



Viet Nam
Biodiversity Finance Initiative (BIOFIN)
Mobilizing Resources for Biodiversity
and Sustainable Development

BIODIVERSITY EXPENDITURE REVIEW

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ABBREVIATIONS AND ACRONYMS

ABS	Access and Benefit Sharing	kWh	kilowatt-hour
ADB	Asian Development Bank	MARD	Ministry of Agriculture and Rural Development
BCA	BD Conservation Agency / MONRE	MOF	Ministry of Finance of Viet Nam
BD	Biodiversity	MOH	Ministry of Health
BER	Biodiversity Expenditure Review	MOIT	Ministry of Industry and Trade
BFP	Biodiversity Finance Plan	MONRE	Ministry of Natural Resource and Environment of VN
BIOFIN	Biodiversity Finance Initiative	MOST	Ministry of Science and Technology
CBD	Convention on Biological Diversity	MPA	Marine Protected Area
CDF	Community Development Fund	MPI	Ministry of Planning and Investment
CIFOR	Center for International Forestry Research	NAPB	National Action Plan on Biodiversity
CPEIR	Climate Public Expenditure and Investment Review	NBS	National Biodiversity Strategy
DARCD	Department of Aquatic Resources Conservation and Development / MARD	NGO	Non-Governmental Organization
DARD	Department of Agriculture and Rural Development / MARD	NP	National Park
DFISH	Department of Fishery / MARD	NR	Nature Reserve
DNC	Department of Nature Conservation	ODA	Official Development Assistance
DMSUPF	Department of Management of Special Use and Protection Forests	OECD	Organization for Economic Cooperation and Development
DOSTE	Department of Science, Technology and Environment / MARD	PA	Protected Area
DONRE	Department of Natural Resource and Environment / MONRE	PFES	Payment for Forest Ecosystem Services
DOSTE	Department of Science, Technology and Environment / MARD	PIR	Policy and Institutional Review
DSTE	Department for Science, Technology and Environment	PPC	Province People's Committee
ES	Ecosystem Services	SUF	Special Use Forest
EU	European Union	TF	Trust Fund
FFI	Fauna and Flora International	TFF	Trust Fund for Forests
FNA	Financial Needs Assessment	UNDP	UN Development Program
GDP	Gross Domestic Product	USAID	United States Agency for International Development
GEF	Global Environment Facility	USD	Dollar currency of the United States of America
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit / German Society for International Cooperation	VASI	Vietnam Administration for Seas and Islands
GSO	General Statistic Office of VN	VEA	VN Environment Administration / MONRE
HSBC	Hongkong and Shanghai Banking Corporation	VEPF	Viet Nam Environment Protection Fund
IUCN	International Union for the Conservation of Nature	VFD	Viet Nam Forest Delta program
JCER	Japan Center for Economic Research	VIFARR	Viet Nam Fund for Aquatic Resources Reproduction
JICA	Japan International Cooperation Agency	VN	Viet Nam
		VND	Dong currency of VN
		VNFF	VN Forest Protection and Development Fund
		VNFOREST	VN Administration of Forestry / MARD
		WB	World Bank
		WWF	World Wildlife Fund

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At provincial level: Ba Vi National Park (NP; Hanoi), Cuc Phuong National Park (Ninh Binh Province), Xuan Thuy National Park (Nam Dinh Province), Son Tra Nature Reserve (NR; Da Nang City) and Cu Lao Cham Marine Protected Area (MPA; Quang Nam Province), Tram Chim National Park (Dong Thap Province), Phu My Nature Reserve (Kien Giang province).

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EXECUTIVE SUMMARY

The Viet Nam Biodiversity Expenditure Review (BER) was undertaken as part of the Global Biodiversity Finance Initiative (BIOFIN) project, managed by UNDP in partnership with the European Commission (EU) and the governments of Germany, Switzerland, Norway and Flanders. The overall goal of the project is to explore national and sub-national level biodiversity expenditures by government organizations, agencies, ministries, NGOs and private sector actors having allocated financing for biodiversity conservation, providing inputs for the development of a biodiversity finance plan aiming to achieve Viet Nam's national biodiversity targets.

The Viet Nam BER follows guidance provided by the BIOFIN global team, embedding a number of adjustments to ensure alignment with the contextual conditions of the country. The BER was completed with inputs from various sources at both the national and provincial level, including the Ministry of Agriculture and Rural Development (MARD), the Ministry of Natural Resources and Environment (MONRE), the Ministry of Science and Technology (MOST), relevant subordinate ministerial Administrations, Agencies and Departments, Provincial Departments of Agriculture and Rural Development (DARDs), Provincial Departments of Natural Resources and Environment (DONREs), National Parks (NPs), Nature Reserves (NRs), etc. All collected data and information were analyzed following the guidance provided in the BIOFIN Workbook (UNDP, 2016). Two consultation workshops were organized, to collect comments and feedback from relevant stakeholders and interested parties, which were used to frame this final report and its recommendations.

