and agricultural production areas, Vietnam now has nearly 76% of the population living in rural areas where infrastructure is backward, most of human waste and untreated livestock should soak into the ground or be washed away, causing pollution of organic water and microorganisms. According to a report by the Ministry of Agriculture and Rural Development, the average number of Feca coliform bacteria varies from 1,500-3,500MNP / 100ml in areas along the Tien and Hau rivers, increasing to 3800-12,500MNP / 100ML in the irrigation channel [9].

However, the World Cultural Heritage is currently severely

degraded by global warming, the ocean acidification environment and the high temperature of mourning caused by climate change is the biggest threat to coral reefs.

4. Environmental solutions to limit the impact of climate change

4.1. Solutions

Renovate and upgrade infrastructure

Experts say that infrastructure accounts for nearly a quarter of the emissions of greenhouse gases on earth. Therefore, the improvement of environmentally friendly infrastructure will help improve climate change. In addition, the convenient transportation system will also play a part in reducing the amount of vehicle exhaust emissions into the environment. Industrial zones need scientific planning and exhaust gas treatment to reduce environmental pollution.

Limit use of fossil fuels

Using fossil fuels such as coal, oil, natural gas causes great greenhouse effect. Therefore, to overcome climate change, it is necessary to find safe solutions. Or use safe alternative fuel sources such as biofuels, etc.

Spending

Reducing spending will help reduce production activities, thereby reducing greenhouse gas emissions from factories. We can use safe or recyclable resources to save production.

Protection of forest resources

Currently, deforestation is increasing not only in our country but also in the world. Therefore, preventing deforestation will help protect natural resources. In addition, we need to raise awareness, plant trees and do not discharge waste into the environment to protect this valuable natural resource.

Saving electricity and water

Saving electricity will help reduce environmental pollution quite effectively. must use water resources to save not depleting natural resources.

Work close to home

When working far away, people need to use the means to join in traffic. From there, it increases a certain amount of waste into the environment. So when working near home, we can walk or ride a bike. Help reduce emissions into the environment, which is a remedy for climate change.

Eat smart, enhance vegetables, fruits

Growing green vegetables - clean, not using chemical fertilizers and pesticides will limit the amount of toxic substances into the environment. In addition, if you eat a lot of green vegetables, eating less meat will limit the breeding activities. Therefore, smart eating is both good for health. It is both a remedy for healthy climate change in people's lives.

Each couple should have only 1 child

The increasing number of people will make the demand for clothing, travel and consumption of the world increasing, from which the earth will face a range of different pollution risks. Therefore, each couple should only have 1 child will help the world population increase in control, limit the

generation and help society develop sustainably.

Exploiting new sources of energy

Natural resources will be increasingly exhausted if people do not seek new sources of fuel. With the development of science and technology, experts have discovered new environmentally safe energy sources such as energy from the sun, wind, heat, waves and ethanol from plants, hydrogen from the process of hydrolyzing water.

The above are measures to overcome climate change which are studied, analyzed and put into practice by the experts. The environment is our own life, so we need to take immediate action. Applying measures in practice to combat pollution and prevent possible climate change. When the environment is clear, it will bring about comprehensive and sustainable development for the economy, society and life. live by the people.

4.2. Recommendations

It is necessary to promote the propaganda and mobilization of all people of all strata of environmental protection, towards a lasting green economy, based on which appropriate actions and solutions to build the economy. For example Vietnam should not allow using plastic bags, encouraging the use of environmentally friendly products to replace, actively preventing and treating environmental pollution.

The State continues to improve the legal system on environmental protection, including sanctions that must be really strong to deter detainees. In addition, it is necessary to build an integrated environmental management system in factories and industrial parks according to international standards and strictly supervise organization towards a better environment.

To incorporate environmental protection into the daily life activities of the party committees, authorities and mass organizations; educational programs for pupils and students in the school; in the daily program of the media; putting environmental protection requirements into emulation, commendation and evaluation of organizations and individuals.

Further improve the institution of resource management, environmental protection and climate change adaptation in line with the socialist-oriented market economy institution and international economic integration in Vietnam. Strengthening environmental protection and climate change response, limiting the use of natural resources (natural resources are limited but the demand for human use is infinite).

Authorities should issue necessary sanctions in production, business and consumption to implement green growth to ensure sustainable socio-economic development while enhancing training and developing human resources for the sake of green economy. Researching and selecting courses and contents on ecological economics, sustainable development, green growth, renewable energy, clean technology, sustainable consumption, environmental audits, and exploitation of natural resources, implement sustainable principles, protection of ecosystems and biodiversity at all levels and levels of education in colleges and universities.

Strictly handle violations, strengthen inspection and supervision regularly.

Strengthen the work of grasping the situation, inspecting and supervising the environment. Improve the professional capacity of staff in charge of environmental work and equip modern technical facilities to effectively serve these forces. Integrate sustainable development goals into the country's socio-economic development plan. Promote the wider application of cleaner production to improve the efficiency of use of natural resources, energy, raw materials, water, and at the same time minimize emissions and limit the level of increasing pollution and protection of environment and human health ^[10].

5. Conclusion

By analyzing the factors that cause climate change affecting the social and cultural life of people Protection of the environment is a vital issue of the country, of humanity, and is a responsible task. Deep society, associated with the struggle to eradicate poverty in each country, with the struggle for peace and progress on a worldwide scale. Thus, environmental protection has great significance to the country's development cause, in particular, to protect the culture of civilization.

In short, the environmental pollution in Vietnam is serious but it can still be saved if every citizen knows how to contribute to protect the environment. Let's chant the slogan "For the green environment - clean - beautiful" and also for our own lives as well as the generations to come.

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