ARPA

Asian Review of Public Administration (ARPA)
Volume 33 Issue 2, 144-166
E-ISSN: 3082-5652 P-ISSN: 2094-408X
https://journal.eropa-arpa.co

Market-Based Planning Instruments for Ecotourism Governance: Lessons from Vietnam's National Parks

Mai Duong[1], Ngoc T.B. Duong[2], D. Ary A. Samsura[3], Erwin van der Krabben[4]

[1,2] *Vietnam National University of Forestry, Vietnam*
[3,4] *Radboud University, Netherlands*

ARTICLE INFO:

Received: 25-04-2025
Revised: 30-09-2025
Accepted: 03-10-2025

Keywords:
Ecotourism; environment conservation; market-based instruments; Vietnam;

DOI: https://doi.org/10.64423/arpa.v33i2.67

ABSTRACT

The growth of ecotourism in a forested national park has raised serious negative environmental concerns, while the public sector is increasingly facing challenges in financing forest conservation. Some market-based planning instruments have been applied in Vietnam to manage ecotourism growth and protect forest areas, including a payment for forest environmental services (PFES) scheme and a leasing of forest environments for ecotourism business project. However, it remains uncertain whether these instruments effectively address the overexploitation of resources by tourism development and reduce the funding gap for forest conservation or not. In the attempt to address these issues, the paper investigates three market-based planning instruments, including a cap-and-trade system, transferable development rights as non-monetary compensation, and an auctioning system, to see how well they can manage ecotourism activities in Vietnamese national parks. The results of this study may not only be useful for addressing problems in Vietnam but also for a broader scope, as it expands the general debate on the feasibility of employing a market-based approach to environmental conservation. In doing so, it highlights important governance and policy design questions that are central to public administration in the Asia–Pacific context.

1. Introduction

Ecotourism in national parks has rapidly expanded worldwide, especially in Asia and the Pacific, where forests cover around 20% of the world's land (FAO, 2005). The expansion of ecotourism has positively supported forest conservation by generating financial resources, benefiting nearby communities, and significantly shifting local attitudes and behaviour on conservation issues and environmental protection (Wunder, 1999). Despite its benefits, ecotourism development also poses sustainability issues such as the overuse of natural resources and the expansion of tourism services and infrastructure (Andreopoulou et al., 2015).

Since *Doi Moi*[1] reforms in 1986, ecotourism development in Vietnam has been increasingly promoted, particularly within national parks (NPs) (Suntikul et al., 2010). The growth of ecotourism has generated

[1] Doi Moi, meaning "renovation," refers to the series of economic and political reforms launched in Vietnam in 1986 by the Communist Party of Vietnam focusing on the transition of Vietnam's centrally planned economy to a socialist-oriented market economy, leading to significant economic growth, increased living standards, a surge in foreign trade and investment, and a reduction in poverty.

significant economic benefits for local regions (FAO, 2009), and revenues from forest-based tourism are frequently directed toward forest conservation (Le et al., 2018). At the same time, the rising number of visitors and the environmental pressures associated with the construction and expansion of tourist accommodations continue to strain forest ecosystems (Tran, 2004). In an effort to increase income, many NPs prioritise selling more entrance tickets to areas with good access and infrastructure, often without regard for ecological carrying capacity (Pham & Bui, 2020). As a result, achieving a balance between conservation and ecotourism development remains a persistent challenge, underscoring the importance of sustaining the ecosystem services on which tourism relies. This tension reflects a broader governance dilemma in which public administrators must navigate between economic objectives and the responsible stewardship of natural resources.

Internationally, a market-based approach has been introduced as an alternative solution to support the sustainability of ecosystem service use for tourism development, especially in national parks. Market-based instruments can deal with problems, for example, of environmental protection (Filatova, 2014; Stavins, 2003), biodiversity, and ecosystem conservation (Pirard, 2012), funding for conservation activities (Kroeger & Casey, 2007), and the allocation of resources for conservation in developing countries (Do et al., 2018). In Vietnam, payment for forest environmental services (PFES) and leasing of forest environments for ecotourism businesses have been introduced as market-based instruments to address the challenges of NPs conservation. Nevertheless, the contribution of these instruments remains insignificant (Pham & Bui, 2020). Furthermore, such mechanisms may not solve the overuse of natural resources or resolve the financial constraints facing forest conservation.

Integrating ecosystem services into spatial and land-use planning offers a promising strategy to managing development because planning involves spatial arrangements that accommodate human activities while also ensuring the sustainable use of natural resources and environmental protection. From this perspective, spatial planning is therefore considered critical for regulating ecosystem changes originating from anthropogenic activities (Georgia et al., 2022), such as those associated with tourism development. For public administration, the adoption of market-based instruments raises questions of institutional design, legitimacy, and policy effectiveness, which are central concerns in the governance of ecotourism and natural resources in the Asia–Pacific. Here, we focus on three market-based planning instruments: the cap-and-trade market; the transferable development rights (TDR) program; and the auctioning mechanism.

In the context of this study, the term *tourism development rights* refers to the concrete and legally recognized permissions that national parks in Vietnam can grant to developers under existing regulations. These include the right to develop tourism projects or activities within areas permitted by approved master and land-use plans, the right to operate specific tourism sites inside a national park, and the right to operate tourism-related vehicles or transport services within designated zones. These rights are currently allocated through established mechanisms such as leasing arrangements and cooperation agreements. Because they already function as defined operational permissions within the national park system, they provide a clear and practical basis for examining how quantity-based market instruments could be applied in this context.

Many researches already exist to analyze the implementation of those instruments in urban planning in general, especially in terms of their legitimacy, effectiveness, efficiency, and fairness (Hartmann & Spit, 2015), and the results are varied (see e.g. Colby, 2000; Georgia et al., 2022; Mahendra et al., 2020). However, to date, study on how market-based planning instruments can be applied to manage ecosystem services sustainably continue to be constrained (Georgia et al., 2022; Qiu et al., 2022). In this reseach, we investigate the potential of applying market-based planning instruments to regulate economic activities in

forest areas while contributing to the funding of forest conservation. Vietnam presents itself as a suitable case for study because it might not only provide practical relevance for this study, since the degradation of environmental quality, especially in the forest area of NPs due to ecotourism activities, has become an important issue in the country (see e.g. Khuu et al., 2021; Nguyen et al., 2017), but also some scientific relevance. First, it might provide valuable insights into the debates on the feasibility of using the market-based approach in environmental conservation, particularly in the context that the governance of public policy in Vietnam is still transitioning from a socialist and centralized system to a more open and market-oriented model (Nguyen et al., 2017; Duong et al., 2020). Second, it can expand the debate on how to integrate ecosystem services into the planning context by introducing Vietnam as an empirical case study. Third, the potential application of market-based planning tools can be seen as an attempt to put the Coase theorem into practice in addressing environmental problems.

To achieve its aim, the paper is structured as follows. Section 2 provides a literature review on ecotourism development and the current market-based approach in Vietnam for managing it, including an introduction to the three market-based planning approaches. Section 3 introduces the methodology for the data collection and analysis, followed by the empirical results in Section 4. Finally, a discussion and conclusions of the study is given in section 5

2. Ecotourism development: A brief literature review

This section provides the conceptual background necessary for understanding the governance challenges associated with ecotourism in Vietnam's national parks and clarifies the specific gap that motivates our study. While the introduction outlines the broader context of ecotourism and existing policy mechanisms in Vietnam, this section focuses more directly on three themes: the definition and key issues of ecotourism, the current instruments used to manage ecotourism-related pressures (particularly PFES and forest-environment leasing), and the limited attention in the literature to planning-oriented market instruments such as cap-and-trade, TDR programmes, and auctioning systems. Together, these themes establish why a closer examination of these instruments is relevant and how they differ from existing approaches to ecotourism governance.

2.1. Definition and current issues

In 1991, during the Ecotourism Management Seminar, organized by the International Ecotourism Society (TIES), the term "ecotourism" was defined as "responsible travel to natural areas that conserves the environment and improves the welfare of the local people" (Das & Chatterjee, 2015). Thanks to the potential contribution of ecotourism development to the conservation of natural resources and poverty eradication, ecotourism has been strongly promoted in many countries (Surendran & Sekhar, 2011; Pham & Bui, 2020).

Although the conservation of the environment and the improvement of the local people's welfare have been the primary focus and goals of ecotourism since its inception, many studies around the world have shown that the term ecotourism has been used more as a 'buzzword' to fascinate tourists. At the same time, its practices have led to serious failures by neglecting both the environment and local people. In some areas, the accelerated development of ecotourism without adequate planning and control has been identified as a major driver of intense pressure on natural resources and forests (Lee & Bui, 2018).

