sustainability

MDPI

Article

The Discourse of Forest Cover in Vietnam and Its Policy Implications

Thi Kim Phung Dang

Faculty of Social Sciences and Humanities, Ton Duc Thang University, Ho Chi Minh City 72900, Vietnam; dangthikimphung@tdtu.edu.vn

Abstract: As the world's largest ecosystem, forests affect the location, layout, and functionality of human populations worldwide. Despite environmental efforts, forests are being taken down. As socioeconomic issues promote deforestation, sustainable development is a worldwide answer. However, there is still a shortage of information about the manifestation and interconnection of sustainability aspects in a country's forestry and their impact on policy making in developing nations. To address this knowledge gap, this study analyzes the preeminent discourse of forest cover in Vietnam forestry and determines how well it incorporates the three pillars of sustainable development. The various pieces of pertinent material (forestry regulations, reports, articles, statements by government officials and National Assembly representatives in the media, etc.) were analyzed using discourse analysis and thematic analysis. Overall, the findings show that the discourse has evolved through four themes: intercropped supporting trees, multi-purposed trees, replacing afforestation and change from forest cover to tree cover. These themes all exclude ecosystems that must exist beneath forest cover, which is frequently disrupted by the clear cut of fast-growing trees and industrial crops. The institutionalization of the discourse is facilitating legal deforestation by converting natural forest into other land uses, in particular infrastructure with replacing afforestation. The economic coalition, which strategically includes livelihood and social development in their storylines to legitimize forest conversion to other land uses, is winning the discursive struggle for hegemony. The paper concludes with some recommendations to improve Vietnam's forestry policy, making for long-term sustainable development.

Keywords: forestry discourses; discourse analysis; forest cover; multi-purpose tree; replacing afforestation; Vietnam

Citation: Dang, T.K.P. The Discourse of Forest Cover in Vietnam and Its Policy Implications. *Sustainability* **2022**, *14*, 10976. https://doi.org/10.3390/su141710976

Academic Editor: Richard Hauer

Received: 6 August 2022
Accepted: 29 August 2022
Published: 2 September 2022

1. Introduction

A forest is an ecosystem where trees and other woody plants grow in close proximity to one another, making up the majority of this type of plant community [1]. A distinction is made between natural and planted forests. Natural forests are made up of native species that are not managed by humans or managed and used but grow back on their own after being taken [2]. Forest plantations are established by planting and/or seeding in the process of afforestation or reforestation [3].

Forests are widely recognized as the world's largest and most important terrestrial ecosystem, with far-reaching effects on the form and function of human habitat worldwide [4]. Wood and non-wood forest products, as well as the protection of biological diversity, water, and soil resources, all depend on the world's forest resources [2]. Forests provide drainage basins, regular water supplies, and create and retain soil [5]. By absorbing greenhouse gases, forests regulate global and regional temperatures, thereby mitigating the effects of climate change [5]. Forests also have an effect on agricultural and fishery yields by bringing rainfall to inland, providing shelter from wind, and supporting pollination from birds, bats and bees [6]. Hundreds of millions of people around the world rely on the forest for their livelihoods [4] (pp. 2–3).

There has been a rise in environmental awareness and conservation efforts, yet forest loss has continued. An estimated 180 million hectares of forest were cut down or converted to other uses between 1980 and 1995 [2]. Unfortunately, a large portion of the remaining forest is becoming more depleted [4]. The tremendous economic growth in the Asia–Pacific area puts forests at risk [5]. A significant pace of deforestation was centered in tropical areas of Asia and Oceania during the 1990s and early 1990s [4]. Warmer, drier weather and more costly natural disasters occur as a result of forest loss [6].

Because forests are critical to the ecology, economy, and society, they are in crisis [4]. Overexploitation, fragmentation, air pollution, forest insects and diseases, and human-caused fires are all factors contributing to forest degradation and forest land around the world. Reforestation efforts can be accomplished through the use of tree plantations, but critics point out that they lack biodiversity and employ overly intensive growing practices [2].

In the face of forest degradation and deforestation, biodiversity, governance, and sustainable management have been at the core of global forest policy discourses since the 1980s [7]. Diverse species, genes, and ecosystems are now all considered when discussing biodiversity, a term that was first coined in 1986 [8]. Since global deforestation and forest degradation have led to massive loss of biodiversity and decline of ecosystem services [9], those issues thus are frequently brought up in discussions about biodiversity loss, especially in tropical forests, the home to most of the Earth's species [10]. As a contentious concept in global forestry discourses, governance generally refers to a paradigm change from top-down authority to shared decision-making [11]. New governance mechanisms exist in forestry and forest politics [7]. Since the 1990s, new policy instruments and multi-actor, multi-level governance have been increasingly adopted in the field of natural resource management. Additionally, there is room for participation in multi-stakeholder discussion, and deliberative policy making. In response to shifting societal demands and impacts on forests by multiple actors, new international, national, and subnational governance arrangements and transnational policy regimes on international trade, climate change mitigation, and biodiversity protection have emerged to meet demand while mitigating negative impacts [12].

Sustainable development was initially suggested in the 1980 World Conservation Strategy (WCS), which highlighted conservation-oriented development [13]. The concept was popularized in the early 1990s by the Brundtland study *Our Common Future*, which advocated for the integration of economy, society, and ecology [14]. Governments, corporations, and environmental organizations applaud this integration Integrating resource utilization and biodiversity conservation, sustainable forest management helps mobilize stakeholders from different fields, such as loggers, wood processors, timber traders, nature conservationists, affluent consumer countries, impoverished producing countries, etc. [7]. Thus, elements of biodiversity protection and governance are also included in the policy conversations that make up the discourse.

Globally, sustainable development is seen as a remedy to forest loss due to a variety of socioeconomic issues. Sustainable development, a policy buzzword, has become a significant means of bringing about social, political, and environmental change [5]. As a result, a number of initiatives have been launched to develop the criteria for sustainable development in various fields and sectors. A review made by the Food and Agriculture Organization (FAO) reveals that a sustainable forest management strategy can be summarized as the following six criteria: the state of forest resources, biodiversity preservation; forests' well-being and vitality, forest productivity, forest protection functions, and related economic and social needs [15,16]. The main goal of ecologically sustainable forestry is to protect biodiversity, although it is considerably broader [17]. Biodiversity encompasses genetic, species, landscape, and ecosystem diversity [18]. In the past two or three decades, there has been a growing awareness of the values of forests (carbon sequestration and biodiversity) that extend beyond the commercial values of timber and wood products [5].

The concept of sustainable development, which attempts to include global and long-term dynamics of social and ecological systems, is ambitious and ambiguous [19], leaving too many opportunities to interpret the true meaning of sustainability [20]. In addition, when it comes to the three components of environmental preservation, social progress, and economic development, there is potential for positive and negative interactions [13], and they are practically often at odds with one another [20]. Furthermore, controversial interests of different stakeholders frequently conflict within a single pillar of sustainability, and therefore balancing their interests regarding one pillar is sometimes more in the foreground than balancing the three pillars [21]. For that reason, it is widely accepted that implementation of sustainable development can be complex in various contexts [22]. At this point in time, there is still a lack of discussion on how these dimensions of sustainable development are translated into national forest policy, particularly for emerging economies. There is also a lack of knowledge about the ways in which a country's forestry can demonstrate and connect these aspects of sustainable development.

To bridge these knowledge gaps, the paper examined the dominant discourse of forest cover in Vietnam, which considers forest cover as a proxy for the country's forest wealthiness. The case of Vietnam's forestry provides an interesting example to investigate the manifestation of the global discourse sustainable development in its specific national forestry policies. Vietnam adopted a centrally planned system of forest management after gaining its independence in 1945. "*Forests are the property of the entire people and have to be administered by the State*", read Decree No. 15 CT/CTCW of the Central Bureau of the Communist Party of Vietnam in 1961 [23] (p. 89). As the owner of the country's forest resources, the State was responsible for policy making and decision-making in forest protection and management. State forest businesses were in charge of forest operations [24]. Protecting forests from locals, especially those who engage in shifting farming methods, was considered as a risk for the forestry sector [25]. It was during state forestry in the 1970s and 1980s in Vietnam that illicit logging was rampant, as the country's forests had basically become open access resources. In addition, forest management, which was primarily concerned with over-harvesting wood, further degraded forests.

Inspired by dominant global forestry discourses such as sustainable development, forest devolution, and participation, Vietnam's forestry reforms since the late 1980s under the Doi Moi (the political socio-economic renovation in Vietnam since 1986) have indicated a significant shift from state forestry to both state and non-state actors [23] (p. 196). Central actors' decision-making powers have been delegated to provincial governments. Allocation of forest land to individuals, households, and organizations was further legislated by Article 2, the Forest Protection and Development Law in 1991 [26]. However, forest enterprises and forest boards continued to own the majority of forest resources on behalf of the state [27]. After decades of timber over-exploitation, forest rehabilitation emerged as a central focus in the forestry sector. In 1991, with the help of the United Nations Development Program (UNDP), the Food and Agriculture Organization (FAO), and the Swedish International Development Cooperation Agency (SIDA), Vietnam's government proposed the General Forestry Development Plan, which called for a shift from the exploitation of wood to the protection of forest capital [23] (p. 196). Concerns for the loss of biodiversity and environmental services have intensified since the late 1990s, after the country accepted the Convention on Biological Diversity (1994) and other international agreements [24,28].

This article uses discourse analysis and thematic analysis to examine the extent to which the discourse's structuration and institutionalization integrated the three dimensions of sustainable development in Vietnam's forestry, against the backdrop of the country's existing forestry institutional arrangement.

