

Executive summary

“Research on international experiences and propose regulations on payment for ecosystem services suitable to Vietnam's conditions (Applicable to carbon sequestration and storage services)”

1. Purpose of the research

Payments for ecosystem services (PES) occur when a user of an ecosystem service makes a payment to the provider of environmental and landscape values created by the ecosystem to protect, maintain and develop the ecosystem. The payment for ecosystem services is made according to Benefit Pays Principle and comply with the provisions of Clause 6, Article 4 of the Law on Environmental Protection 2020.

The service of carbon sequestration and storage of ecosystems is one of the services subject to the application of payment for natural ecosystem services under the provisions of the Law on Environmental Protection. The application of payment for carbon sequestration and storage services contributes to the implementation of commitments and objectives such as: (i) the Prime Minister's commitment at COP26 - responding to climate change, restoring Natural recovery must become the highest priority in all development decisions, the highest ethical standard of all levels, industries, businesses and people, aiming for net zero emissions by 2020. 2025; (ii) National Voluntary Commitment (NDC) - Vietnam is expected to reduce emissions by 8% with its own resources by 2030; (iii) goal number 13 of 17 sustainable development goals (SDGs) - timely and effective response to climate change and natural disasters.

Around the world, payment for carbon sequestration and storage services (CES) has been applied by many countries such as Brazil, Indonesia, New Zealand, Papua New Guinea, ... and European countries. However, each country has different regulations on ecosystem ownership, carbon rights stipulated in the constitution, so the approach is different. Therefore, the lessons learned from countries around the world are the documents that need to be studied when formulating a payment policy for carbon sequestration and storage services in Vietnam to achieve the goal of reducing carbon emissions. national emissions.

In Vietnam, the policy of payment for ecosystem services has been stipulated in a number of laws such as the 2017 Forestry Law, the Law on Environmental Protection 2020, and guiding documents; The types of services covered by payment include leisure tourism, mining, aquaculture, carbon sequestration and storage. Services of business tourism, entertainment, aquaculture have been specified in terms of subjects, scope, form and level of payment. For carbon sequestration and storage services, Decree No. 08/2022/ND-CP dated January 10, 2022 of the Prime Minister assigned the Ministry of

Natural Resources and Environment to assume the prime responsibility for, and coordinate with other ministries, ministerial-level agencies submit to the Prime Minister for decision the organization of pilot application of payment for carbon sequestration and storage services of marine ecosystems and wetland ecosystems, as a basis for reporting to the Government. government to decide on the official application.

PES for CES in Vietnam is generally still new and has not been widely applied. Although there are regulations on payment for CES services, detailed regulations and guidelines are still being studied and proposed to be issued in the near future. In order to support MONRE in the process of formulating policies on PES for CES, as a basis for conducting pilot application, promote biodiversity conservation, sustainable development, and respond to climate change in Vietnam. As a result, ISPONRE with the support of HSF has carried out **“Research on international experiences and propose regulations on payment for ecosystem services suitable to Vietnam's conditions (applicable to carbon sequestration and storage services)”**. This study aims to propose the approach and content of regulations on PES for CES based on the process of reviewing and analyzing experience from various countries around the world and the current laws and policies in Vietnam.

2. Highlight the major points of the report

The study is structured in 03 components with the following main contents:

- Chapter 1. Research on the theoretical basis of payment for ecosystem carbon sequestration and storage services;
- Chapter 2. Systematization of international experience and current state of policy and legislation in Vietnam on payment for carbon sequestration and storage services;
- Chapter 3. Proposing the approach and content of regulations on payment for carbon sequestration and storage services.

3. Summarize key results of the report

a. Overview of payment for ecosystem services

The Millennium Ecosystem Assessment identifies four main categories of ecosystem services. These types of services include provisioning, accommodation, support and culture services. These services manifest in a variety of forms, from the specific goods provided by the aquatic ecosystem to more abstract regulatory services such as water treatment, breakwaters, flood control, and multi-maintenance. biological form.

Services provided: are products or goods obtained directly from ecosystems, e.g. fresh water, food, timber, fisheries, timber, fuel, genetic resources, biochemistry, natural medicine and pharmaceuticals.