In Vietnam, tourism activities in Special Use Forests (SUFs) have also led to environmental problems, such as pollution and forest fires (Nguyen et al., 2016). Pham & Nguyen (2020) have also shown that

some NPs have not yet efficiently exploited their potential for ecotourism development or have not utilised their ecotourism revenues to reinvest in the conservation of the forest ecosystem. For several reasons, the conflict between conservation and development has been identified as a critical issue in the encouragement of tourism in protected areas such as NPs. On the one hand, tourism is a legal right of all people on earth (Mihalič & Fennell, 2015), and tourism is developed to provide direct funds for conservation and create economic benefits for local communities (Schloegel, 2007). From this perspective, restricting tourism activities in protected areas may reduce economic benefits for local communities and limit the funds available for conservation efforts. On the other hand, the encouragement of tourism development causes enormous problems in protected areas related to the resource's overexploitation and pollution. Balancing conservation with regional economic growth while developing ecotourism continues to be a significant challenge for countries such as Vietnam (Tran, 2004).

2.2. Current solutions to deal with the conflicts and problems in ecotourism

In the search for alternative solutions, a market-based approach has been introduced to link the conservation of ecosystem values with the economic benefits of tourism development in NPs (Pham Van, 2016). As mentioned earlier in the introduction, two instruments related to this approach have been particularly created in Vietnam, namely the Payment for Forest Environmental/Ecosystem Services (PFES) and the leasing of forest environments. A more detailed description of those instruments is provided below.

2.2.1. Payment for Forest Environmental/Ecosystem Services (PFES) through tourism

In general, PFES can be seen as a tool that encourages users of natural resources, such as tourism developers and tourists, to pay a price for their use rights. The revenues from PFES schemes have, to a large extent, become a new source of funding for the conservation of natural resources (Duong & De Groot, 2020). PFES has been gaining increasing popularity worldwide as the concept is being promoted by governments and non-governmental organizations, including academics, due to its ability to correct market failures and protect the environment (Arriagada et al., 2018). However, some studies have also raised several criticisms of PFES, indicating that accurately calculating the economic value of ecosystem services can be challenging and complex (e.g., Kosoy & Corbera, 2010; Martin-Ortega & Waylen, 2018). Moreover, Teo (2019) also pointed out that there is a potential for PFES to exacerbate existing inequalities and marginalise vulnerable groups. Martin-Ortega & Waylen (2018) also found that, to date, there is no dominant or uncontested viewpoint on the defining characteristics of PFES that can influence the success of its implementation.

In Vietnam, the PFES scheme was launched nationwide in 2010, following a two-year pilot phase in the provinces of Son La and Lam Dong. Ecotourism businesses related to forest service resources in the country are regulated as one of the four forest service users of the PFES scheme, alongside a hydropower plant, a water supply company, and an industrial water supply factory. Ecotourism encompasses tourism service activities, including tourist transport, accommodation, food services, shopping, sports, entertainment, health establishments, sightseeing, advertising, and other services related to tourists within the forest, which provides the host forest service environment. Additionally, the rate of PFES applied to organisations and individuals involved in ecotourism, recreation, and leisure is minimally equal to 1% of the total revenue generated during the term (Duong & De Groot, 2020). In practice, as depicted in Figure 1, the ecotourism businesses are the PFES's users. These users include tourists, who benefit from, e.g., organised activities to enjoy the landscape and recreation; tourism companies, who benefit from, e.g., conducting tours to the forest; NPs and nature reserves, who benefit from, e.g., selling entrance tickets; and accommodation and

transportation companies, including households, who benefit from, e.g., homestay services. So far, the PFES's providers have been the management boards of the protected areas, who can redistribute PFES income to communities and households that contribute to protecting forest-based tourism areas.

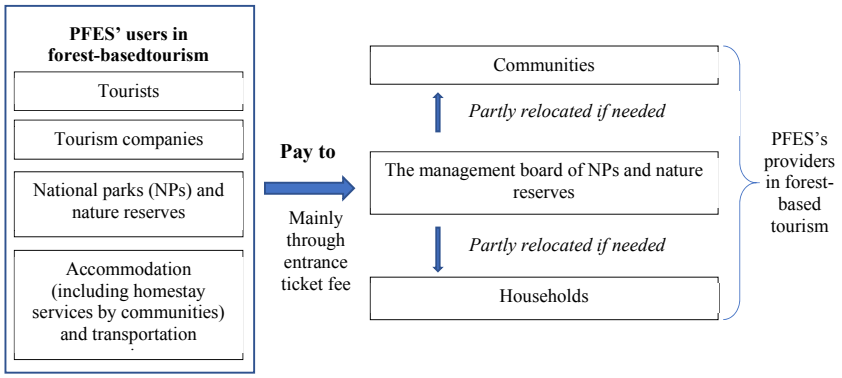

Figure 1. The PFES mechanism in ecotourism in Vietnam
(Source: adapted from Nguyen et al., 2000)

These PFES users can be considered the primary beneficiaries of environmental services. Nevertheless, according to De Groot (2011), local landholders who provide the services directly are rarely rewarded by this user group. In addition, PFES revenues are also intended to financially support forest protection activities that contribute to the conservation of biodiversity and the preservation of the natural landscape's beauty (Pham & Bui, 2020). However, total PFES revenue from ecotourism businesses in the past 10 years has been insignificant, accounting for only 0.7%, equal to about 4.76 million USD[2] (Figure 2).

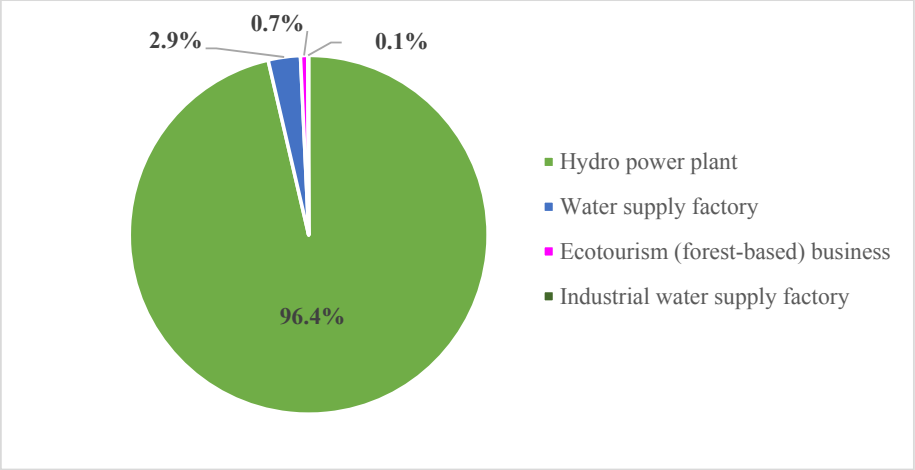

Figure 2. Generated PFES revenue by forest services users in the 2011-2020 period
(Source: Winrock International and VNFF, 2021)

Several main reasons for this have been identified: first, many provinces have not implemented an income collection system because the income is insignificant, due to the poor quality of ecotourism activities (e.g., their small scale, spontaneous nature, and old and monotonous infrastructure). Second, the complexity of various activities in tours makes it difficult to separate which activities are related to forest

[2] 1 USD ≈ 23,100 VND.

services. For instance, if the PFES collection is based on the revenue of accommodation service suppliers, ticket offices, or travel agencies, tourists would have to pay more than twice the cost of a forest-based tour with a single destination if these companies operate independently (Nguyen et al., 2020). Third, there are challenges in determining PFES users who are outside forest areas but benefit from forest-based tourism businesses (Winrock International and VNFF, 2021). This is because boundaries and areas of forests providing FES for tourism companies have not been determined (McElwee & Nguyen, 2014).

Against the above background, ecotourism is still in its early stages and is expected to flourish in Vietnam soon. To increase this income, the current PFES regulation needs to be more specific. Additionally, more research is needed to propose feasible collection mechanisms, and potential zones for ecotourism should be mapped (Winrock International and VNFF, 2021). Explicitly, as suggested by Nguyen et al. (2020) in a rare study on this issue, accommodation services suppliers who, once determined, benefit from forest ecosystem services should pay based on revenues from room rates, and entrance ticket fee collectors at forest-based sites should pay based on revenue from ticket sales, as many protected areas have already been applying.