The article is divided into 5 sections. Section 2 outlines the analytical framework and presents the research methods in further detail. Following this, the article provides an analysis of the research findings about the discourse of forest cover in Vietnam's forestry. The policy implications are discussed in Section 4. The final section concludes the article.

2. Materials and Methods

The article's analytical framework is based on Hajer's discourse analysis, which highlights how discursive practices, processes, and institutions understand and debate social concerns. Discourse analysis aims to illuminate how particular frames become dominant in environmental issues. Discourse is "*a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities*" [29]. Discourse influences the conceptualization and debate of policies and problems, as well as policy practices and actions. Discourses determine how policy challenges are framed and what responses are regarded appropriate [30]. Different discourses are represented by their storylines, which is a generative narrative that actors use to provide meaning to physical and social facts [29]. When actors utilize stories to force their definition of a problem on others, propose social stances and behaviors, or critique social arrangements, they are in coalitions [29]. Policy discourse analysis shows that environmental policy is a struggle for discourse hegemony amongst discourse coalitions over the definition and meaning of environmental problems [29].

Discursive hegemony is established through the processes of discourse structuration and discourse institutionalization [31]. Discourse structuration begins when a discourse dominates a society's worldview. Then, discourse institutionalization materializes this worldview into institutions. To examine the structuration and institutionalization of the discourse of forest cover, the article traced the development of various storylines of discourse of various discourse coalitions in association with the three dimensions of sustainable development.

This article presents the findings of qualitative research that takes a detailed look at the various literature relevant to the topic. Based on the analytical framework, the author employed thematic analysis to code and uncover themes and patterns from the storylines of various discourse coalitions linked to the country's forest cover, reforestation, and forest conversion. These themes and patterns were then analyzed in association with the three pillars of sustainable development. In order to discover the pattern of discourse structuration and institutionalization, each of the storylines that make up discourse coalitions were investigated. This was accomplished by finding common threads across the narratives.

Laws pertaining to forests, governmental decrees and decisions, and other forestry regulations, were among the documents compiled. Scientific reports, government reports, national forestry strategies, articles published in scientific journals, and newspaper stories were also consulted. The article looked at the speeches and statements of government leaders to the press on forestry-related issues, the responses of the Ministers to the National Assembly deputies published on the mass media, and the statements of National Assembly deputies reflecting the concerns of their constituents around the issues of re-forestations and forest conversion to learn how different actors frame issues related to the country's forest cover.

3. Results

The section first provides an overview on changes in the country's forest covers over the past 20 years. It then analyzes the structuration and institutionalization of the discourse through narratives of multi-purpose trees and replacing afforestation for forest conversion in the two largest national programs of forest rehabilitation. This section ends with the current changing narrative from forest cover to tree cover.

3.1. Forest Cover Changes in Vietnam

Tracking the state of forests is especially crucial for gaining an understanding of the scale of land cover change because deforestation is one of the most impactful changes in land cover due to the extent to which it impacts biophysical and biological aspects [32]. Forests are tracked using a number of different measures [33], in which the concept of forest cover is widely used in global forestry. Forest cover is the amount of land area

that is covered by forest, which can be measured as relative (in percent) or absolute (in square kilometers/miles) [34]. Although measures of total forest areas alone do not reveal forest quality [4], forest cover is often considered as a proxy for the status of forests in a location/country, as well as the ability of forests to environmental protection, particularly protecting the soil and water resources.

A country's forest cover can be enhanced through the use of plantations as well as the natural restoration of degraded forest lands. Deforestation is one of the many factors that can lead to loss of forest cover [34]. The most common pressures that cause deforestation and severe forest degradation are agriculture, unsustainable forest management, mining, infrastructure projects, and increased fire incidence and intensity [35]. It should be stressed that while afforestation and replanting are viable options for increasing forest cover, research has shown that different types of vegetation offer varied ecosystem services, and natural forests provided higher ecosystem services than planted forests [36].

For many decades, the percentage of land that is covered with forest has served as a proxy for forests' health in Vietnam. At any particular point in time, it is measured as the proportion of a country's, territory's, or community's total natural area that is covered by forested land [37]. Vietnam developed state-owned forestry shortly after gaining independence in 1945. As the sole owner of all the country's forests, the government held the exclusive right to exploit forests. Economic growth through heavy use of timber and forest product was a common topic of discussions among foresters at that time [23]. Logging targets were established at the highest levels of government and were not always based on the growth of natural forests, but rather on demand for wood [23,38]. Excessive logging has resulted in forest loss and degradation. Consequently, the country's forest cover declined from 33% in 1975 [23] to 24.7% in 1992 [39].

Under forestry's reforms, which started in the late 1980s, Vietnam's forest cover has expanded as a result of logging ban of natural forests in 1990, as well as the forest rehabilitation operations that began with the national program in 1992 on regreening barren land and subsequently with the national program on planting five million new forests. Over the past three decades, the amount of land covered by forests has increased steadily in Vietnam, the only Mekong nation to report such a trend [40]. In the year 2020, the percentage of forest cover in Vietnam reached 42.01%; nevertheless, the government of Vietnam has set a goal of increasing the percentage of land covered by forests to 45% by the year 2030 [28] (Figures 1 and 2).

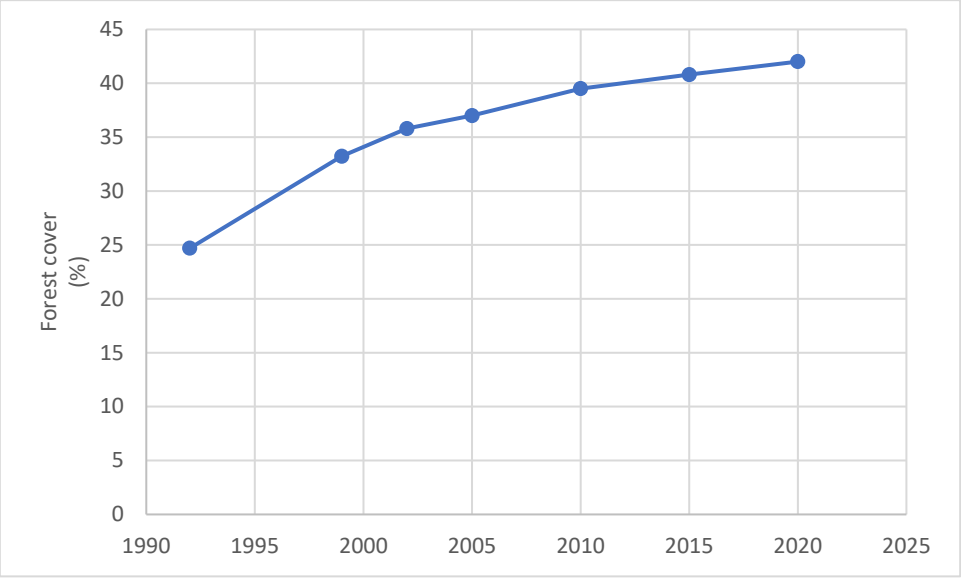

Figure 1. Forest cover change in Vietnam from 1992 to 2020 (Source from: [39,41–47]).

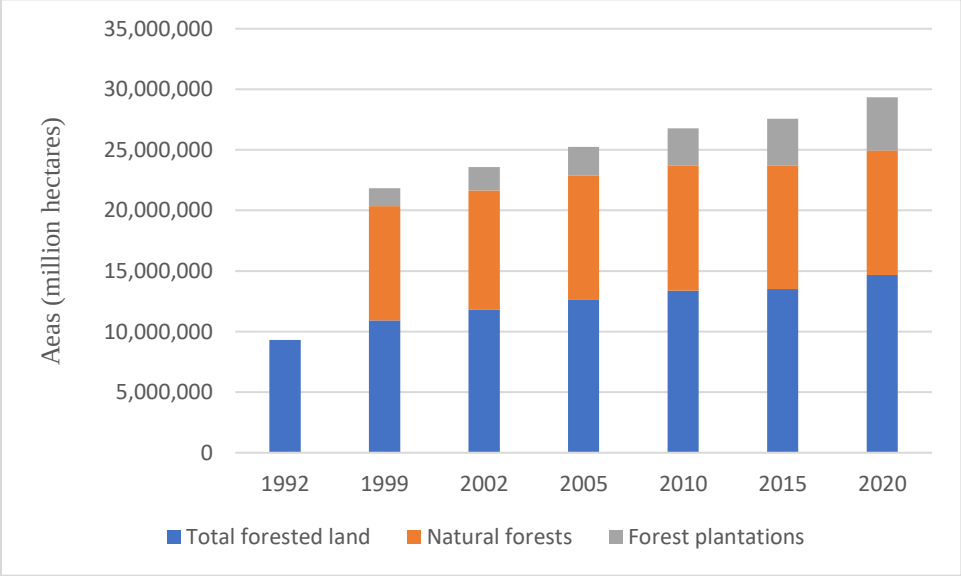

Figure 2. Changes in Vietnam's forest lands from 1992 to 2020 (Source from: [39,41–47]).

3.2. From Intercropped Supporting Trees to Multi-Purpose trees

Since the late 1980s, Vietnam's forestry reform has been implemented in response to the severe depletion of forest resources. The reforms were influenced by the country's open-door policy, which allowed the forestry sector to become more globally integrated through its participation in international treaties and international environmental organizations. Forestry reforms sought to rehabilitate the nation's forest resources, thereby expanding forest cover across the country. In response to the severe deforestation that was occurring at that time, a logging ban was enacted in 1990. The first commitment of forest reform was the national program on the utilization of barren land and hills, alluvial deposit lands, and water bodies (1992–1997) enacted by the Decision of the Chaiman of the Ministers Council (hereby called Program 327). The program aimed to re-green 12.000 barren land after decades of deforestation and timber harvesting [48].