Key findings of the Viet Nam BER include:

- The BER analysis showed that in general data availability and accessibility is highly dependent on the biodiversity finance actors. Especially for actors for whom biodiversity conservation is of secondary importance the biodiversity-related expenditures could be insufficiently quantified for the period of interest, as such the BER analyzed the expenditure of organizations whose legally designated functions and tasks are primarily related to biodiversity management in Viet Nam.
- The BER analysis focused on reviewing budget allocations from various sources, but did not include an analysis of the divergence between budgeted, approved and allocated financing, or actual expenditures, therefore no conclusions can be drawn on commitments of the government and/or donors towards actually distributing and spending as budgeted and approved, nor on efficiency or effectiveness of financing on achieving biodiversity targets.
- Of the key actors analyzed, almost none has a separate system for monitoring and tracking biodiversity financial flows by funding source, project components/objectives or by biodiversity target, making it difficult to apply biodiversity sub-target categorization and weighting percentages to assess the relative contributions towards achieving approved biodiversity conservation targets.
- The BER estimates that during 5 years between 2011 and 2015, Viet Nam spent VND 22,910,016 million (USD 1,018.2 million) on biodiversity-related activities, of which public sector spending accounted for 76.7%, followed by the social sector (19.1%) and private sector (4.2%) (Table E1).
- In general, annual spending on biodiversity tended to increase, corresponding to the economic growth rate of Viet Nam between 2011 and 2015 (Figure E1)¹. Trend analysis shows that during the years investigated, public spending was decreasing, while social spending tended to increase and private spending remained stable.

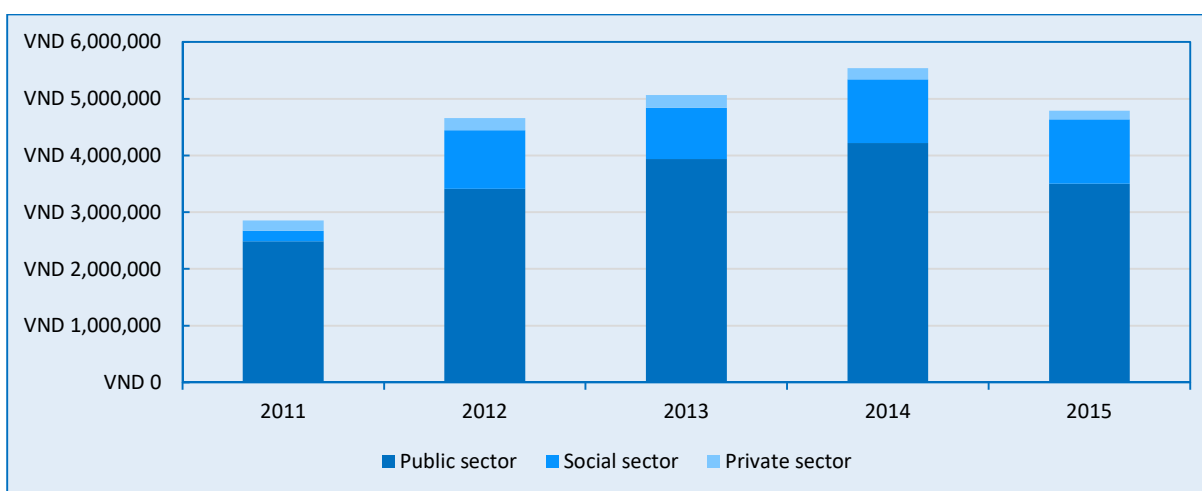
¹ During the BER initial analytical phase in 2016, information and data on 2015 spending had not been fully recorded and captured by key actors, as such 2015 spending is incomplete and seemingly lower than in previous years.

Table E1 Biodiversity-related expenditure by sector between 2011-2015

Sector		2011	2012	2013	2014	2015	Total
Public sector	VND mln.	2,490,346	3,415,980	3,939,122	4,222,214	3,507,208	17,574,870
	USD	110,682,054	151,821,330	175,072,101	187,653,941	155,875,920	781,105,346
Social sector	VND mln.	188,523	1,028,093	899,638	1,122,453	1,130,370	4,369,077
	USD	8,378,800	45,693,022	39,983,911	49,886,800	50,238,667	194,181,200
Private sector	VND mln.	179,687	214,268	228,613	192,944	150,558	966,069
	USD	7,986,080	9,523,030	10,160,570	8,575,270	6,691,445	42,936,395
Total	VND mln.	2,858,556	4,658,341	5,067,373	5,537,610	4,788,136	22,910,016
	USD	127,046,935	207,037,382	225,216,582	246,116,011	212,806,032	1,018,222,941