However, PFES revenues collected from ecotourism remain insignificant. Therefore, it is challenging to determine whether PFES can bridge a financial gap in forest protection (McElwee & Nguyen, 2014). Moreover, the PFES program in Vietnam is designed with the aim of poverty reduction, protection, and conservation of forest ecosystem services (Do et al., 2018). Likely, the scheme does not directly target the problems of overuse of the forest resources consumed by tourism sectors.

2.2.2. Forest Environmental Leasing for Ecotourism Business

In Vietnam, forest owners are allowed to lease forest environments for ecotourism, hospitality, and entertainment services. Within the area designated for lease, developers are permitted to conduct tourism activities; however, they are not allowed to alter the forest land use purposes or harm natural resources within or under the leased area. In exchange for the user rights of the leased area, developers must pay a lease price at a level not lower than 1% of the total realised revenue in the year of the forest environment lessee within the area of the forest environment on the lease (Vietnamese Government, 2018). Hence, as a means of exploiting the value of indirect forest use and as a method of socialising forest environment services, the leasing of forest environments has been implemented in Vietnam, especially in NPs (Bui, 2019).

However, as indicated by Bui (2019), the policy of forest environmental leasing activities has had several positive effects. For example, it has encouraged investment in ecotourism and infrastructure within NPs, reduced investment pressure on the state budget, and generated more revenues from leasing activities. These advantages can lead to growing awareness of forest protection and development among stakeholders.

Despite these positive impacts, forest environmental leasing activities in Vietnam's NPs have some shortcomings. First, regarding economic aspects, revenues from leasing activities are still limited. They accounted for only 0.17% of NPs' total revenue in 2015 (Pham & Bui, 2020). Hence, it is challenging for NPs to rely on leasing to fill the funding gap for forest conservation. Second, in terms of environmental aspects, although environmental leasing activities must follow regulations on environmental protection and the conservation of forest ecosystems and biodiversity, Bui (2019) indicates that the implementation of a leasing policy can lead to negative impacts on the conservation of forest resources and to environmental pollution if it is not well planned and managed. The approval of leasing forest environments for ecotourism projects was blamed for the degradation of forest ecosystems and the loss of forests, as seen in Con Dao National Park (Thang, 2021).

The mentioned solutions are unable to fill the gap in Vietnam's Forest protection funding. Moreover, ecotourism development in the country is viewed as an economic tool rather than a means of protecting biodiversity. It is therefore likely that limiting unsustainable ecotourism activities and the overuse of natural resources is not a top priority. Additionally, the removal of legal but polluted developments in natural areas, such as NPs, remains a controversial issue, as Vietnam encourages investments. Thus, it is important to explore new instruments for Vietnam.

2.3. Market-based planning instruments to trade tourism development rights

Filatova (2014) has classified two main types of instruments for the market-based approach: quantity-based instruments and price-based instruments. A quantity-based mechanism is designed to set a socially optimal level of environmental goods and services and to establish a market to redistribute them to the most efficient use in each location. Therefore, in this quantity system, the price of a permit changes while the total number of permits remains constant (Pizer, 2010). In contrast to a quantity system, a pricing mechanism is designed to put a price on environmental goods and services. Within this system, the price is fixed, while the level of total environmental goods might change (Pizer, 2010). Using this classification, the two market-based mechanisms for NP conservation in Vietnam, the PFES and Forest Environmental Leasing for Eco-tourism Business, discussed earlier, can be seen as part of the pricing mechanism in a market-based approach. As argued earlier, it is apparently difficult to determine whether these two current market-based mechanisms can effectively address the issue of overexploitation of natural resources and reduce the funding gap in forest conservation, especially in Vietnam. Therefore, some alternative market-based mechanisms, especially with the quantity-based instruments, could be considered.

In urban planning, three quantity-based market instruments have been quite commonly used to regulate and manage environmental protection as alternatives to more conventional planning instruments such as zoning, building regulations, and development controls (Di Leva, 2002; Dolona, 2018). These market-based planning instruments include the cap–and–trade market, the Transferable Development Rights (TDR) program as a non-financial compensation mechanism, and the auctioning mechanism. In those three instruments, the goods to be redistributed in the market are development rights. By considering the rights or permits to develop tourism activities as goods, the implementation of such instruments might therefore also be used to protect natural resources and support ecotourism in a more sustainable way (Dolona, 2018).

Similar to many other countries, conventional planning instruments have also been used to manage and control tourism development in the Vietnamese NPs (Le & Bui, 2018; Pham & Bui, 2020). However, in practice, poorly developed planning instruments have resulted in negative externalities on the natural environment in these areas, the loss of biodiversity and ecosystems (Pham & Bui, 2020). Hence, a new and more sustainable approach to planning is needed to develop tourism in natural areas.

In this section, the three market-based planning instruments mentioned above will be discussed in more detail.

2.3.1. The cap-and-trade system

- How the system would work

  In a cap-and-trade system, the authority sets a cap or a maximum quantity limit for certain goods and provides a market to allow the exchange of those goods among the market actors within that cap (Colby, 2000). In the case of ecotourism development, suppose there is a maximum number of tourism development activities allowed in a specific region, which can be considered a cap on development

rights. Using the cap-and-trade mechanism, these rights can be distributed among tourism developers. Some developers might want to expand their activities, and they can only do so by buying the rights from other developers. In this case, the developer who wishes to increase their activities should compensate the other developers to decrease their activities (see Figure 3).

By setting a cap on tourism activities, the system can ensure that tourism development within a region is controlled and sustainable. Developers can apply for additional tourism development rights if such activities can be done sustainably. Second, the system can force developers to invest in sustainable activities. Instead of buying more rights, developers can invest, for instance, in more environmentally friendly facilities and infrastructure. By doing this, the quality of the environment can be controlled while increasing tourism activities.

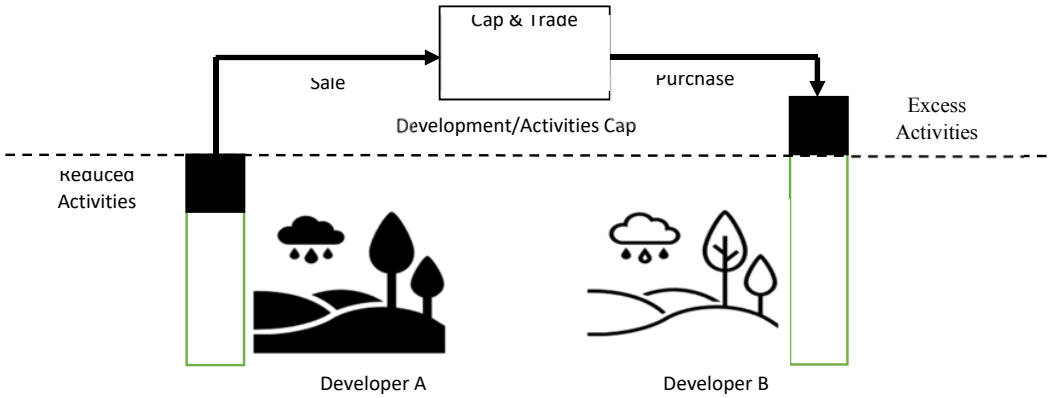

Figure 3. Illustration of the cap-and-trade system
(Source: Authors)

- Example of a cap-and-trade program

  A cap-and-trade mechanism can take the form of certificates for environmental use in tourism development. For example, the government can limit the area of land that can be developed into a skiing area by setting an upper limit in terms of space for skiing and fixing the number of certificates. The authorities allocate the rights to the existing ski area owners and keep the rest for future trading. New ski-lift developers will have to buy developmental rights or permits from the authorities. The trading of such certificates is based on the principle that tourism is a right, and if people have it, they may transfer this right to someone else (Mihaliè & Fennell, 2015). The study of Cashman & Moore (2012) also introduced the application of a cap-and-trade system to control the use of water resources in the hotel and accommodation industry. Under a cap-and-trade approach, a baseline allocation of water resources is established for the entire industry, and each hotel in this industry is given a share of this allocation based on an agreed distribution mechanism. By setting a limit (or cap) on the use of resources, the number of resources might not be affected as the number of users increases. New users or even existing users need to purchase (additional) resource user rights from current rights holders in the existing markets.

2.3.2. Transferable development rights as non-financial compensation

- How the TDR as non-financial compensation works

  TDR as non-financial compensation has been identified as a new planning instrument in recent years. It is used when a government compensates a person or company with an interest in land for the loss

of one or more of the property rights to that land by creating a new property right that they can either use or sell. In other words, instead of directly giving them a certain amount of money, the government grants them a right that is worth a specific sum (Janssen-Jansen & Spaans, 2008). Figure 4 illustrates the operation of a TDR program.