Various actors, each with their own agenda, were involved in the programs. Governmental organizations, local authorities, forestry experts at central institutes and universities, state-owned forestry enterprises, state-owned agricultural enterprises, and companies planting industrial crops were all examples of the types of entities that make up the discourse coalition. While central actors in the Ministry of Forestry and forestry experts insisted on greening of barren land out of concerns for the environment, state agro-forestry enterprises welcomed the program for acquiring new funding for their operations following the sharp cut in state finance [49]. Provincial governments and local authorities valued the initiative as the program financed tree planting, which in turn produced new timber supplies and sources of income for local people [27].

Program 327 justified the re-greening of barren lands and hills for environmental protection [48]. The initiative favored large-scale concentrated afforestation as a technique for expanding forest cover over scattered planting. To encourage local people to participate in tree planting, Program 327 specified the tree composition of forest plantations as follows:

> *About 40% of long-term protection trees are native large trees, with dense canopy, deep roots, long growth cycle. Depending on the conditions in each place, some perennial fruit trees and specialty trees can be intercropped (such as longan, lychee, mango, avocado, jackfruit, star apple, anise. . .). Because those trees have the same effect as large timber trees, they can be counted as native trees. The rest 60% are supporting trees (economic trees), which grow quickly and help improve soil, prevent erosion, create moisture for protection trees. Depending on specific conditions, supporting trees can be fruit trees, spe-*

> *cialty trees, acacia of all kinds. . . They both support the main trees and provide products (flowers, fruit, resin, oil, wood) to increase household income* [50].

The program's description of significant attributes of long-term native trees (such as dense canopy, deep roots, and long growth cycle) demonstrated that it considered that the primary role of forest cover was to serve as a protective barrier. This narrative helped the discourse justify the intercropping of supporting trees in forest plantations.

While the program emphasized the tree component for environmental protection:

> *The planting of protection forests on bare land, bare hills, and steep slopes must be mixed with mixed-species forests, with a group of native trees and appropriate supporting trees forming a multi-story canopy forest for long-term protection. In areas with steep slopes, high rainfall, and critical areas, priority must be given to planting first in order to promote quick protection"* [50].

It highlighted the economic importance of fast-growing forest trees (such as acacia), which would provide products in a short-term period (around 5–10 years), while the harvest of native big trees would take longer (>20 years). To increase income for people planting forests, the program not only allowed the use of fruit trees, perennial industrial crops (rubbers, mulberry, coffee, tea . . .), specialty plants, and medicinal plants in forestry lands, but also argued supporting trees had *"a protective effect like forest trees"* because of their large canopy and vast root systems, which could provide "*quick protection"* for soil erosion and prevent flood:

> *Trees in this project include forest trees and perennial agricultural trees with canopy cover, having a protective effect like forest trees. In order to improve the effectiveness of environmental protection, reduce natural disasters, in association with the requirements of biological diversity and socio-economic efficiency. For production forests and protection forests in less critical areas: Select plants of high economic value (including perennial industrial plants, fruit trees, specialty plants, medicinal plants, etc. with good canopy)* [50].

Following Program 327, Vietnam's national program on planting five million hectares of new forest (1998–2010) enacted by the Prime Minister Decision 661/QĐ-TTg (hereby called Program 661) had the ambitious goal of increasing the country's forest cover to 43% by 2010 [51]. This initiative intended to incorporate the environmental, social, and economic aspects of tree planting while working to increase the country's forest cover to 43% by the year 2010. In terms of environmental considerations, it extended beyond the simple role of forests as a protector and encompassed the role of forests as a conservator of biodiversity. Program 661 set a different storyline in reforestation when aiming to increase the country's forest cover by not only planting 5 million hectares of new forests, but also preserving and promoting the natural regeneration (Figure 3) of Vietnam's existing forests [51].

The establishment of new forests was anticipated to have positive social and economic effects. It hoped to provide more job opportunities, reduce hunger and poverty, promote sedentary agriculture and settlement, and increase the incomes of rural people. Two million hectares of the new forests were set aside for conservation and special use, while the remaining three million hectares were planted in new production forests. The new production plantations were expected to produce wood and other resources for domestic consumption as well as export production, making forestry an important economic sector.

There was a time when the environmental dimension of reforestation seemed to be focused. During the 2000s, coalitions of forestry professionals and international NGOs promoted the establishment of more national parks and reserves to protect biodiversity. Their influence on policy making can be seen in the National Forestry Strategy (2001–2010), which designated half of Vietnam's forests as special-use and conservation forests [42]. A powerful coalition was developed by scientists and policymakers from the National Institute of Forest Planning and Inventory, the Vietnam National Institute of Forestry Science, the World-Wide Fund for Nature (WWF), and Birdlife International. This partnership emphasized conservation-oriented sustainable forest management and protected areas [24].

Figure 3. A regenerated natural forest at the historical relic of Central Office for South Vietnam Base in Tan Bien district, Tay Ninh province, Vietnam (Source from: Author).

However, a significant change happened in 2008, when the Minister of Agriculture and Rural Development (MARD) issued Decree No. 2855, recognizing rubber trees as multi-purpose trees, and thus can be used in forestry [52]. Subsequently, MARD issued Circular No. 76/2007/TTBNN dated 21 August 2007, guiding the conversion of forests and forestry land to rubber plantations in The Central Highlands [53]. Decree 2855 and Circular 76 paved the way for the conversion of poor natural forest into rubber plantation in order to meet the high demand for land in the late 2000s. Trees that served multiple purposes not only provided cover for the soil but also produced other products besides wood. Decree 2855 with the term "multi-purpose tree" has been well received by businesses looking for land to grow rubber and local authorities looking for improvement of local people's incomes since the early 2010s.

In the years immediately following the promulgation of the Decree, there was a nationwide movement to convert degraded natural forests to rubber plantations. At the conclusion of phase 2 of program 661, a total of 38.636 hectares of forest land (26,432 hectares of natural forests and 12,204 hectares of forest plantations) had been converted into different land uses, most notably land for rubber plantations [54]. This conversion however goes against the overall aim of the program: to protect and encourage the natural regeneration of existing natural forests. Despite the fact that members of the environmental coalition, such as forestry experts at universities and research institutes, expressed concern about the conversion of poor natural forests into rubber plantations beginning in the early 2010s, members of the economic coalition, such as companies planting rubber, and local authorities, argued that that conversion helped to alleviate poverty in forested areas [55].

In 2006, the area of planted production forest increased to 68% of the total planted forest area (1,678,867 ha out of 2,463,710 ha) [56]. According to this number, the area covered by multi-purpose trees was growing. In 2012, 2013, and 2014, the Ministry of Agriculture and Rural Development (MARD) began including the areas of rubber trees in forestry lands into the country's forest cover [57–59]. This was clearly inconsistent with the law of forest protection and development 2004, which stipulated:

> *Forest is an ecosystem consisting of a population of forest plants, forest animals, forest microorganisms, forest soil and other environmental factors, of which trees, bamboo or typical flora as main components, have a forest canopy cover of 0.1 or more* [60].

At the National Assembly session on 31 October 2011, the Government's report on the implementation of Program 661 (1998–2010) emphasized that the country's forest cover increased from 32% in 1998 to 39.5% in 2010 and would increase to 44–45% in 2020, in order

to meet environmental requirements for sustainable development [61]. During the session, the Chairman of the National Assembly's Ethnic Council, Mr. Ksor Phuoc, however, was "*very sceptical about the number in the report of the Ministry of Agriculture and Rural Development, especially the area of natural forest"* because there were very few forests in places like Dak Nong, western Thanh Hoa and Nghe An [62]. A reporter of the state media VOV was also concerned about the quality of the increased forest cover and their impacts on the environment because most of the new plantations included industrial trees and paper materials (such as acacia, eucalyptus, and bamboo), which would be cut down after a cycle of 5–10 years and required intensive techniques leaving almost no trees or animals under the canopy [61]. Figure 4 shows the minimal understory vegetation in a forest plantation with intercropped supporting trees.

Figure 4. A forest plantation with main trees (*Hopea odorata*) and intercropped supporting trees (*Acacia mangium*) (Source from: Author).

In the Assembly session on 03 November 2020, delegate Hoang Duc Thang also worried about the quality of forests and its protective function:

> *Along with people's livelihoods and infrastructure development needs, the annual target of forest cover has increased, but not much is said about the quality and ability to keep land, protect water, prevent natural disasters when natural forests and protection forests are increasingly narrow* [62].

In sum, the struggle of the two main discourse coalitions in this period centered around the protective function of forests and the conversion of natural forests into rubber plantations.

3.3. From Replacing Afforestation to Green Tree Cover

Following the legalization of multi-purpose trees in reforestation by Decree 2855 in 2017, there has been a rapid increase in the proportion of forested area that is being converted into rubber plantations as well as other uses of land (hydroelectric dams, highway, roads). The Law of Forestry, which came into effect in 2017, institutionalized this pattern. Although the Law stated that:

> *Forests are managed sustainably in terms of area and quality, ensuring harmony with socio-economic development, national defense and security goals, biodiversity conservation, and increasing forest cover rate, value of forest environmental services and response to climate change* [63].

Article 18 (Changing forest categories), and Article 19 (Changing the use purpose of forests) of the law paved the way to the conversion of forests to other land uses. Article 21 of the law further prescribed replacing afforestation for forest conversion. Even though the Law seemed to be strict that "the project owner must have an area of land without forests planned for the development of protection forests or special-use forests", it opened the door for project owner not to fulfil this requirement by payment for replacing afforestation. The lower level of decision-making in forest conversion also helped project owners to get approval more easily. The People's Councils at the provincial level have the authority to convert less than 20 hectares for watershed protection forests, 50 ha or less for border protection forests, windbreak, and flying sand protection forests, protection forests against waves and sea encroachment, and under 50 ha for production forests. In 2019, Decree 13/2019/TT further specialized the conversion [64].