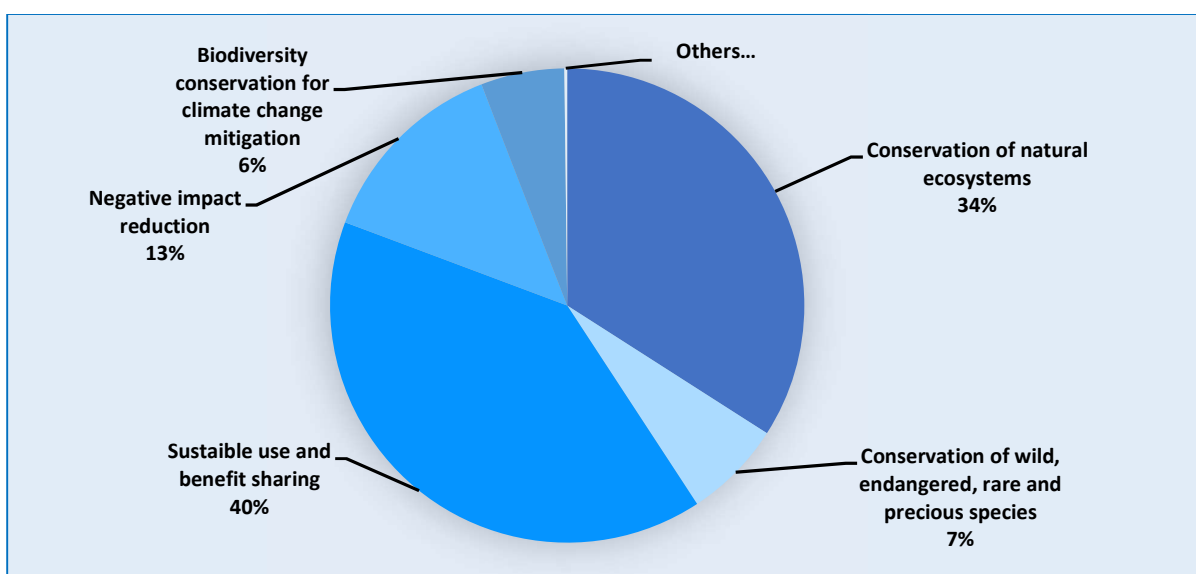
Notes: Unit – million VND; Source - Synthesized by the author.

Figure E1 Trends in biodiversity-related expenditure by sector between 2011-2015



Notes: Unit – million VND; Source: synthesized by the author.

Figure E2 Relative biodiversity expenditure by NBS major tasks overall for 2011-2015



- Analysis of biodiversity expenditures against the major targets formulated in Viet Nam’s National Biodiversity Strategy (MONRE; 2013) shows that between 2011 and 2015, 40% of financing for biodiversity was allocated in support of “sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity”, followed by 34% for the “conservation of natural ecosystems”, 13% for the “control of activities which negatively impact on biodiversity”, and less than 10% for other NBS targets (Figure E2).
- Government expenditures between 2011 and 2015 for nature conservation and biodiversity as formally registered under sub-category 287 of the State Budget index show much lower values of financing recorded compared to the actual spending estimated in accordance with BIOFIN’s BER methodology - VND 1,697 billion compared to VND 22,910 billion, respectively, which is the result the use of an unclear and inconsistent methodology and inaccurate data recording. Viet Nam already has identified a separate line in the state budget index to record and track the government’s spending on biodiversity. However, due to the use of an unclear and inconsistent methodology, data recording is inaccurate, leading to much lower values recorded compared to actual spending estimated in accordance with BIOFIN’s BER methodology (VND 1,697 billion compared to VND 22,910 billion for the 2011 – 2015 period), while it is noted that actual spending remains underestimated.
- The total annual biodiversity expenditure is linked relatively closely to the GDP. Regression analysis shows that, with other factors remaining unchanged, a 1% increase in GDP corresponds to a 1.32% increase in total annual biodiversity expenditure. Using the World Bank’s (WB) and HSBC’s forecast on future GDP growth rates for Viet Nam, the country’s total annual biodiversity expenditure for the years 2020, 2025 and 2030 is estimated at VND 7,206,057 million (USD 320.27 million); VND 10,104,979 million (USD 449.11 million) and VND 14,170,107 million (USD 629.78 million), respectively.

The following recommendations are formulated based on the review of biodiversity expenditure in Viet Nam during the period 2011-2015:

- While Viet Nam has adopted a state budget categorization and attribution system which includes the recording of biodiversity expenditures as part of expenditures for environmental protection, the very large discrepancy between biodiversity expenditures recorded as formal government spending as per state budget index and the actual expenditures as estimated in this BER report confirms the need to improve the methodology for recording state expenditures on biodiversity as well as to strengthen the accuracy of data recording, to ensure the consistent and reliable tracking of the cash flow to biodiversity-related activities, and to allow for timely adjustments of financial allocations from different sources to achieve national biodiversity targets.
- While the government budget spending remained the primary source covering biodiversity expenditures in recent years, its relative importance showed a decreasing trend during the period of analysis. In order to ensure coverage of the forecasted increase in biodiversity expenditures to 2030 under the business-as-usual scenario, the government of Viet Nam is recommended to develop a Biodiversity Finance Plan which should elaborate on opportunities for maintaining and strengthening government budget finance, i.e. by using government-regulated instruments, as well as strengthening the mobilization of financing from social and private sector sources, making use of an appropriate mixture of already applied and innovative finance solutions supported by education and awareness raising across communities and sectors on the importance of biodiversity and its services provided to the economy and society at large.
- Along with developing a Biodiversity Finance Plan for mobilizing additional finance resources from the public, social and private sectors, state government departments and agencies as well as other actors

financing biodiversity conservation in Viet Nam should also focus on realigning existing financial flows, avoiding expenditures and deliver better on existing biodiversity expenditures, towards cost savings, efficiency gains as well as reducing transaction costs, all to ensure that the variety of allocated financing will synergistically support achieving Viet Nam's national biodiversity conservation targets to the maximum level.

- Building on the findings of the current BER, a follow-up BER should be conducted focusing on (i) expanding the quantification of biodiversity expenditure by public, social or private sector actors to include such actors for whom biodiversity conservation is of secondary importance, and apply appropriate weighting factors to incorporate such expenditures across national biodiversity targets; (ii) analyzing the linkages between budgeted, approved and allocated, and actual expenditures.