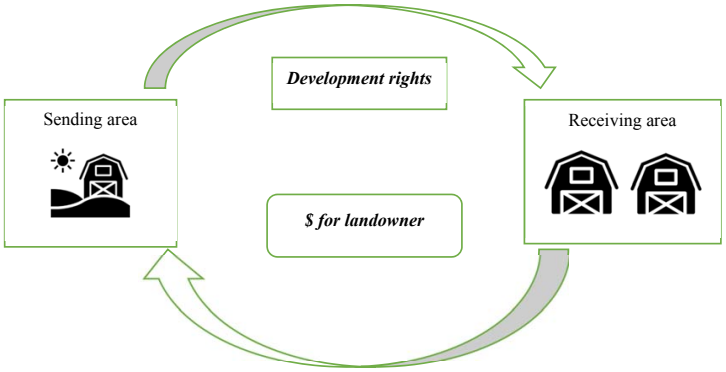

Figure 4. TDR program as non-financial compensation
(Source: Authors' compilation)

TDRs, in general, can be seen as a promising instrument for controlling land use and preserving natural areas (Nelson et al., 2013) without requiring public investment. The use of TDRs as non-financial compensation is a viable option for governments facing financial difficulties, as they can utilise them to compensate landowners in cases of conservation, conversion, and reallocation (Janssen-Jansen & Spaans, 2008). Landowners are compensated for their loss of development rights in one area by obtaining development rights in other areas that can be transferred. Nevertheless, the implementation of TDR, as Walls & McConnell (2007) indicate, faces a considerable challenge, as it is operated based on a voluntary principle. It is therefore challenging to negotiate with developers and persuade them to abandon their development plan, as well as their economic benefits.

- Example of a TDR program

  The TDR instrument has been utilised as a potential tool for balancing built heritage conservation and development in Hong Kong, as its implementation in the region does not hinder new development while pursuing conservation goals (Hou & Chan, 2018). However, the study highlighted the importance of government support, public support, and institutional cooperation in enhancing compact development. As another example, TDR has been implemented in Villasor, Italy, as non-financial compensation to replace buildings incompatible with the historical urban landscape. Based on the granting of bonus development rights to realise on-site or in alternative locations, the application of TDR in Villasor, Italy, has established a model to support the use of a compensation mechanism for the redevelopment of historical settlement values (Colavitti & Serra, 2020).

2.3.3. Auctioning mechanism

- How the mechanism works

  In this mechanism, suppose the government offers several rights to individuals to carry out tourism activities within a specific region. Developers who have already obtained some rights can bid on additional rights in this region to expand their business. The government will grant more rights to those developers who pay the highest price for such rights at auction. The types of rights or commodities

up for auction may include the right to develop additional tourism activities, the right to operate a tourism site, or the right to operate tourism vehicles, among others. An auctioning process is illustrated in Figure 5.

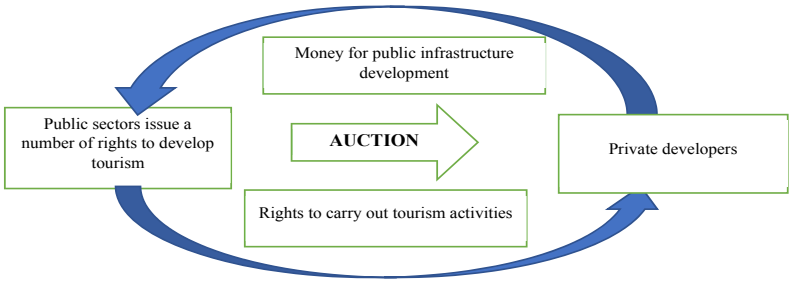

Figure 6. Auctioning rights to conduct tourism activities
(Source: Authors)

First, based on the market principle, auctioning is expected to create fair competition among developers (Deng et al., 2022). Second, by choosing the company that pays the highest price for the right to conduct tourism activities, governments can raise more revenue from auctions and utilise that revenue source to support public infrastructure (Kim, 2018).

- Example of auctioning rights to develop

  An example of auctioning certificates for potential additional construction (CePACs) in Brazil can be used to illustrate our solution. According to Kim (2018), CePACs are issued by cities as a means to monetise the additional development potential of each urban operation involving large-scale areas (typically over 500 ha.) that have building rights[3] over and above the restrictions imposed by the master plan or zoning ordinances. A CePAC certificate is equivalent to a unit of developable space tied to a specific Urban Operation. The total number of CePACs is limited and linked to the total additional developable space. CePAC buyers are often developers, landowners, and other investors in the real estate development market. CePAC buyers can execute their development at any time and/or can sell their certificates on secondary markets. CePACs are sold through online public auctions or private auctions. The government regulates the minimum bidding price for each auction; however, final CePAC prices are market-driven and determined through public auctions (Smolka & Maleronka, 2018).

3. Methodology

3.1. Analytical framework

Planning and managing ecotourism activities within NPs requires *governmental interventions* in the *allocation* and *distribution* of *resources* in forests. To observe the potential of using the Quantity-based Planning Approach to Ecotourism Management, especially in NPs in Vietnam, this study utilised an analytical framework based on four criteria that have been useful to evaluate spatial planning policies and instruments (Hartmann & Spit, 2015; iTDR, 2019). The four criteria include *democratic legitimacy*, *effectiveness*, *efficiency*, and *fairness*. They would be suitable to evaluate planning instruments because:

[3] The right to build at a density up to the basic floor area ratio (FAR) is free, but developers wanting to build at a higher density than the FAR established by the zoning law for a particular area must pay compensation to the city (Smolka & Maleronka, 2018).

- the *governmental* character of spatial planning calls for *democratic legitimacy*,
- an *intervention* needs to be *effective* to be justified,
- the *allocation* aspect links to *efficiency*,
- and the *distributional* aspect requires some consideration of *fairness*

Based on Hartmann & Spit(2015), democratic legitimacy implies that a public intervention should align with the values and interests of the people affected by it. To do so, the decision-making process for determining the intervention should be transparent, inclusive, and conducted in a participatory manner. In terms of effectiveness, an intervention should be able to achieve its intended goals and objectives. Efficiency, on the other hand, refers to the ability of the intervention to achieve those goals and objectives by allocating resources, such as time, money, and labour, in the most optimal way possible. Finally, fairness refers to the equitable distribution of benefits and costs among different stakeholders.

Those four criteria were used to evaluate the potential implementation of the three proposed quantity-based planning approaches for ecotourism management by interviewing key respondents and analysing related public policies in Vietnam.

3.2. Data Collection

A total of 12 interviews were conducted with four groups of respondents, including national park managers, individuals active in the tourism sector, planning experts, and ecotourism experts, from May to July 2021. Due to the COVID-19 pandemic, the interviews were conducted in various types. Detailed information about the lists of respondents and the types of interviews is provided in Table 1 below.

Table 1. Lists of respondents for the interview

Groups of stakeholders		No. of Respondents	Type of Interviews
1. NPs	Ba Vi National Park	1	Face – to – Face interview
	Cat Tien National Park	1	Online interview
	Cuc Phuong National Park	1	Online interview
2. Tourism sector	Hotel investor	1	Phone interview
3. Planning experts	Centre for Nature Conservation	2	Online interview
	Hanoi University of Civil Engineering	1	Online interview
4. Tourism experts			
5. Academics	Institute for Tourism Development Research	1	Online interview
	Vietnam National University of Forestry	2	Face – to - Face interview
		1	Online interview
6. Non-academics	Pan Nature	1	Online interview
Total interviews		**12**	

Although the number of interviews is relatively small, this reflects the study's qualitative aim of obtaining in-depth insights from actors who are directly involved in or knowledgeable about ecotourism governance in Vietnam's national parks. The respondents listed in Table 1 represent groups that are central to understanding institutional conditions and governance feasibility. The selection of three national parks

from different regions of Vietnam further provides contextual variation while allowing the study to explore perspectives that are most relevant to the potential application of market-based planning instruments. The goal of the data collection was therefore not statistical generalisation, but to gather rich and context-specific information from key stakeholders who engage with ecotourism practices and policies in practice. The information gathered from the interview was combined and triangulated with information collected from several available policy documents, as well as the media and previous research, to improve the reliability of the analysis.

4. Results

4.1. General Findings

To date, Vietnam has not yet established a national strategy or comprehensive plan for ecotourism development (iTDR, 2019). Nevertheless, ecotourism activities within national parks (NPs) and special-use forests (SUFs) are governed by several legal instruments, including the Forestry Law, Biodiversity Law, and Tourism Law, as well as a series of related decrees and circulars (iTDR, 2020).