The legalization of payment for afforestation and decentralization of forest conversion decisions had a significant impact on forests, especially in the upstream areas of mountainous regions. According to Vietnamese state media, more than 50,000 hectares of forest have been cleared to make way for 824 hydropower plants. On average, it takes 59 hectares of forest to build a hydroelectric power plant [65].

Since 2010, forest conversion for changing land uses has increased across the country. Up to 2015, 55/64 provinces and cities of Vietnam had replaced afforestation for changing forest use purposes [66]. According to the Ministry of Agriculture and Development, as of October 2015, 386,290 hectares of forests had been converted to other purposes, such as hydropower construction, mineral exploitation, rubber plantations, agricultural production, and so on [66]. As reforestation was not necessary after forest clearance for rubber plantations, a total of 68,209 hectares were set aside for the endeavor. This figure includes the converted areas for hydroelectric dams (2621 ha), other economic projects (2071 ha), and infrastructure (25,872 ha). As of 20 July 2016, just 44% of the entire area in need of replacing has been completed [67].

Concerns over forest conversion for hydropower projects and replacing afforestation were voiced by various representatives in the National Assembly on 2 November 2020. For example, delegate Truong Trong Nghia (Ho Chi Minh city) said it was necessary to clarify the problem of deforestation for hydropower and the implementation of compensation afforestation because his constituents reported that the owners of the projects first cut down forests to get timber and receive the initial capital necessary to build the dams. He also voiced his worries regarding the impact of the change on the ecosystem, as well as the quality of the planted forest in comparison to the main forest that had previously existed [68]. Delegate Dinh Duy Vuot (Gia Lai) recalled that he had previously advocated against developing minor hydropower, particularly in the Central Highlands, during the second session of the XIV National Assembly. In light of this concern, the Prime Minister has stated that the construction of new small hydropower projects must be restricted. The National Assembly would be consulted on major initiatives involving forested areas [68]. Under public debate, the Ministry of Industry and Trade suggested the removal of the Government to remove 424 projects, suspend 136 projects, and did not consider the planning of 172 main hydropower sites in the master plan [69].

Economic coalition, including Ministry of Industry and Trade, Vietnam Electricity Corporation (EVN), businesses operating hydroelectric dams, provincial governments, insisted that dams helped local economic development and did not cause flooding and environmental impacts. However, social and environmental coalitions, including representatives of National Assembly, environmental NGOs, increasingly blamed hydroelectric dams for deforestation, flooding, and negative impacts on local livelihood.

Delegate Hoang Duc Thang (Head of Quang Tri delegation), for example, said "*Hydroelectricity may not cause floods, but hydroelectricity causes deforestation and creates more severe floods*" [62]. Delegate Phan Thai Binh (Deputy Head of the National Assembly Delegation of Quang Nam Province) asked the government to review the planting of replacing forests and argued that it was not possible to replace protection forests of large trees with other trees [62]. According to the General Department of Natural Disaster Prevention and Control, deforestation and hydropower construction are the causes of flash floods and landslides. From 2010 to 2019, there were 260 flash floods and landslides affecting residential areas, causing serious damage to the population. Economic losses were estimated at tens of trillions of Vietnamese dong [65].

It should be noted that most of the comments in the debate mainly focused on the protective function of forests, and related it to national disasters such as floods and landslides. Only a few mentioned the loss of forest biodiversity due to forest conversion. An example is Mr. Nguyen Huynh Thuat, an environmental expert who campaigned for the cancellation of two large hydropower projects on the Dong Nai river in the Nam Cat Tien national forest area. He argued that most of the places for building hydropower dams were forests, and thus the environmental impacts were serious, and thus the environmental impacts are severe:

> *If building hydropower in forested areas, investors will destroy forests to sacrifice for hydropower. The rivers for hydropower have relatively high slopes and most of them are still forested. If we do so, we must sacrifice the environment, especially biodiversity. Forests are not only trees as we look at them, but also many different species. When we destroy forests, the entire ecosystem serving humans, and other species in the chain, will be destroyed. That would threaten the very existence of humanity*" [65].

He also pointed to the economic problems associated with hydroelectric projects as local people living in the area had to be displaced, often to a more disadvantaged place than where they live. Since most of them live by farming and fishing, they faced more difficulties in their livelihood [65].

With increasing public critics on hydropower dams, the Electricity and Renewable Energy Department under the Ministry of Industry and Trade coordinated with the People's Committees of the provinces to eliminate 8 terraced hydropower projects, 463 small hydropower projects, and 213 potential hydropower locations from 2012 to 2019 [70].

From 2021, a new wave of forest conversion began, with increasing requests from provinces to convert forests to the road construction (especially highways) and other types of infrastructure. For example, to serve the construction of the North–South highway project (2021–2025), the Government proposed to change the use purpose more than 1054 ha of forest land [71] because this is "*a national key project, which is of great significance to the country's socio-economic development*" [71]. On 11 July 2022, the Standing Committee of the National Assembly approved a resolution on the decision on the policy of changing the use purpose of forests, forest land, and rice land of the North–South–East highway construction project in the 2021–2025 period. In addition to agreeing to changing the purpose of using more than 1000 hectares of forests, the National Assembly Standing Committee also allows the conversion of the purpose of using nearly 1900 hectares of forestry land and more than 1500 hectares of wet rice cultivation with two or more crops [72].

Forest conversion for infrastructure and replacing afforestation became popular headlines on social media, highlighting the aim to boost socio-economic development (Table 1).

Table 1. Some typical headlines for forest conversion for North–South highway Project.

March 2021	Quang Nam submitted to the People's Council to convert more than 40 hectares of forest for hydropower, roads, and urban areas [73]
June 2021	Quang Nam would like to convert 25 hectares of forest to make roads in Ngoc Linh ginseng area [74]
July 2021	Ha Tinh submitted to the People's Council to convert nearly 24.5 hectares of forest to build a thermal power plant [75]
February 2022	Lam Dong proposes to convert 486 hectares of forest for highways [76]
	Lam Dong would like to convert more than 186ha of forest to make Tan Phu–Bao Loc highway [77]
March 2022	Quickly change the purpose of land use to make the North–South expressway [78]
April 2022	Binh Dinh and Quang Ngai propose to change the purpose of using more than 85 hectares of forest to make highways [79]
May 2022	The Government proposes to convert nearly 2,592 hectares of forest land and double-crop rice to build the North–South highway [80]
July 2022	Converting more than 1000 hectares of forest to build North–South highway [72]

The economic coalition provided some simple explanations for the environmental impacts of forest conversion into infrastructures. For example, in an article on the Giao Thong online newspaper about the conversion of 167 ha forests for two component projects Bai Vot–Ham Nghi and Ham Nghi–Vung Ang, Mr. Nguyen Trung Son, Head of Technical–Appraisal Department, Thang Long PMU, insisted that "*The conversion of forests to serve the North–South expressway component projects is the optimal solution, ensuring the total project investment is not incurred*". He also said:

> *"As the converted forests were mainly production forests, the conversion has almost no major impact on the environment . . . For the land planned for afforestation, the locality will find another location for planning and replacing"* [81]

This statement was obviously at odds with Vietnam's Forestry Laws in 2004 and 2017 as well as other forestry regulations, which stated that production forests were expected to provide both forest products and environmental protection.

In addition, it was confusing when Mr. Bùi Chính Nghĩa, Deputy Director General of the General Department of Forestry, said:

In order to reduce the environmental impact when using forest land for other purposes, the replacing afforestation may have to be done at a place far away from the actual place of forest conversion, or it can also be planted in another locality in the case the land resource for this activity cannot be arranged [71].

In sum, by highlighting the project of North–South highway as "*Leverage for the country's socio-economic development*" or "*a big "push" for economic restructuring*" [82], the economic coalition was able to legalize and normalize forest conversion in a large scale across the country.

3.4. From Forest Cover to Green Tree Cover

Since the early 2020s, the discourse has begun shifting the central concept of its narratives by talking about tree cover, not forest cover. At the 10th session of the XIV National Assembly, Prime Minister Nguyen Xuan Phuc proposed a project to plant 1 billion trees in the next 5 years in order to reduce the risk of landslides and flooding [83]. The Prime Minister highlighted that it is vital to continue supporting afforestation, forest protection, enhancing forest quality, properly operating reservoirs, and inter-reservoirs, and ensuring safety for production as well as the lives of the people. The Prime Minister also emphasized "*Planting trees to promote national livelihood*" [84].

According to the project *One billion green trees* [85], the majority of new trees will be planted in developed regions, such as cities and industrial zones, as part of this initiative. This was done in recognition of the significance of environmental protection and the fight against climate change. It is noted that those planting sites are different from the locations of the risk of landslides and floodings—mountainous, rural areas—and it is not clear how trees planted in urban areas can facilitate livelihood. The storylines of the discourse in the project also ignored the main cause of natural forest loss in Vietnam. In only 5 years, 2012–2017, the area of natural forest lost due to illegal cutting was 11%, and the remaining 89% was due to the change of forest use purpose in approved projects, in which there were mostly economic development projects [86].

Despite those contradictions, different actors came to social media to frame the shifting storyline from forest cover to tree cover. Protective functions, particularly combating climate change, have become the significance of tree planting. Talking to a reporter from the Government Electronic Newspaper, Dr. Hoang Duong Tung, Chairman of the Vietnam Clean Air Network, said that in urban areas, trees produced fresh air, absorbed CO_2, released oxygen, limited PM2.5 fine dust, making the city more beautiful, and reducing street temperature, as well as the harmful effects of solar radiation [86]. Similarly, Prof. Nguyen Ngoc Lung, a senior forestry expert, said that forests were effective in blocking wind, absorbing flood water, and weakening wind power in storm-stricken areas [86]. In a broader view, the Minister of Natural Resources and Environment–Tran Hong Ha stated:

> *"Planting trees for a green Vietnam for today and future generations is also correcting and overcoming mistakes in dealing with nature during the past long time, making Vietnam become an example, an attractive destination about living in harmony with nature on the world map"* [87].