1 BACKGROUND AND FRAMEWORK OF THE BER

1.1 Introduction

Viet Nam is ranked 16th among the Earth's most biodiverse countries and one of the 10 richest centers of biodiversity in the world (MONRE, 2015). The country is characterized by an abundance of ecosystems, including terrestrial forests, wetlands and marine ecosystems, a high species variety, including 11,458 fauna and 21,017 flora species, as well as varied and unique genetic resources, especially for rice and sweet potatoes (BCA, WWF and Stockholm University, 2013).

Biodiversity in Viet Nam is of great significance. The country's ecosystems and the goods and services they provide bring direct and indirect benefits to humans, the environment and the economy. Biodiversity is especially important to:

- agriculture, (e.g. biodiversity supporting maintaining sustainable crop productivity through processes such as pollination, biological control of pests and diseases, and nutrients cycles and soil fertility),
- forestry (e.g. currently, about 25 million people live in and around forests, with 20-50% of their incomes derived from timber and non-timber forest products),
- fisheries (e.g. about 20 million people live in coastal or riverine regions, earning at least part of their income from exploiting over 300 marine species and more than 50 species of valuable freshwater fish species), and
- tourism (e.g. ecosystems with charismatic and visible biodiversity provide opportunities for developing Viet Nam's recreational sector, particularly ecotourism which can provide income-generating opportunities for rural communities) sectors (MONRE, 2014).

Biodiversity degradation, therefore, will cause negative impacts on the society and the economy.

Recognizing the importance of biodiversity, the Government of Viet Nam has initiated great efforts to conserve, protect and strengthen biodiversity. On 31 May 2007, the Prime Minister approved Decision No.79/2007/QD-TTg on National Action Plan on Biodiversity (NAPB) up to 2010 and Orientations towards 2020 (NAPB, 2007) to support the implementation of the Convention on Biological Diversity and the Cartagena Protocol on Biosafety in Viet Nam. On 31 July 2013, the Prime Minister approved Decision 1250/QD-TTg on the National Biodiversity Strategy (NBS) to 2020, vision to 2030 (NBS; 2013), to enhance biodiversity conservation across Viet Nam and to conform to the sustainable development targets. Along with the NAPB and NBS, over the years Viet Nam has also ratified and implemented international biodiversity related conventions and initiatives (e.g., the World Heritage Convention, The Ramsar Convention on Wetlands, the Convention on International Trade in Endangered Species, etc.), as well as actively engaged with technical and financial support from outside the country to strengthen biodiversity conservation.

To date, some achievements towards biodiversity conservation have been recorded, but many barriers remain towards achieving notable and sustainable progress on the formulated targets in biodiversity conservation. One significant barrier is the lack of sufficient financial resources. Notwithstanding that the critical importance of biodiversity for sustainable development is well understood, and that government budget allocations in support of biodiversity conservation are gradually increasing in recent years, never has more than 1% of government budget allocations been earmarked for biodiversity conservation purposes. While beyond state support also other financial resources are available, such as Official Development Assistance (ODA), loans, state bonds, etc., still the overall amount available is insufficient for the full, efficient and effective implementation of biodiversity conservation and achievement of targets agreed in the NAPB

and NBS (MONRE, 2014). As a result, while on the one hand still species previously unknown are found in Viet Nam's protected areas, e.g. *Camellia vuquangensis* and *Camellia hatinhensis*, new taxa of the Theaceae group of tea species, found in 2018 in Vu Quang National Park (Nguyen *et al.*, 2018), on the other hand funding gaps result in the disappearance of globally threatened plants and animals from the country. For example, a persistent funding gap from 2007 – 2010 for the Conservation of wild and endangered, rare and precious species of plants and animals led to the collapse of the population of western black crested gibbons in Muong La.. During the same time, changes in institutional priorities and reduced funding for conservation led to the loss of the last Javan rhino (*Rhinoceros sondaicus*) in 2011, while driving many other species to the edge of extinction (Brunner, 2012).

Within the framework of the Biodiversity Finance Initiative (BIOFIN) - a UNDP-managed global partnership – a Biodiversity Expenditure Review (BER) has been conducted. The BER provides an analysis of public and private biodiversity expenditures in the recent past, as well as an estimate of the projected financial resources to be allocated in the near future under the business-as-usual scenario, i.e. the baseline with no actions taken beyond already ongoing initiatives to strengthen financing for biodiversity conservation. The BER is developed based on inputs from the Biodiversity Finance Policy and Institutional Review (PIR; 2018), which focuses on identifying the policies, institutional and finance actors relevant to biodiversity conservation in Viet Nam. In turn, the BER provides inputs for the Financial Need Assessment (FNA), which aims to provide a calculated estimate of the overall anticipated costs for implementing the adopted NBS, and to assess the associated gap between financial resources needed to reach the conservation targets adopted in the NBS and the estimated future financial allocations under the business-as-usual scenario identified by the BER. The FNA is subsequently used as input for the Biodiversity Finance Plan (BFP), which engages in developing a range of financial solutions, actors and mechanism to fill the identified national gap for financing biodiversity conservation in Viet Nam.

Together, the PIR, BER, FNA and BFP provide an integrated analytical framework to assist Viet Nam with assessing the current financial flows allocated for biodiversity conservation, and developing appropriate actions plans and mechanisms to mobilize additional and sufficient financial sources for achieving national biodiversity targets both in a short- and long-term perspective.