To develop ecotourism activities within their boundaries, national parks must have an approved ecotourism development scheme. The process for implementing tourism activities in nature reserves is illustrated in Figure 7. Ecotourism is permitted only when such schemes are consistent with the approved sustainable forest management plan. However, many NPs initiated ecotourism activities before their development plans were formally approved, and the absence of proper planning has contributed to environmental pressures and resource degradation (Pham & Nguyen, 2020). This indicates a persistent gap between regulatory requirements and actual implementation.

To safeguard forest resources, ecotourism activities are confined to the administrative zone of NPs and must comply with several conditions. Tourism infrastructure, for example, must not harm conservation processes, forest landscapes, or forest trees, and structures used for hospitality services must not exceed 12 meters in height. According to the 2014 Regulation on Forest Management, all construction activities within NPs must follow relevant legal provisions on construction. The Ministry of Agriculture and Rural Development also oversees the allocation of land for agricultural purposes. In strictly protected and ecological restoration sub-zones, high-end tourism infrastructure is prohibited; only limited structures, such as viewpoint posts, signposts, cable cars, and tunnels, are permitted in these sensitive areas.

Consistent with Vietnam's broader shift from a socialist-oriented economy to a more market-driven one, NPs have increasingly encouraged private-sector participation in ecotourism. Developers seeking to obtain tourism development rights may collaborate with NPs, which act as forest owners, or lease forest environments through auctioning processes. Any such development must ensure the protection of natural ecosystems, biodiversity, environmental landscapes, and other forest functions. These regulatory provisions demonstrate Vietnam's intention to adopt market-based mechanisms that allow private developers to acquire tourism development rights. However, most NPs continue to self-organise ecotourism activities rather than partnering with private actors, with self-managed zones accounting for 56 out of more than 60 zones (Vu, 2021).

Ecotourism in Vietnam's national parks is governed by a complex legal framework involving multiple institutions across different administrative levels, and the state retains a central role in the allocation and distribution of spatial and forest resources. While these characteristics may pose challenges for introducing new governance approaches, the government does allow a certain degree of ecotourism development in

forest areas and permits different types of investment to obtain development rights. This suggests that the existing legal framework is, in many respects, supportive of applying quantity-based planning instruments for ecotourism management.

The potential for applying quantity-based planning approaches, namely a cap-and-trade mechanism, an auctioning system, and a TDR program, was also studied through interviews with representative respondents. The results of the interviews were summarised and presented in Tables 2, 3, and 4.

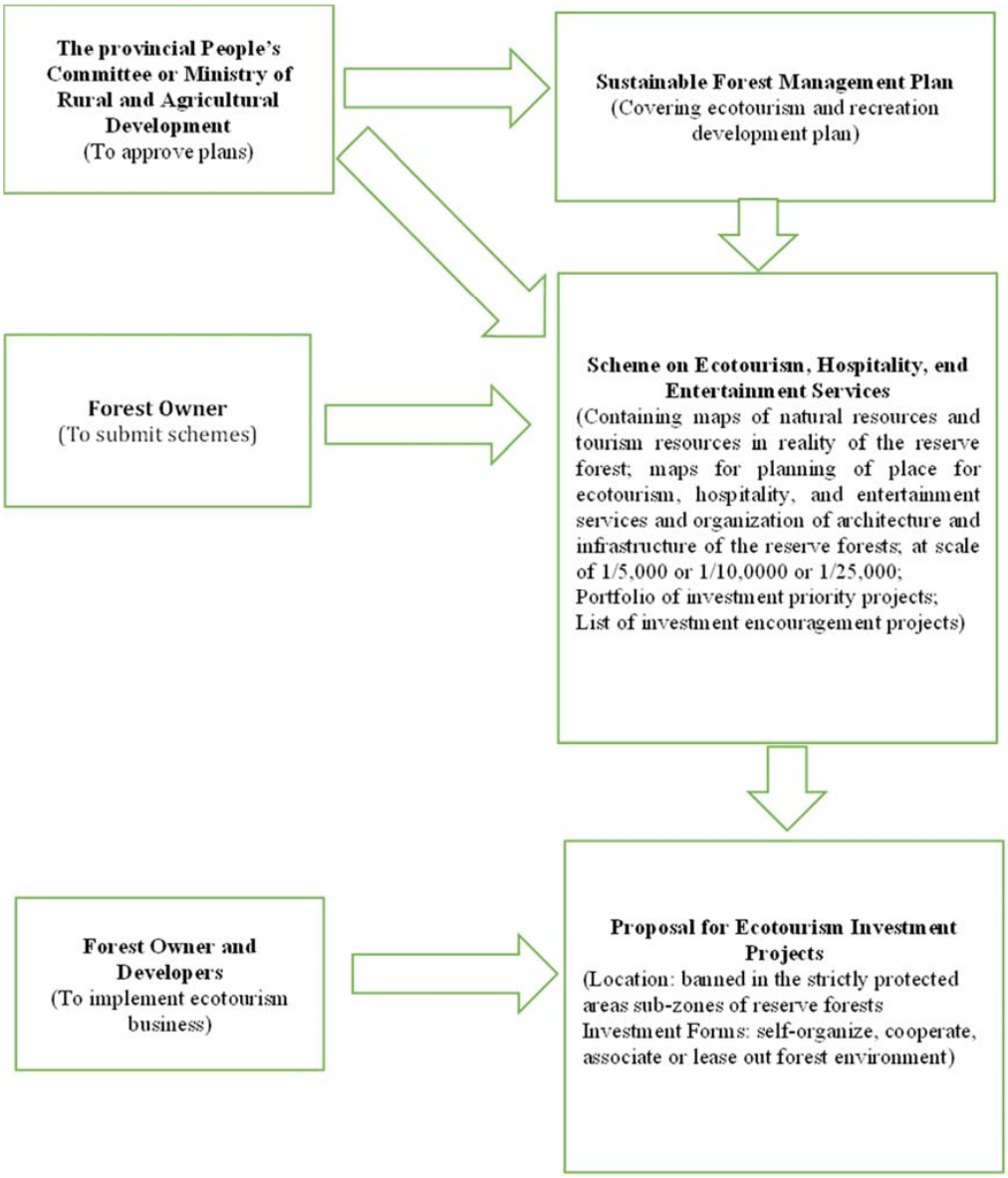

Figure 6. The planning process of ecotourism investment projects in Vietnam's reserve forests, according to Decree No. 156/2018/ND-CP on the enforcement of several articles of the Law on Forestry
(Source: The author)

Based on the feedback provided by the interviewees and the desk analysis, the potential for applying the three market-based planning approaches to manage ecotourism activities in the NPs of Vietnam is discussed in this section.

Table 2. Evaluating the potential for applying a cap-and-trade mechanism

Tools	Role	Assessment criteria			
		Democratic legitimacy	**Effectiveness**	**Efficiency**	**Fairness**
Cap-and-trade	**National Park managers**	Numerous laws and regulations related to ecotourism development State ownership of forest and natural resources makes it impossible to trade development rights on the market-based principle	It needs more regulation to make clear who are the right users and right owners Lack of regulation on the "cap"	How to identify the price of rights	Afraid of loss of state ownership over forest and natural resources
	Tourism companies	A gap between regulation and its practices Based on "xin-cho" practice (ask-give mechanism)	N/A	N/A	N/A
	Academic experts	The decisive role of the state in the right to use natural resources	More regulations on what kind of rights to trade and what criteria to identify such rights are Instead of buying more rights, the government could allow developers to increase in building density	Trading based on a market principle and the identification of a "cap" is most important	The role of the private sector should be taken into account The decisive role of the state as policymaker and resource owner would impact the operation of such a market
	Non-academic experts	The market will depend on the lease for forest environment contract or transfer mechanism The barrier is that the state acts as the owners of all rights and assets in NPs All trades need to be approved by the state	Only trade the rights or services that are not related to or do not impact public common property Make changes in planning and land-use purposes The role of the private sector needs to be enhanced	It is difficult to value the price of rights Need to balance between development and conservation	The state only intervenes once ecotourism activities negatively impact the forest environment Developers informally transfer their business operation to other developers

(Source: Authors)