He also informed the deployment of a new project to restore and develop the green tree system to cope with climate change and environmental pollution [88].

4. Discussion

The conceptualization and debates on forest degradation and policy responses in Vietnam's forestry reforms have been inspired by the rhetoric of forest cover, which shows an attempt to embrace the three dimensions of sustainable development. The discourse structuration has evolved throughout four distinct themes in its storylines concerning the tree component of the cover and its implications on the environmental, social, and economic aspects of forest planting. The first began with the so-called intercropped supporting trees in forest plantations. Those fast-growing trees with short cycles were considered by Program 327 as a key to encourage local participation in long-term reforestation. They also supported the main forest trees and provided quick regreening of barren land. However, intercropping of supporting trees with their intensive cultivation techniques that left no shrubs or wild animals under the canopy implied a serious removal of forest ecosystems under the canopy, which was also frequently disrupted by the harvest of supporting trees. The intercropping of supporting trees thus further decreased the total spectrum of ecological services, despite the increasing forest cover.

The second theme related to the use of multi-purpose trees in forestry, which was legalized during the second phase of Program 661. High profits from industrial trees such as rubbers were touted as the great motivation for local participation in reforestation—a means to alleviate poverty and boost economic development. Rubber trees were considered to provide soil protection by their canopy. Consequently, the use of multipurpose trees shifted tree planting from reforestation to deforestation, because forests are defined by the Forestry Law 2004 as an ecosystem that includes populations of forest plants, animals, microbes, and other components. When compared to the intercropping of supporting trees in forest plantations, the use of multi-purpose trees completely eliminates the forest ecosystems beneath the tree cover. Ecological services that are lost when natural forests are converted to other land uses like rubber plantations cannot be restored through reforestation or afforestation.

The third theme of replacing afforestation was mandated by the Law on Forestry in 2017 and Decree 554, facilitating increasing forest conversion to other land uses, particularly infrastructures from 2010 to present. This theme touted that the conversion of natural forest for hydroelectricity and other infrastructures is essential for socio-economic development. Replacing afforestation in other places was seen as a sufficient means to protect the forest cover and mitigate environmental impacts caused by the conversion. Not only does the theme disregard the fact that ecosystem services differ between natural forests and forest plantations [33], but it is unclear how the environmental impacts of the entire destruction of forest ecosystems in one location are offset by forest planting in another location. Moreover, as replacing afforestation must occur on planned forestry areas, it is evident that this afforestation cannot compensate for the loss of forest land and forest cover resulting from the conversion.

The recently emerged theme of green tree cover is also touted as essential for environmental, social, and economic development. Its narrative also focuses on protective functions of the trees, particularly in reducing air pollution and storing CO_2 in order to combat climate change. Against the backdrop of increasing conversion of forests for infrastructure and insufficient land for large-scale tree planting, the One Billion Tree Project is a reinterpretation and reimagining of the discourse surrounding replacing afforestation. The shifting theme from forest cover to tree cover also illustrates the degradation of biodiversity and forest ecosystem under the tree canopy. Carbon sequestration to combat climate change thus has double duty, as it both diverts attention away from forest degradation and biodiversity loss while also providing an excuse for why tree planting is sufficient. Due to the change of the location for tree planting from forestry areas to urban and industrial areas, the forest cover was replaced by the cover of what is called "Trees Outside Forests" [89]. In this scenario, replacing afforestation is incompatible with the definition of forests, both in terms of location and canopy cover.

In general, the common pattern across the above themes is an emphasis on the protective function of forests, which is entirely related to the tree canopy. Current forest conversion into other land uses in Vietnam should be called its proper name, deforestation, which is defined by the UN Food and Agriculture Organization (FAO) as the permanent removal of forest area by people and the conversion of the land for other uses, such as agriculture or infrastructure [4]. It should be noted that even FAO does not consider logging to be deforestation, because forest can regrow in logged areas [34]. However, once forests are converted to other uses, such as roads or hydroelectric dams, they are lost forever. In this way, the real forest loss and deforestation in Vietnam is being concealed by the notion of replacing afforestation. The discourse storyline not only ignores the fact that forest conversion is the main reason of current natural forest loss across the country [86] but also paved the path for more forest land to be converted into other purposes.

The research findings also illustrate how the discourse of forest cover has influenced policy practices and actions in Vietnam. The focus of the rhetoric on the protective role of forests has paved the way to use of intercropped supporting trees and then multipurpose trees in forest plantations. This is also cited by policymakers as an argument for replacing natural forests with plantations, despite the fact that this would destroy the ecosystems that the natural forests maintained, including the species they housed and the understory vegetation like bushes and small plants. Due to ongoing natural forest degradation, the increased forest cover in Vietnam, which is due primarily to forest plantings, is a poor indicator of the country's actual forest health.

The perception of forests only in its trees seems to be widespread, from developing nations like Vietnam to industrialized nations like Finland, where sustainability considerations also maintain a firm grip in the national forest policy rhetoric [90]. Even at the level of international agreements like the Kyoto Protocol, where its implementation guideline considered no deforestation in the case, closed canopy natural forest was replaced by monoculture plantations of exotic fast-growing trees [91]. Thus, land uses, such as intensive forestry practices in developed countries like Finland [90] or the hidden deforestation seen

when the use purpose of forests in developing countries like Vietnam is altered, contribute to the acceleration of the global biodiversity crisis.

The discourse on forest cover in Vietnam and its policy implications shed light on tensions between the three pillars of sustainable forest management, a previous literature review had identified [20]. In particular, the involvement of multi-stakeholders and the development of industrial crops and infrastructures are incompatible with forest conservation, exemplifying the stated challenges in harmonizing resource exploitation and biodiversity conservation [7]. In addition, the possible friction in one dimension [21] is made clear by the struggles between reforestation and biodiversity loss. Forest degradation in Vietnam thus reflects the hegemony of economic emphasized view in forestry that is still prevalent in both developing and wealthy nations [90]. Despite the fact that the national discourse on forestry lays a focus on multistakeholder engagement in forestry, the social dimensions of Vietnam's sustainable forest development remain poor as long as participatory policy making is still mostly rhetorical.

The study's findings imply intertwined processes between the discursive structure and institutionalization of the discourse in Vietnam's forestry, in contrast to Hajer's discourse analysis, which proposes a linear progression from structuration to institutionalization. The research also highlights the significance of public debates on forestry issues and how the dominant discourse coalition is seeking to shape concerns of forest conversion on social media. The research demonstrates that policy making in Vietnam is still top-down, despite the fact that recent structuration of the discourse of forest cover takes into account the contested viewpoints of National Assembly deputies with the connotation of reflecting the voice of people.

The discourse's embracing of the three aspects of sustainable forest management displayed the struggle of the two main discourse coalitions: the economic coalitions (The Ministry of trade and Industries, The Ministry of transportations, businesses using forest land, governmental organizations, local governments) and the environmental coalition (forest experts, forestry organizations, deputies of the National Assembly). During the discourse structuration and institutionalization, the economic coalition strategically included social development and local livelihood in their storylines when justifying forest conversion for other land uses. Specifically, Decree 2855, Article 18, 19 and 21 of the Law of Forestry 2017 and Decree 19 showed that the economic coalition is significantly winning the discourse structuration and institutionalization.

5. Conclusions

In global forestry, the forest cover percentage is used to measure the state around the world. This fraction also implied the forest ecosystem under the tree canopy and its environmental services. In Vietnam, although the Forestry Laws define forests in a way that also accounts for biodiversity preservation, the ensuing regulations focus primarily on the protective role forests would provide. Storylines about the importance of forests on governmental documents and social media often focus on forests' function as windbreaks, flood barriers, soil conditioners, and reservoirs for purified water. In the early 2020s, the function of tree canopy as C02 sequestration to mitigate climate change was added to the rhetoric. The discourse of forest cover in Vietnam, in general, is structured in a way that ignores the ecosystems that must exist beneath the forest cover. With their storylines exchanging the forest cover with tree cover with emptied ecosystems, the institutionalization of the discourse in The Forestry Law 2017 is facilitating legal deforestation by the conversion of natural forest into other land uses, particularly infrastructure, by replacing afforestation. The term of forest cover can thus be employed strategically to conceal forest loss for economic gains in developing countries, which are making attempts to integrate in the global forestry.

The article analyzes, in detail, the structuration and institutionalization of the discourse on forest cover and its policy implications in Vietnam. Nevertheless, the analysis of forest loss is still limited in terms of forest area and its presumed impacts on the ecosystem

beneath the lost forest canopy. Further research is required to investigate the actual impact of forest conversion to other land uses and replacing afforestation on local forest ecosystems and local livelihoods in various regions of Vietnam.

Funding: This research received no external funding

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: I would like to thank the three anonymous reviewers for their insightful and helpful comments, which helped me greatly enhance the article.