1.2 The Viet Nam Biodiversity Expenditure Review

The Viet Nam BER was developed based on the guidance provided by the BIOFIN Workbook (2016 version), as an attempt to provide a comprehensive analysis of biodiversity spending during 5 consecutive years 2011-2015. Accordingly, the Viet Nam BER addresses some key issues, including:

- What is a biodiversity expenditure?
- What are available sources of biodiversity expenditure?
- Who are key biodiversity finance actors? How much financing did these actors allocate for biodiversity conservation in the past? What were the allocated financial resources used for? What were the patterns and trends related to biodiversity expenditures over the years?
- What is the likely pattern of biodiversity expenditure in the coming years under the baseline scenario?

The first, and one of the most important, concerns of any BER undertaken in the BIOFIN project is to clarify what types of spending are considered as biodiversity expenditure. In the BIOFIN Workbook, biodiversity expenditure is broadly defined as any spending that directly or indirectly aims to enhance biodiversity and to reduce threats that cause biodiversity degradation. However, it is also advised that BIOFIN countries,

depending on their national context, should develop their own definition and approach for the classification of biodiversity expenditure.

In Viet Nam, during the preparatory phase of the BER, we developed our country-specific definition for biodiversity expenditure, specific to the scope of the most recent NBS, approved in 2013. Accordingly, any type of direct or indirect spending for achieving the following targets are considered as biodiversity expenditure: (i) conservation of natural ecosystems; (ii) conservation of wild and domestic endangered, rare and precious species of plants and animals, (iii) sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity; (iv) control of activities which negatively impact on biodiversity; and (v) biodiversity conservation in the context of climate change. Sub-categories of each NBS's biodiversity target were also identified for further classification of expenditures (Table 1).

Table 1 Relationship between Viet Nam's NBS Major Tasks, BIOFIN and Aichi Categories of Biodiversity Expenditures

	Viet Nam 2013 NBS's biodiversity targets		Link to BIOFIN categories	Link to Aichi Categories
	Biodiversity targets	Example of target (not exhaustive)		
1	Conservation of natural ecosystems	<ul style="list-style-type: none"> • PA and biodiversity corridor establishment and expansion. • PA operations and management. • Investment in PA infrastructure and facility. • Inventory, assessment and valuation of PA ecosystem services (ES). • Investment in PA buffer zones. • Establishment of database for important natural ecosystems. 	<ul style="list-style-type: none"> • Protected Areas (PAs) and other conservation measures 	<ul style="list-style-type: none"> • Protection
2	Conservation of wild and endangered, rare and precious species of plants and animals	<ul style="list-style-type: none"> • Inventory and database of endangered, rare and precious species. • Endangered, rare and precious species – actions for conservation. • Development of gene bank. • Establishment or improvement of animal rescue centers and conservation facilities. 	<ul style="list-style-type: none"> • Biodiversity awareness and knowledge • Sustainable use 	<ul style="list-style-type: none"> • Sustainable use
3	Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	<ul style="list-style-type: none"> • Valuation of biodiversity and ES beyond PAs. • Pilot of payment for ES. • Community-based management of PAs. • Pilot of sustainable use of species and genetic resources. • Capacity building for gene access and benefit sharing. • Promoting communication, education and training on the importance of and actions for biodiversity conservation and sustainable use. 	<ul style="list-style-type: none"> • Sustainable use • Access and Benefit Sharing • Green economy 	<ul style="list-style-type: none"> • Sustainable use • Access and Benefit Sharing
4	Control of activities which negatively impact on biodiversity	<ul style="list-style-type: none"> • Land-use conversion control towards reducing negative impact on biodiversity. • Control of overexploitation, illegal exploitation. • Pollution control to reduce biodiversity impacts. • Wildlife trading, consumption control and reduction, including awareness raising. • Invasive alien species inventory and control • Enhancing biosafety. 	<ul style="list-style-type: none"> • Pollution management • Biosafety 	<ul style="list-style-type: none"> • Mainstreaming

5	Biodiversity conservation in the context of climate change	<ul style="list-style-type: none"> • Identification of impacts of climate change on biodiversity. • Solutions for increasing biodiversity resilience against climate changes in vulnerable regions (especially Red River Delta and Mekong Delta). • Biodiversity conservation as a means to adapt to climate change. • Natural forest regeneration for carbon sequestration, climate change adaptation and mitigation. • Efforts to mainstream biodiversity indicators into development planning. 	<ul style="list-style-type: none"> • Restoration • Biodiversity and Development Planning 	<ul style="list-style-type: none"> • Mainstreaming • Restoration
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Overall, the Viet Nam BER report consists of seven chapters:

- Chapter 1 Background of the Viet Nam BER.
- Chapter 2 Methods applied and activities undertaken during implementation of the Viet Nam BER.
- Chapter 3 National context regarding biodiversity expenditure.
- Chapter 4 Analysis of biodiversity finance sources.
- Chapter 5 Analysis on biodiversity expenditure by sources and categories of biodiversity activities.
- Chapter 6 Estimate of future biodiversity spending under the business-as-usual scenario.
- Chapter 7 Recommendation and conclusions drawn up from the BER implementation.