Table 3. Evaluating the potential for applying an auctioning mechanism

Tool	Assessment Criteria				
	Role	Democratic legitimacy	Effectiveness	Efficiency	Fairness
Auctioning system	National Park managers	Currently, auctioning the lease of forest environments has been implemented to obtain the right to do ecotourism	More analysis is needed on how to calculate the reserve price	How to allocate the revenue from auction is the key concern	The role of the state is significant
	Tourism companies	Doing business is based on a "relationship" rather than a transparent mechanism such as auction	The more transparent, the more attractive and efficient an auctioning system is	Clear benefit-sharing system	A complete legal document and a transparent system would reduce the intervention of the state
	Academic experts	Auctioning to provide services and products in NPs already exists	More regulations on the right to explore in order to prevent overuse	The reserve price should concern not only the price itself but also other factors to develop in a sustainable way	The state acts as the owner of resources and the rights over such resources Everyone can auction tourism development rights
	Non-academic experts	Auctioning the lease of forest environments and the operation of a restaurant has been implemented in Vietnam The current auctioning system does not transfer the ownership of rights; instead, it transfers the user rights	Regulation on the price evaluation of common property is lacking	Chance to get highest revenue for forest protection Auction cannot be an option due to its high level of competition among developers	N/A

(*Source: Authors*)

Table 4. Evaluating the potential for applying a TDR program as non-financial compensation

Tools	Role	Assessment criteria			
		Democratic legitimacy	**Effectiveness**	**Efficiency**	**Fairness**
TDR strategy as non-financial compensation	**National Park managers**	It really depends on what the regulations in leasing contract between national parks and developers are	It could lead to conflict governments and developers in the case of applying a compulsory mechanism.	The most difficult task is to find appropriate location for developers	Negotiation should be based on a market mechanism
	Tourism companies	The contract is a base for any negotiation	If the state is the prior party that cancel the contract, then voluntarily mechanism would be the best option	Suitable compensation in terms of location, business opportunity, and other benefits that developers can receive are decisive factors	Fair and equal power in negotiations
	Academic experts	Regulation of tourism activities in NPs is strictly related to pollution A 30- or 50-year lease contract is a legal framework to solve the problem	The voluntarily mechanism should be applied Planning for the receiving area needs to be transparent and informed A Land Fund for the receiving area is a big concern	Sending area needs to ensure that it is protected A fair compensation policy	Compensation at market price is a barrier for the state budget The application of user rights over land is problematic
	Non-academic experts	The agreement/contract with developers can be the foundation for any negotiation and compensation The approval of a tourism development project in NPs has to take the issues of carrying capacity and pollution into account	If the state changes its planning (for public interest purposes), it is possible to apply TDR solution	Source of funds to protect the sending area	Fair compensation at market price The decisive role of the state in the negotiation process

4.2. Possibility to apply a cap-and-trade mechanism

- *Democratic legitimacy*

  Under current Vietnamese regulations governing ecotourism development, national parks (NPs), as state agencies, retain a monopoly over the allocation of ecotourism development rights. These rights are granted in three forms: self-organisation, cooperation or association, and the leasing of forest environments. In practice, ecotourism activities are predominantly implemented either directly by NPs or through forest-environment leasing arrangements (interview with Respondent 8, June 9, 2021). In contrast, joint ventures, intended to serve as co-business arrangements between NPs and external entities, remain largely theoretical because significant capital contribution barriers hinder their practical implementation. Apparently, NPs in Vietnam are not permitted to use the public assets under their management as capital for such ventures (interviews with Respondent 1, May 20, 2021, and Respondent 2, May 21, 2021).

  However, the Vietnamese regulatory framework demonstrates that the government permits NPs to commercialise access to ecotourism sites and related resources. In this sense, leasing arrangements can be interpreted as a form of market in which tourism development rights are exchanged, enabling developers who place a higher value on these rights to obtain them at prices negotiated with NP management boards. Although decisions to trade or transfer development rights ultimately depend on the terms of individual contracts, the ability of developers to determine values that reflect their interests aligns with the legitimacy conditions associated with cap-and-trade systems (Hartmann & Spit, 2015). This stands in contrast to Vietnam's PFES mechanism, where payment levels are set by the authorities, even though efforts have been made to enhance transparency in the process (Do et al., 2018; Teo, 2019).

- *Effectiveness*

  The market for trading rights to conduct tourism activities in NPs is constrained by several regulatory provisions. In the case of forest-environment leases, for instance, the 2017 Forest Law stipulates that ecotourism development must not result in the loss of state ownership over forests or natural resources, whether on the surface or underground. As a consequence, developers are not permitted to directly trade or transfer their development rights to other parties. They may only transfer the assets they have invested within the leased forest area, which requires voluntarily returning the land to the state so that it can be reassigned to new developers. These rules illustrate the extent of state intervention in the exchange of tourism development rights within Vietnam's NPs. Nevertheless, emerging discussions about introducing cap-and-trade mechanisms in Vietnam indicate that comparable market-based approaches may also be feasible in the context of ecotourism.

- *Efficiency*

  The main concern raised by respondents regarding the implementation of a cap-and-trade system relates to the pricing of development rights. Once developers relinquish their rights to engage in tourism activities, they are expected to use their remaining rights as efficiently as possible (interview with Respondent 6), operating within the "cap" established by various NP regulations. In principle, such a system could benefit both developers and NPs. However, respondents also noted risks, particularly regarding environmental impacts and the potential for resource overuse once the cap is reached. As one respondent stated, "*We really do not know how to deal with the situation of too many tourists. We have a lack of regulation related to overuse, over-carrying capacity, and the limitation of development*

in the park!". Since an intervention must allocate resources such as time, money, and labour in an optimal manner to be considered efficient (Hartmann & Spit, 2015), efforts to apply a cap-and-trade mechanism in Vietnam remain challenging.

- *Fairness*

  The right to conduct certain tourism activities, such as transporting visitors, is currently distributed informally among developers. However, respondents noted that establishing a formal market for trading these rights would require strong government involvement in issuing appropriate policies, given the state's ownership of the underlying resources. This finding suggests that, under current conditions, a cap-and-trade system may not yet satisfy the fairness criterion.

4.3. Possibility to use an auction mechanism

- *Democratic legitimacy*

  The current Vietnamese legal system requires developers to participate in auctions in order to acquire land-use rights and leases. Consequently, developers seeking the right to conduct tourism activities through the lease of forest areas for ecotourism must obtain these rights via the auction system. Respondents noted that auctions for leasing forest environments can be an effective way to generate additional revenue for NPs. However, another respondent pointed out that, at present, auctions may not be the most suitable approach in Vietnam, as current policy priorities favour encouraging developer investment rather than relying on competitive procedures such as auctions.

- *Effectiveness*

  Within the auctioning mechanism, the extent to which revenues from auctions and tourism activities are allocated to infrastructure investment remains unclear. Revenues generated from ecotourism activities in special-use forests may be used according to the following proportions: (1) 25% may be allocated to replacing the state budget's non-business funds and forest management funds, and (2) the remaining 75% may be used for special-use forest management in a prioritised sequence, which includes salary increases for NP staff, support for community development in SUF buffer zones, investment activities, and ecotourism development. According to one respondent, NPs conduct auctions on behalf of the state and assume responsibility for resource management and protection.

- *Efficiency*

  In an auction system, developers lease the development rights in a forest area for a specified period. In exchange, the state receives lease payments to reinvest in tourism facilities. However, the system, as one respondent observed, poses significant risks to NPs ' forest ecosystem because lengthy leasing arrangements weaken conservation efforts despite regulatory safeguards.

- *Fairness*

  As noted earlier, NPs are permitted to use all revenues generated from ecotourism activities, and both public agencies and NPs, acting on behalf of the state, may allocate these funds to infrastructure investment. In principle, auctions should enable NPs to generate substantial revenue. In practice, however, investors with strong connections to NPs may gain preferential access to tourism development rights, while large companies may obtain them through top-down decision-making processes. This suggests that various informal factors may influence the allocation of forest resources for tourism development through auctioning.

4.4. Possibility to implement a TDR program as non-financial compensation

- *Democratic legitimacy*

  It should be noted that any construction within NPs must comply with the master plan, which sets out requirements concerning carrying capacity, pollution control, and waste treatment. Under the current legal framework, developers must cease operations without compensation if their projects violate environmental regulations. Conversely, when the government seeks to discontinue unsustainable or non-ecotourism activities that developers are otherwise permitted to carry out, any compensation for the loss of such rights is determined by the contractual agreement between NPs and the investors, according to respondents. Despite these provisions, respondents also emphasised that, in practice, it is difficult to require developers to withdraw from NPs once they have been granted development rights.