Conflicts of Interest: The author declares no conflict of interest

References

1. Roberson, F.F. *Terminology of Forest Science Technology*; Society of American Foresters: Washington, DC, USA, 1971.
2. Siry, J.P.; Cubbage, F.W.; Ahmed, M.R. Sustainable forest management: Global trends and opportunities. *For. Policy Econ.* **2005**, *7*, 551–561. [CrossRef]
3. Carle, J.; Vuorinen, P.; Del Lungo, A. Status and trends in global forest plantation development. *For. Prod. J.* **2002**, *52*, 12–23.
4. Salim, E.; Ullsten, O. *Our Forests, Our Future*; Cambridge University Press: Cambridge, UK, 1999; pp. 2–3.
5. Palo, M.; Uusivuori, J. (Eds.) *World Forests, Society and Environment*; Springer Science & Business Media: Dordrecht, The Netherlands, 2012; pp. 11–12.
6. Seymour, F.; Busch, J. *Why Forests? Why Now? The Science, Economics, and Politics of Tropical Forests and Climate Change*; Brookings Institution Press: Washington, DC, USA, 2016.
7. Arts, B.; Buizer, M. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *For. Policy Econ.* **2009**, *11*, 340–347. [CrossRef]
8. Haila, Y.; Jari, K. The phenomenon of biodiversity in conservation biology. In *Annales Zoologici Fennici*; Finnish Zoological Publishing Board: Helsinki, Finland, 1994; pp. 5–18.
9. Ciccarese, L.; Mattsson, A.; Pettenella, D. Ecosystem services from forest restoration: Thinking ahead. *New For.* **2012**, *43*, 543–560. [CrossRef]
10. Lewis, S.L. Tropical forests and the changing earth system. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* **2006**, *361*, 195–210. [CrossRef] [PubMed]
11. Pierre, J. (Ed.) *Debating governance: Authority, Steering, and Democracy*; OUP Oxford: Oxford, UK, 2000.
12. De Jong, W.; Galloway, G.; Katila, P.; Pacheco, P. Forestry discourses and forest based development—An introduction to the Special Issue. *Int. For. Rev.* **2017**, *19* (Suppl. S1), 1–9. [CrossRef]
13. Selman, P.H. Responding to the world conservation strategy. *Environmentalist* **1985**, *5*, 263–268. [CrossRef]
14. Langhelle, O. Sustainable development: Exploring the ethics of Our Common Future. *Int. Political Sci. Rev.* **1999**, *20*, 129–149. [CrossRef]
15. Lanly, J.-P. Sustainable forest management: Lessons of history and recent developments. *Unasylva* **1995**, *46*, 38–45.
16. Varma, V.K.; Ferguson, I.; Wild, I. Decision support system for the sustainable forest management. *For. Ecol. Manag.* **2000**, *128*, 49–55. [CrossRef]
17. Lindenmayer, D.B.; Margules, C.R.; Botkin, D.B. Indicators of biodiversity for ecologically sustainable forest management. *Conserv. Biol.* **2000**, *14*, 941–950. [CrossRef]
18. Noss, R.F.; Noss, R.F.; Cooperrider, A. *Saving Nature's Legacy: Protecting and Restoring Biodiversity*; Island Press: Whasington, DC, USA, 1994; pp. 4–5.
19. Voss, J.P.; Newig, J.; Kastens, B.; Monstadt, J.; Nölting, B. Steering for sustainable development: A typology of problems and strategies with respect to ambivalence, uncertainty and distributed power. *J. Environ. Policy Plan.* **2007**, *9*, 193–212. [CrossRef]
20. Koglin, T. *Sustainable Development in General and Urban Context: A Literature Review*; Department of Technology and Society, Lund University: Lund, Switzerland, 2009; pp. 8–12.
21. Hansmann, R.; Mieg, H.A.; Frischknecht, P. Principal sustainability components: Empirical analysis of synergies between the three pillars of sustainability. *Int. J. Sustain. Dev.* **2012**, *19*, 451–459. [CrossRef]
22. Tippett, J.; Handley, J.F.; Ravetz, J. Meeting the challenges of sustainable development-A conceptual appraisal of a new methodology for participatory ecological planning. *Prog. Plan.* **2007**, *67*, 9–98. [CrossRef]
23. MARD (The Ministry of Agriculture and Rural Development). *Lâm Nghiệp Việt Nam (1945–2000)—Quá trình phát triển và những bài học kinh nghiệm [Vietnam Forestry (1945–2000)—The Development and Lessons Learnt]*; Nhà Xuất Bản Nông Nghiệp: Hanoi, Vietnam, 2001.
24. Dang, T.K.P.; Turnhout, E.; Arts, B. Changing forestry discourses in Vietnam in the past 20 years. *For. Policy Econ.* **2012**, *25*, 31–41. [CrossRef]

25. Bien, N.N. *Forest Management Systems in the Uplands of Vietnam: Social, Economic and Environmental Perspectives*; EEPSEA: Singapore, 2001.
26. *National Assembly of Vietnam Luật Bảo vệ và Phát triển rừng [The Law on Forest Protection and Development]*; National Political Publishing House: Hanoi, Vietnam, 1991.
27. Dang, T.K.P.; Van Der Zouwen, M.; Arts, B. Challenges of forest governance: The case of forest rehabilitation in Vietnam. *Public Organ. Rev.* **2019**, *19*, 425–452. [CrossRef]
28. Nguyen, T.T.; Bauer, S.; Uibrig, H. Land privatization and afforestation incentive of rural farms in the northern uplands of Vietnam. *For. Policy Econ.* **2009**, *12*, 518–526. [CrossRef]
29. Hajer, M.A. *The Politics of Environmental Discourse, Ecological Modernization and the Policy Process*; Oxford University Press: Oxford, UK, 1995.
30. Hajer, M.A.; Versteeg, W. A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. *J. Environ. Policy Plan.* **2005**, *7*, 175–184. [CrossRef]
31. Hajer, M.A. Discourse Coalitions and the institutionalization of practice, the case of acid rain in Great Britain. In *The Argumentative Turn in Policy Analysis and Planning*; Fischer, F., Forestet, J., Eds.; Duke University Press: London, UK, 1993; pp. 43–71.
32. Townshend, J.R.; Masek, J.G.; Huang, C.; Vermote, E.F.; Gao, F.; Channan, S.; Wolfe, R.E. Global characterization and monitoring of forest cover using Landsat data: Opportunities and challenges. *Int. J. Digit. Earth* **2012**, *5*, 373–397. [CrossRef]
33. Open Development Vietnam. Forest and Forestry. Available online: https://vietnam.opendevelopmentmekong.net/topics/forest-and-forestry/ (accessed on 19 April 2021).
34. FAO. *Food and Agriculture Organization of The United Nation. Global Forest Resources Assessments 2020-Terms and Definition*; FAO: Rome, Italy, 2018.
35. Pacheco, P.; Mo, K.; Dudley, N.; Shapiro, A.; Aguilar-Amuchastegui, N.; Ling, P.Y.; Anderson, C.; Marx, A. *Deforestation Fronts: Drivers and Responses in a Changing World*; WWF: Gland, Switzerland, 2021; p. 125.
36. Wang, L.J.; Ma, S.; Zhao, Y.G.; Zhang, J.C. Ecological restoration projects did not increase the value of all ecosystem services in Northeast China. *For. Ecol. Manag.* **2021**, *495*, 119340. [CrossRef]
37. GSO (General Statistics Office). *Indicator: Land Coverage (Percentage)*; Nha Xuat ban Thong ke: Hanoi, Vietnam, 2019.
38. MARD (The Ministry of Agriculture and Rural Development). *Forest Sector Manual: Forestry Policy*; The Ministry of Agriculture & Rural Development of Vietnam: Hanoi, Vietnam, 2003.
39. Meyfroidt, P.; Lambin, E.F. Forest transition in Vietnam and displacement of deforestation abroad. *Proc. Natl. Acad. Sci. USA* **2009**, *106*, 16139–16144. [CrossRef] [PubMed]
40. Voices of Mekong Forest (V4MF). Assessing Forest Governance in Vietnam—Identifying Key Challenges and Interventions to Strengthen Governance". Available online: https://data.vietnam.opendevelopmentmekong.net/en/dataset/gi-i-quy-t-cac-thach-th-c-qu-n-tr-r-ng-khu-v-c-song-mekong/resource/0f5c276f-ccf5-47e3-a201-66a191d6b95c?view_id=13999d96-cbb8-4573-a1d5-3479db727adb (accessed on 21 March 2022).
41. FPD (Forest Protection Department). *Hiện trạng sử dụng đất tính đến 31 December 1999 (Theo Quyết định số 03/2001/QĐ-TTg ngày 05/01/2001); [Current land use status as of 31 December 1999 (According to Decision No. 03/2001/QĐ-TTg dated January 5, 2001]*; Vietnam's Forest Protection Department: Hanoi, Vietnam, 1999.
42. MARD (The Ministry of Agriculture and Rural Development). *Chiến lược phát triển lâm nghiệp giai đoạn 2001–2010 [National Strategy for Forestry Development Period 2001–2010]*; MARD: Hanoi, Vietnam, 2001.
43. VNFOREST (Vietnam Administration of Forestry). *Diện tích rừng và đất lâm nghiệp toàn quốc năm 2022. [Current Situation of Land Use and Forest Coverage Nationwide in 2002]*; VNFOREST: Hanoi, Vietnam, 2003.
44. VNFOREST (Vietnam Administration of Forestry). *Tỷ lệ che phủ rừng toàn quốc năm 2005. [The Country's Percentage of Forest Cover in 2005]*; VNFOREST: Hanoi, Vietnam, 2006.
45. VNFOREST (Vietnam Administration of Forestry). *Quyết định số 1828 /QĐ-BNN-TCLN ngày 11 tháng 8 năm 2011 v/v công bố hiện trạng rừng toàn quốc năm 2010. [Decision No. 1828 /QĐ-BNN-TCLN dated 11 August 2011 on Announcing the State of National Forests in 2010]*; VNFOREST: Hanoi, Vietnam, 2011.
46. VNFOREST (Vietnam Administration of Forestry). *Quyết định số 3158/QĐ-BNN-TCLN ngày 27 tháng 7 năm 2016 v/v công bố hiện trạng rừng toàn quốc năm 2015. [Decision No. 3158/QĐ-BNN-TCLN dated 27 July 2016 on Announcing the State of National Forests in 2015]*; VNFOREST: Hanoi, Vietnam, 2016.
47. VNFOREST (Vietnam Administration of Forestry). *Quyết định số 1588/QĐ-BNN-TCLN ngày 13 tháng 4 năm 2021 v/v công bố hiện trạng rừng toàn quốc năm 2020. [Decision No. 1588/QĐ-BNN-TCLN dated 13 April 2021 on Announcing the State of National Forests in 2020]*; VNFOREST: Hanoi, Vietnam, 2021.
48. The Council of Ministers of Vietnam. *Quyết định của Chủ tịch Hội Đồng Bộ Trưởng số 327-CT ngày 15 tháng 9 năm 1992 về một số chủ trương và chính sách sử dụng đất trống đồi trọc, bãi bồi ven biển và mặt nước [Decision of the Chairman of the Council of Ministers No. 327-CT Dated 15 September 1992 on a Number of Guidelines and Policies on the Use of Bare Land, Barren Hills, Coastal Alluvium and Water Surface]*; The Council of Ministers of Vietnam: Hanoi, Vietnam, 1992.
49. Sikor, T. Forest policy reform: From state to household forestry. In *Stewards of Vietnam's Upland Forests: Research Network Report Number 10*; Poffenberger, P., Ed.; Asian Forestry Network: Jakarta, Indonesia, 1998; pp. 118–138.