2 THE VIET NAM BER METHODOLOGY

2.1 The BER approach

The BER approach is based on the guidance provided by the BIOFIN Workbook 2016 (Chapter 5), with regard to implementation steps, scope, data collection and analytical processes. In addition, the BER relies on valuable lessons learnt in terms of data sources and data collection approaches from the Climate Public Expenditure and Investment Review (CPEIR), conducted by UNDP and the World Bank in 2015. Adapting to the absence of a separate record keeping and reporting system for biodiversity expenditure at national and local level, the BER process adopted a bottom-up approach. Specifically, biodiversity related expenditure data and information were collected for each key finance actor at national, provincial and local level and then aggregated to depict an overview of biodiversity expenditure of the country.

More specifically, the following activities were undertaken to complete the BER:

- (i) *Literature review of existing documents:* A wide range of existing biodiversity expenditure related information, data, reports and studies were collected and reviewed by the Viet Nam BIOFIN team, to strengthen the understanding of the background of the study. Literature review was also helpful for the team in designing the work plan and selecting appropriated approaches and methods to achieve the study objectives. Key studies that provided biodiversity expenditure-relevant information include: (i) Protected area financing mechanisms in Viet Nam: lesson learnt and future direction (Emerton *et al*, 2011); (ii) Analysis of barriers for sustainable financial mechanisms for protected areas in Viet Nam (Dang Thuy Nga, 2012); (iii) Assessment of Viet Nam’s protected area financing mechanism in 2015 (Nguyen Xuan Nguyen, 2015), (iv) Status of financial investment in biodiversity conservation and the implementation of the objectives, priority programs of the National Biodiversity Strategy to 2010 with vision to 2030 (MONRE, 2014b); and (v) Viet Nam’s fifth national report to the United Nations convention on biological diversity (MONRE, 2014a).
- (ii) *Inception workshop:* In October 2017, the BIOFIN inception workshop was organized by UNDP Viet Nam in cooperation with BCA (MONRE) in Hanoi, with the participation of members of the Global BIOFIN team, BIOFIN country teams from Thailand and the Philippines, as well as representatives of relevant ministries, including MARD, MONRE, the Ministry of Finance (MOF), the Ministry of Planning and Investment (MPI), sectoral organizations (natural resources and environment, agricultures, fisheries, forestry), representatives of international donors active in supporting biodiversity conservation, including the World Bank (WB), Asian Development bank (ADB), Non-Governmental Organizations (NGOs) (i.e., Pan Nature, SNV), and Protected Areas authorities, including from National Parks (NPs) and Nature Reserves (NRs). Participants to the workshop were invited to join open discussions for sharing ideas and exchanging views on the definition of biodiversity expenditure, biodiversity finance sources, biodiversity finance actors and sources of information in the specific context of Viet Nam. All feedback from the inception workshop’s participants were used to revise the BER approach, methodology, scope and work plan, to ensure the practicability and feasibility of the work.
- (iii) *Data collection and analysis:* Data and information from relevant ministries, agencies and organizations, defined as biodiversity finance actors, were collected by means of questionnaires sent via post (Annexes 1 to 7). In addition, selected key ministries, agencies and organizations were visited by the consultant team to collect follow-up information. Data analysis was conducted in accordance with the guidance provided by the BIOFIN Workbook.

- (iv) *Consultation workshop*: Independent experts and representatives of all relevant stakeholders participated in the consultation workshops held by UNDP Viet Nam and BCA / MONRE in May 2018 and July 2018 in Hanoi, to share ideas and exchange views on the initial results of the Viet Nam BER. All feedback was appreciated and taken into consideration during finalization of the BER report.
- (v) *Peer review*: The draft BER report was revised after the two consultation workshops and sent to independent experts with appropriate expertise and experience in assessment of biodiversity expenditure for the final review.

2.2 Scope of work

The BER process focused on examining public, social and private biodiversity spending over a period of 5 consecutive years, from 2011 to 2015. For this process, public spending is defined as spending by state management bodies with designated responsibilities for biodiversity conservation at the national, provincial, and local level; social spending is defined as spending by social organizations whose financial flows are accumulated by contributions from government (national, provincial, local) as well as community and private sector sources, and private spending is defined as including e.g. volunteer spending by individuals, private companies, private funds, etc.

The backward-looking study is based on limited quantitative information available on actual spending, in contrast to budgeting or any form or level of allocation, from selected biodiversity finance actors. As such, it is understood that the BER therefore cannot provide an exact and complete estimate of biodiversity expenditure for the whole country, nor of the impact of financial flows on on-going biodiversity policies, but can provide a founded estimate snapshot of biodiversity expenditure between 2011 and 2015.

The BER focused on the expenditure of organizations whose legally designated functions and tasks are most related to biodiversity management in Viet Nam, including the 4 ministries of MONRE, MARD, MOST and the Ministry of Health (MOH), and Provincial People’s Committees (PPCs) and their subordinate institutions. Figure 1 describes the state administration on biodiversity and the relationship between the key public biodiversity finance actors in Viet Nam.