Regulatory services: are benefits derived from the natural regulation of ecosystem processes. It is the natural regulation of climate and air quality, the effect of forests in controlling erosion or storing water. These services will mitigate the impacts of natural disasters (such as landslides, coral reef effects on tsunamis, water regulation, erosion regulation, water purification, waste regulation, air conditioning). and regulate natural hazards e.g. droughts, floods, storms).

Cultural services: basically non-physical benefits that people derive from the ecosystem through spiritual enrichment, cognitive development, thinking, entertainment and aesthetic experiences, for example: cultural diversity, knowledge system, educational values, social relations, sense of place, cultural heritage and ecotourism. Although such cultural services are compared with a number of other intangible values and values are difficult to measure, they can provide some of the most compelling reasons for conservation. nature.

Supporting Services: These services are necessary for the production of all ecosystem services. These services include primary production and biochemical processes such as photosynthesis, nutrient cycling and water cycling. They differ from service delivery, regulation, and culture in that their impact on people is often indirect or occurs over very long periods of time, while changes in other services have an impact. relatively direct and short-term to humans. Some services, such as erosion regulation, can be classified as both supportive and regulatory services, depending on their duration and the magnitude of their immediate impact on people.

Payments for ecosystem services occur when a user of an ecosystem service makes a payment to the provider of environmental and landscape values created by the ecosystem to protect, maintain and develop the ecosystem. This concept emphasizes the economic value of the benefits from nature described above to humans. Eco-service payment arrangements can be described as a voluntary transaction in which an environmental service is clearly identified and purchased by the buyer (the actors benefiting from the provision of the service. service), if and only if the supplier (local landowner) guarantees the provision of the service (as above). This approach is based on a clear and simple logic: those who benefit from ecosystem services should give back or compensate those who are providing and conserving these services.

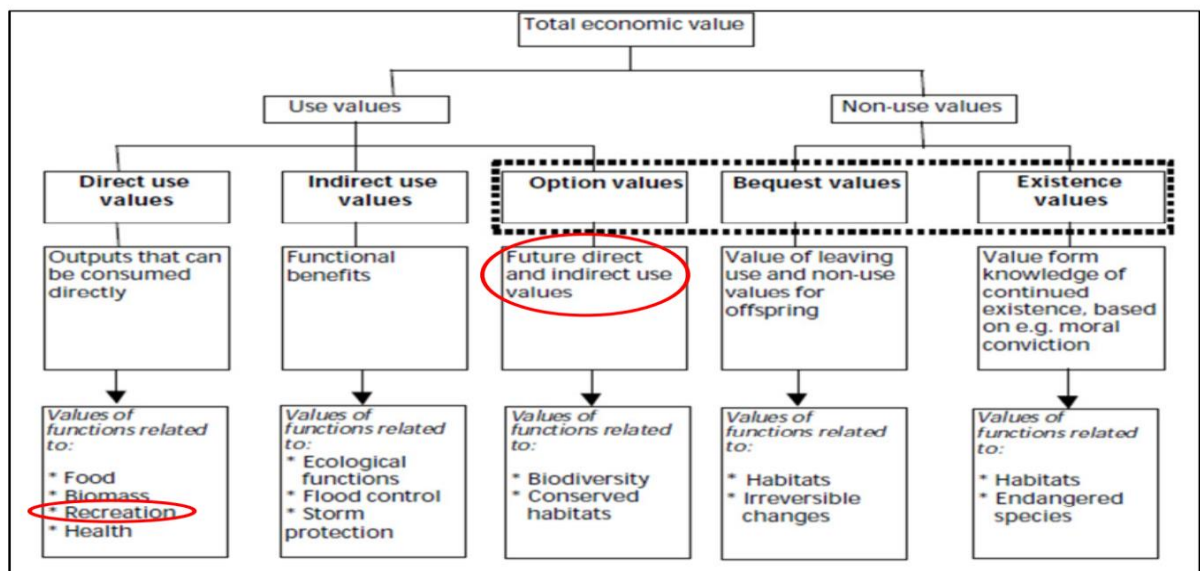


Figure 1. The economic value of nature

* The basic principle of PES is based on the market mechanism and has the following characteristics:

(i) Voluntary transaction between service providers and service users, in which terms are agreed on rules for natural resource management. The government participates in the PES program with the aim of creating mechanisms for transactions to be carried out, not creating administrative mechanisms, forcing parties to participate.