50. MARD & MoF (The Ministry of Agriculture and Rural Development & The Ministry of Finance). *Thông tư liên bộ Hướng dẫn thực hiện Quyết định số 556/TTg ngày 12 tháng 9 năm 1995 của Thủ tướng Chính phủ về điều chỉnh bổ sung Quyết định số 327/CT (Inter-Ministerial Circular Guiding the Implementation of Decision No. 556/TTg Dated 12 September 1995 of the Prime Minister on Amendments to Decision No. 327/CT)*; MARD & MoF: Hanoi, Vietnam, 1996.
51. GoV (The Government of Socialist Republic of Vietnam). *Quyết định của Thủ tướng Chính phủ số 661/QĐ-TTg ngày 29 tháng 7 năm 1998 về mục tiêu, nhiệm vụ, chính sách và tổ chức thực hiện chương trình trồng mới 5 triệu ha rừng [Prime Minister's Decision No. 661/QD-TTg dated 29 July 1998 on Objectives, Tasks, Policies and Organization of Implementation of the Program of Planting 5 Million Hectares of New Forest]*; The Government of Socialist Republic of Vietnam: Hanoi, Vietnam, 1998.
52. MARD (Ministry of Agriculture and Rural Development). *Quyết định số 2855/QĐ-BNN- KHCN ngày 17 tháng 9 năm 2008 về Công bố việc xác đinh cây cao su là cây đa mục đích [Decision No. 2855/QD-BNN-KHCN Dated 17 September 2008 on Announcement of the Identification of Rubber Trees as Multi-Purpose Trees]*; MARD: Hanoi, Vietnam, 2008.
53. MARD (The Ministry of Agriculture and Rural Development of Vietnam). *Thông tư số 76/2007/TTBNN ngày 21 tháng 8 năm 2007, về việc hướng dẫn việc chuyển rừng và đất lâm nghiệp sang trồng cây cao su ở Tây nguyên [Circular No. 76/2007/TT BNV Dated 21 August 2007, Guiding the Conversion of Forests and Forestry Land to Rubber Plantations in the Central Highlands]*; MARD: Hanoi, Vietnam, 2007.
54. MARD (Ministry of Agriculture and Rural Development). *Báo cáo kết quả thực hiện dự án trồng mới 5 triệu ha rừng giai đoạn 1998–2010 [Report on Implementation Results the Project to Plant 5 Million Hectares of New Forest in the Period 1998–2010]*; MARD: Hanoi, Vietnam, 2010.
55. Dang, T.K.P.; Visseren-Hamakers, I.J.; Arts, B. The institutional capacity for forest devolution: The case of forest land allocation in Vietnam. *Dev. Policy Rev.* **2017**, *35*, 723–744. [CrossRef]
56. MARD (Ministry of Agriculture and Rural Development). *Quyết định số 2503/QĐ-BNN-KL ngày 27 tháng 8 năm 2007 của Bộ Nông nghiệp và Phát triển nông thôn v/v công bố hiện trạng rừng toàn quốc năm 2006. [Decision No. 2503/ QĐ-BNN -KL Dated 27 August 2007 of the Ministry of Agriculture and Rural Development on Announcing the State of National Forests in 2006]*; MARD: Hanoi, Vietnam, 2007.
57. MARD (The Ministry of Agriculture and Rural Development of Vietnam). *Quyết định số 1739/QĐ-BNN-TCLN ngày 31 tháng 7 năm 2013 của Bộ Nông nghiệp và Phát triển nông thôn v/v công bố hiện trạng rừng toàn quốc năm 2012. [Decision No. 1739/QD-BNN-TCLN dated 31 July 2013 of the Ministry of Agriculture and Rural Development on Announcing the State of National Forests in 2012]*; MARD: Hanoi, Vietnam, 2013.
58. MARD (The Ministry of Agriculture and Rural Development of Vietnam). *Quyết định số 3322 /QĐ-BNN-TCLN ngày 28 tháng 7 năm 2014 của Bộ Nông nghiệp và Phát triển nông thôn v/v công bố hiện trạng rừng toàn quốc năm 2013. [Decision No. 3322/QD-BNN-TCLN Dated 28 July 2014 of the Ministry of Agriculture and Rural Development on Announcing the State of National Forests in 2013]*; MARD: Hanoi, Vietnam, 2014.
59. MARD (The Ministry of Agriculture and Rural Development of Vietnam). *Quyết định số 3135/QĐ-BNN-TCLN ngày 06 tháng 8 năm 2015 của Bộ Nông nghiệp và Phát triển nông thôn v/v công bố hiện trạng rừng toàn quốc năm 2014. [Decision No. 3135/QD-BNN-TCLN Dated 6 August 2015 of the Ministry of Agriculture and Rural Development on Announcing the State of National Forests in 2014]*; MARD: Hanoi, Vietnam, 2015.
60. NAV (The National Assembly of Vietnam). *Luật Bảo vệ và Phát triển rừng (sửa đổi). [Law on Forest Protection and Development (amended)]*; Nhà xuất bản Chính trị Quốc gia: Hanoi, Vietnam, 2004.
61. VOV.VN. Tỷ lệ che phủ rừng 39.5%—đâu là giá trị thực? Forest Coverage Rate 39.5%—What Is the Real Value? Available online: https://vov.vn/xa-hoi/ty-le-che-phu-rung-395-dau-la-gia-tri-thuc-190653.vov (accessed on 20 January 2022).
62. VOV.VN. Thủy điện có thể không làm ra lũ nhưng làm mất rừng, tạo thành lũ dữ. [Hydroelectricity May Not Cause Floods, but It Does Destroy Forests and Create Floods]. Available online: https://vov.vn/chinh-tri/thuy-dien-co-the-khong-lam-ra-lu-nhung-lam-mat-rung-tao-thanh-lu-du-814811.vov (accessed on 20 July 2022).
63. The National Assembly of Vietnam. *Luật Lâm nghiệp 2017. [Forestry Law 2017]*; The National Assembly of Vietnam: Hanoi, Vietnam, 2017.
64. GoV (The Government of Socialist Republic of Vietnam). *Thông tư 13/2019/TT-BNNPTNT qui định trồng rừng thay thế khi chuyển mục đích sử dụng rừng sang mục đích khác. [Decree 13/2019/TT-BNNPTNT on Regulations on Replacing Afforestation When Changing Forest Use Purposes]*; GoV: Hanoi, Vietnam, 2019.
65. RFA. Bộ Công thương nói loại bỏ hàng trăm thủy điện nhỏ khỏi quy hoạch: Chạy tội phá rừng? [Industry and Trade Said to Remove Hundreds of Small Hydropower Plants from the Planning: Running Responsibility of Deforestation?]. RFA 2020. Available online: https://www.rfa.org/vietnamese/in_depth/eliminate-many-small-hydroelectricity-but-who-is-responsible-for-deforestation-10202020132758.html (accessed on 20 July 2022).
66. PanNature. *Hội thảo "Thực thi chính sách trồng rừng thay thế từ thực tiễn địa phương: Một số đánh giá và khuyến nghị", do Tổng cục Lâm nghiệp & PanNature & Quỹ Bảo vệ Phát triển rừng Việt Nam tổ chức. [Workshop "Implementing Alternative Afforestation Policy from Local Practice: Some Assessments and Recommendations", Organized by General Department of Forestry & PanNature & Vietnam Fund for Forest Protection and Development]*; PanNature: Hanoi, Vietnam, 2016.