- *Effectiveness*

  The government would first need to persuade developers to relinquish their development rights within NPs to implement TDR. Respondents noted, however, that compensating developers is difficult because of state budget constraints and limited available land for compensation. As a result, state intervention is necessary and should involve adjusting plans for special-use forest zones and possibly acquiring land for other public purposes, according to one respondent. At the same time, plans in the receiving areas—such as the socioeconomic development master plan (approved by the Ministry of Planning and Investment), tourism sector development plans (issued by the Ministry of Culture, Sports, and Tourism), the land-use plan (promulgated by the Ministry of Natural Resources and Environment), and the construction plan (approved by the Ministry of Construction)—should be publicised to attract developers.

- *Efficiency*

  According to one respondent, conservation in Vietnam is presently understood as "conservation to develop, not to remain like the original." Consistent with this view, the Vietnamese government supports investment as part of the development strategy for NPs. Consequently, requesting that investors withdraw from NPs is controversial, particularly when land availability and state budgets are limited. In this situation, respondents noted that providing adequate compensation to developers, whether through alternative locations, business opportunities, or other benefits, is essential. At the same time, the state must ensure that the sending area remains adequately protected.

- *Fairness*

  For a TDR approach to function, the government would need to allocate land and grant developers land-use rights as non-financial compensation. Several respondents, however, expressed concerns about the availability of land for this purpose. One respondent emphasised that compensating investors might require reallocating land from existing users. In light of these constraints, a planning expert suggested that it would be more feasible to encourage developers to invest in more environmentally friendly hotels and resorts within NPs rather than relocating them to other areas.

5. Discussion and Conclusion

Ecotourism in Vietnam has been actively promoted within the NP system since the beginning of *Doi Moi* (Suntikul et al., 2010), and this development has been recognised as a means of generating additional funds for NPs while contributing to sustainable tourism development (Pham & Bui, 2020). Nevertheless, despite these positive impacts, the development of ecotourism within NPs poses several threats, including pollution, loss of forest ecosystems, and overexploitation of natural resources (Duong

et al., 2020; Le & Bui, 2020). To mitigate these threats, Vietnam has enacted stringent regulations to manage ecotourism development. The country has also tried to apply market-based mechanisms for conservation and development, namely the PFES mechanism and the Leasing of Forest Environment for Ecotourism Business plan. By applying these instruments, tourism developers must pay for their use of forest ecosystem services, and the revenues collected from the two systems have been partly reinvested in forest conservation. However, the revenues from these two systems are insufficient to cover the financial gap in forest conservation. Moreover, it appears that the current mechanism does not directly address the overuse of forest resources caused by eco-tourism activities. Hence, in this paper, three market-based approaches—the cap-and-trade mechanism, the TDR program, and the auctioning mechanism—have been proposed for implementation in Vietnam.

Based on desk research and discussions with respondents, some conclusions are drawn regarding the potential application of the three instruments. First, regarding a cap-and-trade mechanism, it is clear that achieving a "pure" market in Vietnam is very difficult. State involvement in the allocation and distribution of resources remains high. More importantly, there is concern about how to evaluate the price of the rights to conduct tourism activities and how to identify the "cap" on forest use for tourism development. However, a cap-and-trade program may be relevant and useful in areas that have not yet reached their carrying capacity. In this case, developers can purchase additional development rights to expand their business without further harming the forest environment. Second, regarding the potential for applying an auction system, the auctioning of rights to conduct tourism activities has already been implemented in Vietnam, specifically through the leasing of forest areas. Thus, it is possible to develop further this auctioning mechanism for other tourism development rights in Vietnam. Additionally, an auctioning mechanism can be applied to areas that still have carry capacity but whose public infrastructure is underdeveloped. However, according to respondents, achieving the objectives of fundraising and forest conservation requires additional requirements for environmental protection and construction. Finally, applying a TDR program poses some challenges in Vietnam's current context. It is worth noting that once developers have tourism development rights in NPs, they obtain user rights to specific areas of these parks. Thus, as respondents noted, tourism projects in NPs often cover large areas of forestland, making it difficult to provide adequate compensation to investors. Furthermore, Vietnam is now encouraging investment in tourism within NPs rather than limiting development. Thus, the implementation of a TDR instrument may not receive sufficient attention from policymakers. This situation can lead to the conclusion that TDR solutions may be suitable in vulnerable areas or when an area is too polluted or its carrying capacity has already been reached. In this case, it might be reasonable to negotiate with the developer to move to other areas. More broadly, the analysis demonstrates how market-based planning instruments can be evaluated not only for their technical potential but also for their governance implications. Beyond Vietnam, these findings are relevant to scholars and practitioners of public administration seeking innovative approaches to address the dilemmas of sustainable development in ecologically sensitive areas across the Asia–Pacific.

References

Andreopoulou, Z., Koliouska, C., Lemonakis, C., & Zopounidis, C. (2015). National Forest Parks development through Internet technologies for economic perspectives. *Operational Research*, *15*(3), 395-421.

Arriagada, R., Villaseñor, A., Rubiano, E., Cotacachi, D., & Morrison, J. (2018). Analysing the impacts of PES programmes beyond economic rationale: Perceptions of ecosystem services provision associated to the Mexican case. *Ecosystem services*, *29*, 116-127.

Bui, T. M. N. (2019). Forest Envrionment Lease in Vietnam: Situation and Policy Recommendations (In Vietnamese: Thuê môi trường rừng ở Việt Nam: Thực trạng và khuyến nghị chính sách). *Journal of Forestry Scientific and Technology*, *5*, 151-157. http://tapchikhcnln.vnuf.edu.vn/documents/5898355/34597293/17.TV.BuiTMinhNguyet.pdf

Bui, T. M. N., Doan, T. H., & Tran, Q. B. (2019). Enhancing the Efficieny of Forest Envrionment Lease in National Parks in North Vietnam (In Vietnamese: Nâng cao hiệu quả cho thuê môi trường rừng tại các vườn quốc gia ở miền bắc Việt Nam). *Journal of Forestry Scientific and Technology*, *3*.

Cashman, A., & Moore, W. (2012). A market-based proposal for encouraging water use efficiency in a tourism-based economy. *International Journal of Hospitality Management*, *31*(1), 286-294. https://doi.org/https://doi.org/10.1016/j.ijhm.2011.05.007

Colavitti, A. M., & Serra, S. (2020). Non-financial compensation for the redevelopment of the historic urban landscape: the case study of Villasor in Sardinia (Italy). *City, Territory and Architecture*, *7*(1), 15. https://doi.org/10.1186/s40410-020-00124-9

Colby, B. G. (2000). Cap-and-trade policy challenges: a tale of three markets. *Land economics*, 638-658.

Das, M., & Chatterjee, B. (2015). Ecotourism: A panacea or a predicament? *Tourism Management Perspectives*, *14*, 3-16.

De Groot, K. (2011). Payments for environmental services (PES) from tourism. *A realistic incentive to improve local livelihoods and sustain forest landscapes in Viet Nam's northern highlands [MSc thesis]. Bogor, Indonesia*.

Deng, Y., Meng, W., Huang, B., & Liu, J. (2022). Auction mechanism on construction land quota with selection on land location. *Plos one*, *17*(1), e0263075.

Di Leva, C. E. (2002). The conservation of nature and natural resources through legal and market-based instruments. *Rev. Eur. Comp. & Int'l Envtl. L.*, *11*, 84.

Do, T. H., Vu, T. P., & Catacutan, D. (2018). Payment for forest environmental services in Vietnam: An analysis of buyers' perspectives and willingness. *Ecosystem services*, *32*, 134-143.

Do, T. H., Vu, T. P., Nguyen, V. T., & Catacutan, D. (2018). Payment for forest environmental services in Vietnam: An analysis of buyers' perspectives and willingness. *Ecosystem services*, *32*, 134-143. https://doi.org/https://doi.org/10.1016/j.ecoser.2018.07.005

Dolana, S. (2018). Ecotourism planning in a wetland of international importance and sustainable territorial development. *Journal of Urban and Landscape Planning*(3), 77-86.

Duong, N. T., & De Groot, W. T. (2020). The Impact of Payment for Forest Environmental Services (PFES) on Community-Level Forest Management in Vietnam. *Forest Policy and Economics*, *113*, 102135.

Duong, T. K., Jones, P. J., & Ekins, P. (2020). A Governance analysis of Con Dao National Park, Vietnam. *Marine Policy*, 103986.

Duong, T.T.M., Samsura, D.A.A., & van der Krabben, E. (2020). Land Conversion for Tourism Development under Vietnam's Ambiguous Property Rights over Land. *Land*, *9*(6), 204.