(ii) Conditional transaction: the supplier must ensure to maintain and improve the service provision through the actions and methods of land use as agreed/agreed with the user.

(iii) The level of payment for ecosystem services is determined based on the willingness to pay of users. That is, the user will pay for ecosystem services based on the value they receive from the ecosystem.

* Benefits in making payments for the ecosystem's carbon sequestration and storage services

Making eco-service payments generates direct economic benefits for the participants. The seller has more financial resources to fulfill other goals such as living or carrying out conservation activities for the ecosystem, environmental activities or other social welfare. Buyers (usually industrial enterprises) can also gain the benefits of meeting emissions regulations (buying carbon certificates or offsetting carbon), ensuring regulatory compliance on discharge (possibly at a more affordable cost in the short term); create a positive image to the public. This is also a solution to help businesses have more time to implement technology transformation and operate with less emissions.

Carbon capture and storage services are closely linked to climate change. Paying for carbon sequestration and storage services is another way of looking at benefiting from resources and ecosystems. In the case of afforestation, payment for carbon

sequestration and storage services is one direction for the inefficient use of agricultural land. Forests have the ability to absorb CO₂. Afforestation also offers carbon offsetting opportunities for CO₂-emitting industries, aviation or energy sectors. The forest ecosystem also helps to cool down the hot climate in the dry season.

Payment for ecosystem services creates a sustainable financial mechanism to help entities with resources to carry out activities of ecosystem conservation and restoration, and environmental protection.

b. International experience and best practices in carbon sequestration and storage services

The study has deeply studied regulations, policies, implementation mechanisms and practices of 06 countries around the world including the United States, Brazil, Costa Rica, Indonesia, Australia and China.

No.	Countries	Highlighted results
1	USA	<ul style="list-style-type: none"> - America's Cap-and-Trade program limits air pollution by setting emission reduction targets over time - Regional Greenhouse Gas Initiative - Western Sustainability Exchange in Montana
2	Brazil	<ul style="list-style-type: none"> - Payment for environmental services at Amazon - REDD+ strategy
3	Costa Rica	<ul style="list-style-type: none"> - Financial Management Mechanism of Costa Rica - Benefit sharing mechanism: Social Integration Fund, Comprehensive Sustainable Development Fund
4	Indonesia	<ul style="list-style-type: none"> - Financing mechanism: emission reduction payments will be managed at the national level by the Environmental Fund Management Authority (BLU-BPDLH) through a custodian bank - Benefit-sharing mechanism: use a local Measurement, Monitoring and Reporting (MMR) system and a Monitoring, Reporting and Verification (MRV) system at the national level
5	Australia	<ul style="list-style-type: none"> - Harmonized CO₂ market mechanism in the short term and emission reduction in the long term - Identify the base year of carbon sequestration and storage to compare the soil state of the following years with it
6	China	The payment market for CES in China has been mainly in three forms: (i) carbon offsets for the regulated market as established by the Kyoto Protocol; (ii) sales of voluntary carbon offsets (from LULUCF projects and activities) and (iii) qualified offsetting activities in emerging US regulatory markets operating beyond the Kyoto Protocol

Based on the review results, the study found a necessary gap for Vietnam in the process of developing and implementing a policy on payment for carbon sequestration and storage services such as:

- Paying for ecosystem services of carbon sequestration and storage requires the participation of both the Party and the State.

- Identify beneficiaries and benefit sharing mechanism.

- Identify mechanisms to monitor and evaluate policy effectiveness.

c. Status of Vietnam legislation, policies on PES for CES

The study summarizes the current policies in the Vietnamese legal system related to payment for carbon sequestration and storage services, including:

- The constitution of the socialist republic of Vietnam

- Civil code

- Law on environmental protection

- Law on biodiversity

- Law on fisheries

- Law on forestry

- Law on tourism

- Law fees and charges

- Decree on preservation and sustainable use of wetlands

- Decree guidelines for implementation of the law on fisheries

- Decree detailing and guiding a number of articles of the biodiversity law

- Decree on enforcement of a number of articles of the law on forestry

- Circular elaborating point c clause 1 article 31 of Government's decree No. 66/2019/ND-CP dated July 29, 2019 on preservation and sustainable use of wetlands

Summary of provisions in international treaties related to payment for carbon sequestration and storage services to which Vietnam is a contracting party:

- Convention on Biological Diversity

- The Convention on Wetlands of International Importance, especially as Waterfowl Habitat

- United Nations Framework Convention on Climate Change

- Montreal Protocol

- Convention on the Protection of the Ozone Layer.

