Willingness to participate in Payment for Mangrove Environmental Services

Maritime sector and shipping industry stakeholder perspectives

Pham Thu Thuy¹, Dang Le Hoa², Tang Thi Kim Hong², Dang Hai Phuong², Hoang Tuan Long¹, Pham Thi Thuyen², Nguyen Thi Kieu Nuong², Nguyen Thi Van Anh¹, Nguyen Thi Thuy Anh¹ and Pham Thanh Tuan³

Key messages

- Although the shipping industry plays an important role in economic development globally and in Vietnam, its activities also affect the environment.
- The Government of Vietnam has recently introduced many new policies promoting economic development and environmental protection through sustainable development of the shipping industry, including the Green Port Program and a Payment for mangrove environmental services mechanism.
- Port authorities and shipping companies appreciate the roles mangroves play in: reducing greenhouse gas emissions/absorbing CO₂, NO_x, SO_x, PM particles and volatile organic compounds (VOCs); reducing sedimentation and expenditure on dredging; providing clean water; and reducing wave impacts and coastal erosion. Consequently, these companies are willing to participate in a payment for mangrove environmental services mechanism. In fact, many foreign shipping enterprises are actively engaged in replanting and protecting mangroves.
- Though some shipping industry companies are willing to pay for mangrove protection and development, four key factors determine their long-term commitment to and compliance with such a policy. These factors are: transparency and accountability regarding revenues and expenditure; fairness in applying payments for mangrove environmental services to all user groups; disclosure of detailed plans for mangrove maintenance and reestablishment; and policy development based on comprehensive and scientific cost-benefit analyses.
- Foreign and domestic shipping companies differ in terms of their willingness to pay for and ability to apply a payment for mangrove environmental services mechanism. Further studies are needed to analyze these differences and determine optimum measures

Introduction

The shipping industry plays an important role in the global economy, transporting 90% of the world's goods. In many countries, shipping industry contributions constitute the lever for economic development. For example, in Europe, for every EUR 1 million the shipping industry contributes to gross domestic product (GDP), it generates a further EUR 1.6 million supplementary to GDP in helping other industries, and every job created by the shipping industry provides 2.8 jobs to the economy (Goodwin 2016). Vietnam has adopted many policies, including a sustainable development strategy for Vietnam's maritime economy to 2030, with a vision to 2045 (Central Communist Party 2018), focusing on economic development and environmental protection in the maritime sector and shipping industry. Although the maritime economy's contribution to national

GDP remains low at only 0.97% in 2017 (Ministry of Transport 2019), and the Covid-19 pandemic has had a significant impact on shipping, the volume of goods passing through Vietnam's seaports in the first ten months of 2020 still increased by 5% compared to the same period in 2019 (VCCI 2020). Shipping contributes 11% of the overall maritime economy (PetroVietnam 2021).

Vietnam, like many other countries in the world, not only recognizes the important economic contribution of the shipping industry, but also orients its sustainable development, especially regarding the impacts economic activities in the sea transport industry have on water, air, natural ecosystems and human health. On 22 October 2018, the 12th Central Committee of the Communist Party of Vietnam issued Resolution 36-NQ/TW on a sustainable development strategy for Vietnam's maritime economy to 2030, with a vision to 2045. More specifically, with direction from the Prime Minister under Document No. 7220/VPCP-CN dated 30 July 2018 on the study and application of a green, environmentally friendly port development model, Decision 2027/QĐ-BGTVT approved the Green Port Development Project in Vietnam (Ministry of Transport 2020),

1 Center for International Forestry Research (CIFOR)
2 Nong Lam University – Ho Chi Minh City (NLU)
3 Maritime Administration of Ho Chi Minh City

and the Government of Vietnam expects to develop a competitive maritime economy and protect the marine environment in a sustainable manner. At the same time, with the introduction of the Forestry Law 2017 (Government of Vietnam 2017) and Government Decree 99/2010/ND-CP on Payment for Forest Environmental Services (PFES) (Government of Vietnam 2010), government agencies and domestic and foreign academics are exploring the possibility of developing policies to enhance the role of the shipping industry in the protection and development of mangrove ecosystems.

The area and quality of mangroves in Vietnam have declined sharply since 1990, mainly due to economic development in many industries, including shipping (MARD 2017, Pham et al. 2020). Given the strong environmental commitments made by both the global and Vietnamese shipping industries at domestic and international forums, PFES could be a solution for supporting the maritime sector in achieving its environmental sustainability goals.