67. Pham Hong Luong. *Tổng quan về chính sách và kết quả trồng rừng thay thế của các dự án chuyển đổi mục đích sử dụng rừng sang mục đích khác. Hội thảo: Thực thi chính sách trồng rừng thay thế từ thực tiễn địa phương Tổng cục Lâm nghiệp & PanNature & Quỹ Bảo vệ Phát triển rừng Việt Nam. [An Overview of the Policy and Results of Replacing Afforestation of Projects that Convert Forest Use to other Purposes. Workshop: Implementing Alternative Afforestation Policy from Local Practice Directorate of Forestry & PanNature & Vietnam Fund for Forest Protection and Development]*; Pham Hong Luong: Hanoi, Vietnam, 2016.
68. Báo Người lao động. Lo mất rừng vì thủy điện nhỏ. [Concerns about Losing Forests Because of Small Hydropower]. Available online: https://nld.com.vn/thoi-su/lo-mat-rung-vi-thuy-dien-nho-20201102221209986.htm (accessed on 20 July 2022).
69. Hanoi moi. Mượn cớ thủy điện, hợp thức phá rừng. [Using Hydroelectric Power as an Excuse to Legally Destroy Forests]. Available online: hanoimoi.com.vn/ban-in/Luan-ban-Hanh-dong/624767/muon-co-thuy-dien-hop-thuc-pha-rung (accessed on 4 July 2022).
70. VOV.VN. Trên 460 thủy điện nhỏ bị loại khỏi quy hoạch [Over 460 Small Hydroelectric Plants Are Excluded from the Planning]. Available online: https://vov.vn/kinh-te/tren-460-thuy-dien-nho-bi-loai-khoi-quy-hoach-568923.vov (accessed on 20 July 2022).
71. Bao Giao thong. Chuyển đổi hơn 1.000 ha đất rừng làm cao tốc thế nào? [How to Convert more than 1000 Hectares of Forest Land into Highways]? Available online: https://www.baogiaothong.vn/chuyen-doi-hon-1000ha-dat-rung-lam-cao-toc-the-nao-d551816.html (accessed on 20 July 2022).
72. VNExpress. Chuyển đổi hơn 1000 ha rừng để xây cao tốc Bắc Nam. [Converting More Than 1000 Hectares of Forest to Build North-South Highway]. Available online: https://vnexpress.net/chuyen-doi-hon-1-000-ha-rung-de-xay-cao-toc-bac-nam-4486159.html (accessed on 20 July 2022).
73. Tuoitreonline. Quảng Nam trình HĐND chuyển đổi hơn 40 ha rừng làm thủy điện, đường, khu đô thị. [Quang Nam Submitted to the People's Council to Convert More Than 40 Hectares of Forest for Hydropower, Roads and Urban Areas]. 2021. Available online: https://tuoitre.vn/quang-nam-trinh-hdnd-chuyen-doi-hon-40-ha-rung-lam-thuy-dien-duong-khu-do-thi-20210316101105761.htm (accessed on 22 July 2022).
74. Thanhnien online. Quảng Nam trình HĐND tỉnh chuyển đổi hàng chục ha rừng làm thủy điện, khu đô thị. [Quang Nam Would Like to Convert 25 Hectares of Forest to Make Roads in Ngoc Linh Ginseng Area]. Available online: https://thanhnien.vn/quang-nam-trinh-hdnd-tinh-chuyen-doi-hang-chuc-ha-rung-lam-thuy-dien-khu-do-thi-post1046602.html (accessed on 10 April 2022).
75. Tuoitreonline. Hà Tĩnh trình HĐND chuyển đổi gần 24.5 ha rừng để làm nhà máy nhiệt điện. [Ha Tinh submitted to the People's Council to Convert Nearly 24.5 Hectares of Forest to Build a Thermal Power Plant]. Available online: https://tuoitre.vn/ha-tinh-trinh-hdnd-chuyen-doi-gan-24-5ha-rung-de-lam-nha-may-nhiet-dien-20210715172123339.htm (accessed on 12 April 2022).
76. VNExpress Online. 486 ha of Forest to be Felled in Central Highlands for Building Highway. Available online: https://e.vnexpress.net/news/news/486-ha-of-forest-to-be-felled-in-central-highlands-for-building-highway-4427527.html (accessed on 4 March 2022).
77. Bao Moi. Lâm Đồng xin chuyển đổi hơn 186 ha rừng làm cao tốc Tân Phú—Bảo Lộc. [Lam Dong Requests to Convert more than 186 ha of Forest to Make Tan Phu—Bao Loc Highway]. Available online: https://baomoi.com/lam-dong-xin-chuyen-doi-hon-186ha-rung-lam-cao-toc-tan-phu-bao-loc/c/42994060.epi (accessed on 15 July 2022).
78. Bao Moi. Sớm chuyển đổi mục đích sử dụng đất để làm cao tốc Bắc-Nam. [Soon to Change the Purpose of Land Use to Make the North-South Highway]. Available online: https://www.vietnamplus.vn/som-chuyen-doi-muc-dich-su-dung-dat-rung-de-lam-cao-toc-bacnam/779981.vnp (accessed on 30 April 2022).
79. Cong an Nhan dan Online. Bình Định, Quảng Ngãi đề nghị chuyển mục đích sử dụng hơn 85 ha rừng để làm cao tốc [Binh Dinh and Quang Ngai Propose to Change the Purpose of Using More Than 85 Hectares of Forest to Make Highways]. Available online: https://cand.com.vn/Giao-thong/binh-dinh-quang-ngai-de-nghi-chuyen-muc-dich-su-dung-hon-85-ha-rung-de-lam-cao-toc--i649116/ (accessed on 15 March 2022).
80. Bao Dau Tu Online. Chính phủ đề xuất chuyển đổi gần 2.592 ha đất rừng, lúa hai vụ để làm cao tốc Bắc—Nam. [The Government Proposes to Convert Nearly 2592 Hectares of Forest Land and Double-Crop Rice to Build the North-South Highway]. Available online: https://baodautu.vn/chinh-phu-de-xuat-chuyen-doi-gan-2592-ha-dat-rung-lua-hai-vu-de-lam-cao-toc-bac--nam-d165172.html (accessed on 11 April 2022).
81. Giao thông. Chuyển đổi đất rừng làm cao tốc đã được cân nhắc ra sao? [How Was the Conversion of Forest Land for Highways Considered]? Available online: https://www.baogiaothong.vn/chuyen-doi-dat-rung-lam-cao-toc-da-duoc-can-nhac-ra-sao-d551817.html (accessed on 15 April 2022).
82. Báo Kinh tế môi trường Cao tốc Bắc—Nam phía Đông: Đòn bẩy phát triển kinh tế—xã hội đất nước. [East North—South Expressway: Leverage for the Country's Socio-Economic Development]. Available online: https://kinhtemoitruong.vn/cao-toc-bac-nam-phia-dong-don-bay-phat-trien-kinh-te-xa-hoi-dat-nuoc-66274.html (accessed on 20 May 2022).
83. Báo Điện tử Chính phủ. Thủ tướng phê duyệt Đề án trồng 1 tỷ cây xanh. [The Prime Minister Approved the Project of Planting 1 Billion Trees]. Available online: https://baochinhphu.vn/thu-tuong-phe-duyet-de-an-trong-1-ty-cay-xanh-102290212.htm (accessed on 28 February 2022).
84. Kinh tế Môi trường. Thủ tướng Nguyễn Xuân Phúc: Trồng cây xanh để thúc đẩy quốc kế dân sinh. [Prime Minister Nguyen Xuan Phuc: Planting Trees to Promote National Livelihood]. Available online: https://kinhtemoitruong.vn/thu-tuong-nguyen-xuan-phuc-trong-cay-xanh-de-thuc-day-quoc-ke-dan-sinh-53176.html (accessed on 21 March 2022).

85. GoV (The Government of Socialist Republic of Vietnam). *Quyết định 524/QĐ-Ttg ngày 01/4/2021 Phê duyệt đề án "Trồng một tỷ cây xanh giai đoạn 2021–2025" [Decision No 524/QĐ-Ttg dated 01 April 2021 by the Prime Minister Approving the Project of 'Planting 1billion Trees in the Period 2021–2025"]*; The Government of Socialist Republic of Vietnam: Hanoi, Vietnam, 2021.
86. Kinh tế Môi trường. Tăng độ che phủ rừng để nâng cao chất lượng môi trường sống [Increase Forest Cover to Improve the Quality of Living Environment]. Available online: https://kinhtemoitruong.vn/tang-do-che-phu-rung-de-nang-cao-chat-luong-moi-truong-song-55265.html (accessed on 20 June 2022).
87. Kinh tế Môi trường. Trồng cây để sửa chữa những sai lầm trong ứng xử với tự nhiên. [Plant Trees to Correct Mistakes in Dealing with Nature]. Available online: https://kinhtemoitruong.vn/trong-cay-de-sua-chua-nhung-sai-lam-cua-con-nguoi-trong-ung-xu-voi-tu-nhien-53815.html (accessed on 4 April 2022).
88. Báo tài nguyên môi trường. Bộ TN&MT triển khai Đề án phục hồi, phát triển hệ thống cây xanh để ứng phó BĐKH, ô nhiễm môi trường. [The Ministry of Natural Resources and Environment Has Implemented a Project to Restore and Develop a Green Tree System to Cope with Climate Change and Environmental Pollution]. Available online: https://baotainguyenmoitruong.vn/bo-tn-mt-trien-khai-de-an-phuc-hoi-phat-trien-he-thong-cay-xanh-nham-ung-pho-tinh-trang-khan-cap-ve-bdkh-o-nhiem-moi-truong-320761.html (accessed on 20 March 2022).
89. Carle, J.; Holmgren, P. Definitions related to planted forests. In *UNFF Intercessional Expert Meeting on the Role of Planted Forests in Sustainable Forest Management*; FAO: Wellington, New Zealand, 2003; pp. 329–343.
90. Takala, T.; Hujala, T.; Tanskanen, M.; Tikkanen, J. Competing discourses of the forest shape forest owners 'ideas about nature and biodiversity conservation. *Biodivers. Conserv.* **2019**, *28*, 3445–3464. [CrossRef]
91. Putz, F.E.; Redford, K.H. The importance of defining 'forest': Tropical forest degradation, deforestation, long-term phase shifts, and further transitions. *Biotropica* **2010**, *42*, 10–20. [CrossRef]