Accordingly, considering the direct relevance of the designated tasks and functions of agencies and organizations related to biodiversity, the Viet Nam BER focused its assessment of biodiversity expenditures (both current and future business-as-usual) on selected key players as follows:

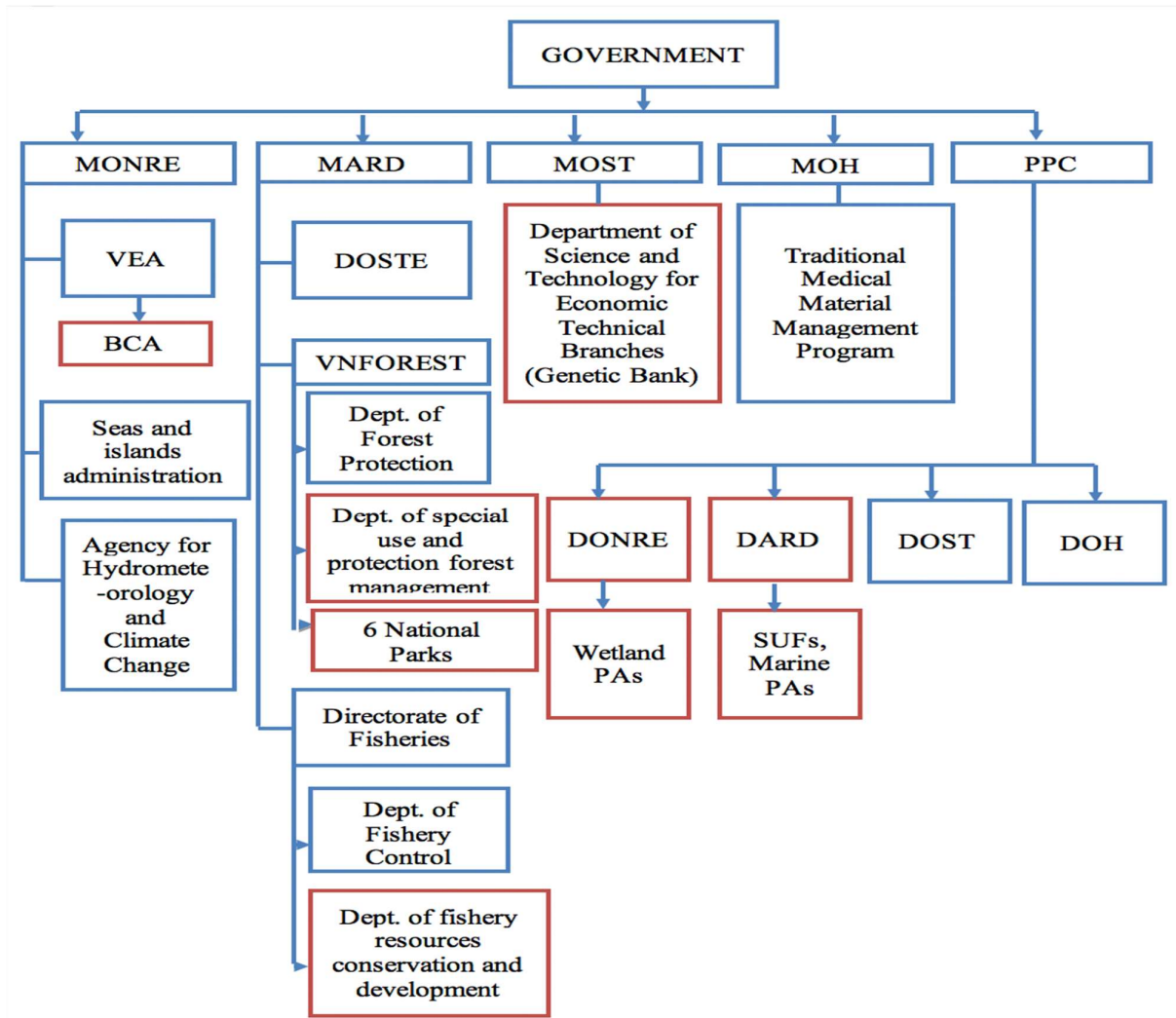
- At the central level:
 - MONRE: BCA – an agency under VEA, responsible for assisting the Director General of VEA in performing state management and law enforcement functions in the field of the conservation and sustainable use of biodiversity resources country-wide².
 - MARD: (i) Viet Nam Administration of Forestry (VNFOREST), specifically the Department of Management of Special Use and Protection Forests (DMSUPF) (former known as Department of Natural Conservation - DNC), responsible for assisting the Director General of VNFOREST in performing state management functions related to Special Use Forests and Protection Forest systems, and the conservation of forest ecosystems within the state management scope of

² *Decision No.1501/QĐ-TCMT, dated 25 November 2014, on defining the functions, tasks, powers and organizational structure of the Biodiversity Conservation Agency.*

VNFOREST³ and 6 National Parks (NPs) – the Tam Dao NP, Ba Vi NP, Cuc Phuong NP, Bach Ma NP, Cat Tien NP and Yok Don NP; (ii) Department of Fisheries (DFISH), responsible for assisting the Director General of DFISH in performing designated state management responsibilities related to the conservation, protection, regeneration and development of fisheries resources⁴.

- MOST: specifically its Department of Science and Technology for Economic-Technical Branches, which is the focal Department to assist the Minister of MOST in managing designated responsibilities for monitoring and management of the fund for the gene bank program at the state, ministerial, and provincial levels⁵.

Figure 1 State management on biodiversity in Viet Nam



Notes: Red-lined boxes - Key biodiversity finance actor, whose expenses are analyzed in the BER; Blue-lined boxed: Other agencies that are envisioned to have biodiversity expenditures; Source - synthesized by the author.

³ Decision No.289/QD-TCLN-VP, dated 17 August 2017, on defining the functions, tasks, powers and organizational structure of the Department of Special Use and Protection Forest Management.