In Vietnam, a number of studies have looked at PFES for mangroves and the shipping industry (Pham et al. 2020), however, none have looked at the shipping industry's willingness to pay for mangrove environmental services. Based on a literature review and outcomes of a focus group discussion (FGD) involving 15 participants representing 12 institutions, including domestic and foreign shipping lines, port management boards, the Ho Chi Minh City Port Authority, the Vietnam Maritime Administration in Ho Chi Minh City, and several shipping-related businesses, this report presents shipping line and other shipping industry stakeholder views and perspectives on willingness to pay for mangrove environmental services. This study also aims to provide an overview and input for future policymakers, funding bodies and project designers.

Protection and development of mangroves: The shipping industry's primary concerns

Results of the literature review and FGD showed both state agencies and shipping industry businesses affirming that environmental protection is inseparable from maritime activities. Foreign businesses said that implementing commitments to protect the environment, including mangroves, is something companies in the shipping industry want to do.

Shipping line and shipping industry business representatives all recognized the roles mangroves play in lessening air pollution and acting as the lungs of Ho Chi Minh City. They also acknowledged the negative impacts the shipping industry can have on mangrove ecosystems, and were therefore willing to join hands with society in protecting and reestablishing mangroves. However, stakeholders' interest in and knowledge of the roles mangroves play was not proportionate across the board. Some companies (mainly foreign) had actively participated in national and international conferences and events relating to mangroves, and already made specific commitments to protecting and reestablishing mangrove forests. Some domestic companies and logistics service providers were relatively unfamiliar with the roles mangroves play and their potential for solving environmental problems caused by the shipping industry. Through the FGD with 12 state agencies and shipping sector companies, representatives said mangrove environmental services have direct impacts on business activities, by reducing: coastal erosion, wave impact, carbon emissions through absorption, sedimentation, and costs associated with dredging and cleaning water. In fact, many

foreign shipping enterprises have been proactive in setting up funds for – and participating in – mangrove planting across the country as a key environmental protection activity..

Companies are willing to pay for mangrove protection and development, but transparency is an essential precondition

Many business representatives participating in the discussion said that as users of mangrove environmental services, they are not only interested in how much they would have to pay, but more importantly, in the financial transparency of the mechanism and how revenues would be used. Would the scheme be effective, who would be in charge, and would the money really go to those people who protect and replant mangroves? Shipping company representatives participating in the FGD said they would commit to complying with local and state regulations as long as revenues and expenditure were clear. Only with confidence their payments will be used properly and effectively and supported by clear scientific evidence, will they believe and commit strongly to protecting the environmental services that mangroves provide.

Companies are willing to pay for mangrove protection and development, but payment amounts must be based on comprehensive cost-benefit calculations

While companies all expressed their willingness to contribute to protecting the environmental services mangroves provide, potential users of these mangrove environmental services require full scientific analyses of related data, costs and benefits.

Benefits: Representatives of some foreign companies said information on the benefits their payments can provide should be clarified before payments are made. More specifically, if they did pay the prescribed amounts, what environmental benefits would there be?

Costs: Some shipping companies emphasized the necessity of cost estimates in facilitating the determination of what is a reasonable amount to pay for protecting and reestablishing mangroves. In other words, instead of taking the traditional approach by applying a regulation requiring stakeholders to pay for mangrove protection, policymakers should consider actual needs and the costs required to carry out activities effectively. According to the companies participating in the FGD, actual cost calculations would help forest environmental service users determine reasonable levels of payment and ensure amounts are sufficient, because if revenues are too low, it will be difficult to ensure the effectiveness of any proposed mangrove conservation activities. In addition, those companies also emphasized the necessity to review the current tax and fee system – by taking the costs businesses already have to spend and the impacts of the Covid-19 pandemic on the shipping industry into account – to ensure payments are rational and do not have adverse effects on the industry and economic development. Domestic enterprises participating in the FGD also said that any payment amount calculations should consider the fact that Ho Chi Minh City has increased costs for seaport operators and that expenditure for domestic enterprises is already

higher than in other countries in the region and the world. Some companies said that mangrove protection is not the shipping industry's only environmental protection consideration. In fact, the construction of new ships with better environmental protection technology and the transition to low sulfur fuel oil or other alternative fuels will increase costs for many shipping lines. Therefore, payments for protecting mangroves will increase costs for customers and end users.

In addition, according to state agency representatives participating in the FGD, any decisions on payment amounts must comply with legal regulations set by the Ministry of Finance. Although some agencies were concerned that additional fees for mangrove protection and development could reduce the competitiveness of some ports as ships choose alternative ports with lower costs, one port authority representative said environmental commitments are a priority for international corporations, and additional costs for mangrove protection would hardly lead to businesses in the industry choosing other ports instead. One port management representative said a contribution of USD 100-500 per transport for foreign shipping lines to protect mangroves was completely feasible and would pose no difficulty for any shipping line. However, the same representative added that further consideration was necessary on fees for domestic shipping lines.