According to Vietnam has a system of policy-oriented documents and legal documents related to payment for ecosystem services, creating a full legal corridor. At the same time, the application of payment for carbon sequestration and storage services in Vietnam is also completely consistent with international practices that Vietnam participates in.

c. Proposing the approach and content of regulations on payment for carbon sequestration and storage services

Payment for carbon sequestration and storage services is a mechanism that applies the principle of “beneficiary pays” to ensure fairness between service providers and service users of the ecosystem. This policy has been successfully applied in many countries around the world. Vietnam is also a country that has successfully applied a policy of paying for carbon sequestration and storage services to forest ecosystems. On the basis of research results, theoretical basis, international experience on payment for carbon sequestration and storage services in the world, the study has proposed to apply payment for carbon sequestration and storage services. -bon suitable for Vietnam.

Firstly, based on the ability of ecosystems to absorb and store carbon, the study recommends that ecosystems should be included in the application of a policy of payment for carbon sequestration and storage services including wetland ecosystems. water, marine ecosystems, and forest ecosystems have been regulated under the forestry law.

Secondly, the proposed task is that the subjects that provide and get paid for carbon sequestration and storage are the Natural Reserve Management Boards and the organizations and individuals assigned to manage, protect and maintain the carbon. and development of wetland ecosystems; sea.

Third, the task proposed that the selected payers for carbon sequestration and storage are major greenhouse gas emitters according to Decision 01/2022/QĐ-TTg of the Prime Minister.

Fourth, the form of payment for natural ecosystem services is proposed, including direct payment form and payment form through entrustment. Priority is given to the form of trust through the Environmental Protection Fund because the carbon sequestration area is very large.

Fifth, propose the level of payment for natural ecosystem services. This level of payment is determined on the basis of a voluntary agreement between the supplier and the user of the carbon sequestration and storage service.

Sixth, propose the use and management of payment for natural ecosystem services. The use and management of PES money is decided by the supplier, after fulfilling financial obligations to the State in accordance with the law. In case the supplier is the Nature Reserve Management Board or organizations assigned to manage, protect, maintain and develop the natural ecosystem, the proceeds from the natural ecosystem service, after deducting costs reasonable to protect, maintain and develop the natural ecosystem, the rest shall be transferred to the provincial environmental protection fund or the Vietnam Environmental Protection Fund for localities that have not yet established a provincial environmental protection fund. to coordinate and use for the purpose of protecting, maintaining and developing other natural ecosystems in the province.

Seventh, propose the rights and obligations of organizations and individuals providing carbon sequestration and storage services.

Eighthly, propose the rights and obligations of organizations and individuals using natural ecosystem services. (1) take responsibility before the law for the accuracy of the information provided as a basis for determining the level of payment for carbon sequestration and storage services; (2) pay for carbon sequestration and storage services in full and on time according to the signed natural ecosystem service payment contract; (3) participate in the protection of natural ecosystems in the area where carbon sequestration and storage services are provided; take measures to prevent and control impacts from production and business activities that may affect the natural ecosystem and be responsible for recovering if they cause damage to the natural ecosystem and receive an environmental protection fund. The entrustment school shall notify the payment results in the form of entrustment to organizations and individuals providing natural ecosystem services in the case of payment in the form of entrustment.

4. Recommendations

Outputs of research plays an essential role in the process of developing and promulgating policies related to PES in the near future. This research has identified the necessary contents to propose in the implementation and detailing of regulations on payment for CES. In order to be able to apply proposals in practice, it is supposed that some tasks need to be studied at the coming time as follows:

- To research on the CES capacity to evaluate the amount payment of CES for some specific ecosystems in Vietnam.
- To research role, coordination mechanism of related stakeholders in the implementation of PES for CES policies.
- To develop a map of CES of each area, each region and the whole country./.