FAO. (2005). *Global Forest Resources Assessment 2005. Progress towards sustainable forest management.*. https://www.fao.org/3/i0627e/I0627E05.htm

FAO. (2009). Vietnam Forestry Outlook Study. *No. APFSOS II/WP/2009/09*. http://www.fao.org/3/am254e/am254e00.pdf

Filatova, T. (2014). Market-based instruments for flood risk management: A review of theory, practice and perspectives for climate adaptation policy. *Environmental science & policy*, *37*, 227-242.

Georgia, P., Marilena, P., & Doukeni, K. (2022). Ecosystem services in strategic spatial planning: insights from a literature review. *Euro-Mediterranean Journal for Environmental Integration*, *7*(2), 277-285.

Hartmann, T., & Spit, T. (2015). Dilemmas of involvement in land management–Comparing an active (Dutch) and a passive (German) approach. *Land Use Policy*, *42*, 729-737.

Hou, J., & Chan, E. H. W. (2018). Potentials of TDR for Balancing Built Heritage Conservation and Compact Development in Hong Kong. In K. W. Chau, I. Y. S. Chan, W. Lu, & C. Webster, *Proceedings of the 21st International Symposium on Advancement of Construction Management and Real Estate* Singapore.

iTDR. (2019). *Những vấn đề đặt ra trong phát triển du lịch sinh thái ở Việt Nam (Considering issues in ecotourism development in Vietnam)*. http://itdr.org.vn/nhung-van-de-dat-ra-trong-phat-trien-du-lich-sinh-thai-o-viet-nam/

iTDR. (2020). *Chính sách quản lý, phát triển du lịch tại các Vườn quốc gia và khu bảo tồn thiên nhiên Việt Nam (Management and development policies on tourism at National Parks and Nature Reserves of Vietnam)*. http://itdr.org.vn/nghien_cuu/chinh-sach-quan-ly-phat-trien-du-lich-tai-cac-vuon-quoc-gia-va-khu-bao-ton-thien-nhien-viet-nam/

Janssen-Jansen, L., & Spaans, M. (2008). *New instruments in spatial planning: An international perspective on non-financial compensation* (Vol. 23). IOS Press.

Khuu, D. T., Jones, P. J., & Ekins, P. (2021). A Governance Analysis of Con Dao National Park, Vietnam. *Marine Policy*, *127*, 103986.

Kim, J. (2018). *CePACs and Their Value Capture Viability in the US for Infrastructure Funding*. Lincoln Institute of Land Policy, Cambridge, MA.

Kosoy, N., & Corbera, E. (2010). Payments for ecosystem services as commodity fetishism. *Ecological economics*, *69*(6), 1228-1236.

Kroeger, T., & Casey, F. (2007). An assessment of market-based approaches to providing ecosystem services on agricultural lands. *Ecological economics*, *64*(2), 321-332.

Le, T. A., Markowski, J., & Bartos, M. (2018). The comparative analyses of selected aspects of conservation and management of Vietnam's national parks.

Le, X. L., & Bui, X. T. (2018). Ecotourism in Vietnam's National Parks and Nature Preserve Areas: Potential, Challenges and Solutions (In Vietnamese). http://vnppa.org/du-lich-sinh-thai-tai-cac-vuon-quoc-gia-va-khu-bao-ton-thien-nhien-viet-nam-tiem-nang-thach-thuc-va-giai-phap.html

Mahendra, A., King, R., Gray, E., Hart, M., Azeredo, L., Betti, L., Prakash, S., Deb, A., Ashebir, E., & Ibrahim, A. (2020). *Urban land value capture in São Paulo, Addis Ababa, and Hyderabad: differing interpretations, equity impacts, and enabling conditions*. Lincoln Institute of Land Policy.

Martin-Ortega, J., & Waylen, K. A. (2018). PES what a mess? An analysis of the position of environmental professionals in the conceptual debate on payments for ecosystem services. *Ecological economics*, *154*, 218-237.

McElwee, P., & Nguyen, C. T. (2014). Report on 3 years of implementation of policy on PFES in Vietnam 2011-2014.

Mihalič, T., & Fennell, D. (2015). In pursuit of a more just international tourism: the concept of trading tourism rights. *Journal of Sustainable Tourism*, *23*(2), 188-206.

Nelson, A. C., Pruetz, R., & Woodruff, D. (2013). *The TDR handbook: Designing and implementing transfer of development rights programs*. Island Press.

Nguyen, K., Bush, S. R., & Mol, A. P. (2016). The Vietnamese state and administrative co-management of nature reserves. *Sustainability*, *8*(3), 292.

Nguyen, T. B., Van de Krabben, E., & Samsura, D. A. A. (2017). A curious case of property privatization: two examples of the tragedy of the anticommons in Ho Chi Minh City-Vietnam. *International Journal of Urban Sciences*, *21*(1), 72-90.

Nguyen, V. H., Dang, T. T. T., & Nguyen, H. N. (2020). Payment For Environmental Service: An Application in Tourism in Vietnam. *SEAS (Sustainable Environment Agricultural Science)*, *4*(1), 77-87.

Pham, H. L., & Bui, H. T. (2020). Ecotourism and sustainable development in Vietnam's protected areas. *Tourism and Development in Southeast Asia*.

Pham, H. L., & Nguyen, M. H. (2020). Report on Evaluating the current status and the potential for ecotourism development at the Vietnamese National Parks and Natural Reserves system

Pham, T. T., Loft, L., Bennett, K., Phuong, V. T., & Brunner, J. (2015). Monitoring and evaluation of Payment for Forest Environmental Services in Vietnam: From myth to reality. *Ecosystem services*, *16*, 220-229.

Pham Van, D. (2016). Environmental lease services for ecotourism business in Cat Ba National Park, Vietnam. *Journal of Forestry Science and Technology*, *3*.

Pirard, R. (2012). Market-based instruments for biodiversity and ecosystem services: A lexicon. *Environmental science & policy*, *19*, 59-68.

Pizer, W. A. (2010). Choosing price or quantity controls for greenhouse gases. In *The RFF Reader in Environmental and Resource Policy* (pp. 245-254). Routledge.

Qiu, L., Dong, Y., & Liu, H. (2022). Integrating Ecosystem Services into Planning Practice: Situation, Challenges and Inspirations. *Land*, *11*(4), 545. https://www.mdpi.com/2073-445X/11/4/545

Smolka, M. O., & Maleronka, C. (2018). Assessing the monetary relevance of land value capture: the case for charges for additional building rights in São Paulo, Brazil. *RELAND: International Journal of Real Estate & Land Planning*, *1*, 124-133.

Stavins, R. N. (2003). Experience with market-based environmental policy instruments. In *Handbook of Environmental Economics* (Vol. 1, pp. 355-435). Elsevier.

Suntikul, W., Butler, R., & Airey, D. (2010). Implications of Political Change on National Park Operations: Doi Moi and Tourism in Vietnam's National Parks. *Journal of Ecotourism*, *9*(3), 201-218.

Teo, D. D. (2019). Payments for forest environmental service policy and sustainable development: a case study of Vietnam.

Thang, M. L. (2021). *Phía sau nhưng dự án thuê môi trường rừng để kinh doanh, liệu rừng có được an toàn? (Behind the leasing of forest environment projects, is the forest protected?)*. Doanh Nhan Vietnam 247. https://dnvn247.com.vn/phia-sau-nhung-du-an-thue-moi-truong-rung-de-kinh-doanh-lieu-rung-co-duoc-an-toan-d75775.html. Retrieved October 2022

To, P., & Dressler, W. (2019). Rethinking 'Success': The politics of payment for forest ecosystem services in Vietnam. *Land Use Policy*, *81*, 582-593.

Tran, D. L. (2004). Strategic Planning and Standards for Ecotourism Development in Vietnam. Conference proceedings, The Sixth Asian Development Research Forum (ADRF) General Meeting,

Vietnamese Government, Decree No.156/2018/ND-CP on Enforcement of a number of articles of the Law on Forestry (2018).

Vu, T. D. T. (2021). Legal Mechanism for Ecology Tourism Activities in Reserve Forests in Vietnam. *International Journal of Innovation Scientific Research and Review*, *03*(03), 1015-1018.

Walls, M. A., & McConnell, V. D. (2007). *Transfer of Development Rights in US Communities: Evaluating Program Design, Implementation, and Outcomes*. Resources for the Future.

Winrock International Institute for Agriculture Development. Vietnam Forest and Delta Program. Final Report. 2021. *Thematic report on national PFES implementation in the 2010-2020 period and development orientation to 2030*

Wunder, S. (1999). Promoting forest conservation through ecotourism income. *A case study from the Ecuadorian Amazon region. CIFOR. Ocasional paper*(21), 24