Potential revenue and expenditure mechanism – Companies are willing to participate in PFES to protect and reestablish mangroves, but it needs to be applied fairly

All companies participating in the FGD confirmed the need for a trust fund for mangrove protection and development, and said if the State establishes such a fund, they would be willing to pay into it. Most companies also said the Maritime Administration of Ho Chi Minh City should be the agency that collects payments for forest environmental services before transferring them to a mangrove protection and development trust fund.

Regarding Port Authority collection from shipping lines, most companies participating in the FGD shared the same views regarding:

Unit of measure: Volume of transported goods. According to some foreign and domestic shipping companies participating in the FGD, volume-based payments collected by the Port Authority would pose no difficulties for businesses or the Port Authority because all businesses are already responsible for reporting goods volumes to the Port Authority.

Categorization of collection rates based on shipping items.

According to shipping businesses, different shipping items have different environmental impacts. Therefore, businesses transporting goods that cause more environmental pollution should pay higher fees. For example, bulk carriers transporting goods such as coal will cause more pollution and should therefore contribute more than container ships. Regulations on charge rates should also be based on the type and age of the vessel, its tonnage, and type of cargo. At the same time, there should be an incentive mechanism and reduced

premium payments for businesses that invest more actively in environmental protection, to encourage them to continue to do so.

Who will have to contribute and pay? Some government agency representatives believed that for easier collection, the PFES mechanism should only be applied to domestic ships because the Port Authority and Sub-Department of Vietnam Maritime Affairs in Ho Chi Minh City already have data and management systems for these businesses. However, according to both international and domestic shipping companies, this would be unfair because all parties involved should share responsibility for protecting the environment. Furthermore, statistics show only 5% of vessels entering and leaving Vietnam are domestic ships, while 95% are foreign. Collecting only from domestic ships would not ensure sufficient funds for replanting and protecting mangroves. Many international shipping companies also affirmed that foreign shipping lines would be willing to contribute to this environmental protection, so Vietnam should collect from both domestic and foreign vessels.

Pay to whom? All companies participating in the FGD said mangrove forest management units should receive payments to plant, maintain, conserve and develop mangrove forests. One international shipping company believed such units could be mangrove forest management boards, youth volunteer units under the Ho Chi Minh City Party Committee, or forest management boards established by communities.

Applying lessons from international experiences. A payment mechanism for mangrove forest environmental services is still a new concept for both state agencies and shipping companies. Many participants in the FGD said more studies on synthesizing international experiences in this field are needed to provide lessons for Vietnam to apply such a mechanism.

Organize regional consultation workshops. FGD participants also believed that in order to apply payments for mangrove forest environmental services to the Ho Chi Minh City port area, it would be necessary to hold regional consultation workshops with shipping industry stakeholders in neighboring provinces such as Ba Ria-Vung Tau and Dong Nai. Doing so would provide useful information for policymakers in deciding payment amounts and avoiding overlapping revenue and expenditure regulations causing difficulties for shipping companies.

Companies are interested in being kept informed about details of mangrove maintenance and development implementation plans

Some companies participating in the FGD said they were well aware of the roles mangroves play in the industry's business activities and were willing to contribute to forest conservation. In collecting payments for mangrove environmental services, it is essential to provide stakeholders with detailed and clear information on plans to maintain and replant mangroves and allocate funds according to a roadmap. More specifically, in order

to carry out a new mangrove planting or conservation project at any given site, it is necessary to accurately calculate and be transparent about minimum area and time requirements, the costs involved in implementing activities, and the effectiveness of results. Another issue potential payers are concerned about is having a roadmap for the implementation of specific activities with detailed annual budget allocations and long-term goals.

Conclusion

The payment for forest environmental services (PFES) mechanism has been implemented in Vietnam since 2008, but so far has not fully considered the potential of mangroves and the essential roles they play. Whereas previous discussions have focused only on the role of mangroves in providing spawning grounds for aquaculture production, our report indicates that large companies operating in the shipping industry are potential users of mangrove environmental services.

The results of a literature review and focus group discussion show that environmental protection is one of the shipping industry's top priorities as both domestic and foreign regulations aim to reduce the negative impacts the industry has on the environment. The fact that companies recognized and agreed on the important roles mangroves play for their businesses, and were willing to pay for conservation and development of forest environmental services shows great potential for Vietnam to realize an applicable financial mechanism. However, in order to apply PFES to the shipping industry, further research and studies are necessary on the views of domestic and foreign shipping companies and central and local governments regarding appropriate mechanisms and policies, together with scientific and practical assessments of the economic and environmental costs and benefits for stakeholders. In addition, important preconditions for ensuring commitments from shipping industry stakeholders and a successful payment for mangrove environmental services mechanism are financial transparency and a robust system for monitoring and evaluating mangrove maintenance and development.

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