⁴ Decision No.906/QD-TCTS-VP, dated 1 September 2017, on defining the functions, tasks, powers and organizational structure of the Department of Fishery Resources Conservation and Development.

⁵ Decision No.18/QD-TT-BKHCHN, dated 24 December 2010, on regulating the management of science and technology tasks of gene fund.

- At the local level:
 - Department of Natural Resources and Environment (DONRE): A specialized department at the provincial level, implementing the function of aiding the PPC in performing state management responsibilities on natural resources and environmental management, including biodiversity conservation.
 - Department of Agriculture and Rural Development (DARD): A specialized department at the provincial level, implementing the function of aiding the PPC in performing state management responsibilities in the field of agriculture, forestry (including forestry and plant protection), and aquaculture.
 - Protected Areas - NPs, Nature Reserves (NRs), Species Habitat Conservation Zones, Landscape Conservation Zones, etc. - performing the state responsibilities on managing, protecting and developing natural resources, the conservation and promotion of special natural values, ecological standard models, biodiversity, gene bank, cultural-historical relics and landscapes, scientific research, etc.

In addition to the main actors – mainly MONRE, MARD and MOST – described above, few other departments also have relations to biodiversity (see blue lined boxes in Figure 1). However, due to the limited access to separate, transparent accounting/auditing data and information on biodiversity spending, the secondary importance of conservation management, as well as the relative irregular allocation of funding allocated to biodiversity conservation by these departments, agencies and institutions, the biodiversity-related expenditures of such state organizations could be insufficiently quantified for the period of interest. For example, the Vietnam Administration for Seas and Islands (VASI, under MONRE) informed the BER team about its irregular allocation of budget to conduct surveys and supervisions of natural resources and environment protection in seas and islands; the Department for Science, Technology and Environment (DSTE, under MARD) occasionally allocates government budget for studies focusing on nature and biodiversity conservation in forestry and fishery sector. However, through discussions with representatives of MONRE and MARD in consultation meetings, the BER team learnt that biodiversity related expenditures of these departments are allocated on an annual basis, while if there are any biodiversity-related expenditures, the amounts can be ignored as insignificant because biodiversity is not a priority for these departments, as it is not mentioned in the description of their tasks and functions. Therefore, biodiversity expenditures of such departments are omitted from further analyses.

For agencies of primary importance, the Viet Nam BER reviewed their expenditures from two sources: government state budget allocations, and ODA fund allocations, including both bilateral and multilateral ODA. It is noted that bilateral ODA in recent years accounted for 70% of the total ODA received by Viet Nam, and tends to increase gradually over the years (OECD, 2017).

Regarding social spending, the Viet Nam BER focused on the expenditures of the Forest Protection and Development Fund (VNFF), managed by VNFOREST. The VNFF is established with financial contributions from the government, individuals and organizations benefiting from forest environmental services, applying the principles of payments for forest ecosystem services (PFES). VNFF is a not-for-profit financial institution and established based on Decree No. 05/2008/ND-CP to mobilize social resources, including government financial support and compulsory contributions, external aid, financial support, voluntary contributions and contributions from entrusted funds of domestic and foreign individuals. Financial expenditures by VNFF aim to strengthen protection and development of natural forests throughout the country, contributing to promoting biodiversity conservation in Viet Nam. Thus, based on the mixture of financial resources received, VNFF's expenditure are considered social biodiversity spending in Viet Nam.

Concerning private sector spending, the Viet Nam BER reviewed biodiversity-related expenditures of selected companies, including Holcim, Honda, Coca Cola, and private international and domestic funds, including the Ford Foundation, John D. and Catherine T. MacArthur Foundation, small grants of embassies, all of which provide financial support directly to NGOs, PAs and communities for the purpose of biodiversity conservation in Viet Nam.

All data quoted in the BER report are current price.

An exchange rate of USD 1 = VND 22,500 is applied throughout the report.

2.3 Data collection method

Collection of secondary information and data

Available information and data related to public and private biodiversity expenditure were collected from official websites, audited financial balance reports, financial statements, published documents and other reliable sources, including government agency websites, research institute websites, etc.

Collection of primary information and data

Public sector: Questionnaires were sent to MONRE (Annex 1), VNFOREST/MARD (Annex 2), DFISH/MARD (Annex 3), MOST (Annex 4), DONREs (Annex 5), DARDs (Annex 6) and 64 PAs (Annex 7) to collect information and data on any organization's:

- Key financial resources – amount and origin - for biodiversity spending in the years 2011 – 2015.
- Government recurrent expenditures and investments for biodiversity conservation purposes in the years 2011 – 2015.
- Government's investments in biodiversity-related national strategies, target programs and priority projects implemented or managed by MONRE, MARD, MOST, DONREs, DARDs (or subordinate units) and PAs in the years 2011 - 2015.
- International donors' expenditures on biodiversity-related programs or projects, identified as having at least one of following objectives: (i) conservation of natural ecosystems, (ii) conservation of wild and domestic endangered, rare and precious species of plants and animals; (iii) sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity; (iv) control activities which negatively impact on biodiversity; (v) biodiversity conservation in the context of climate change. The programs and/or projects were implemented or managed by MONRE, MARD, MOST, DONREs, DARDs (or their subordinate units) and PAs in the period 2011 – 2015.
- Additional information that helps identifying the exact biodiversity purposes of financial expenditures by various organizations.

Questionnaires were designed carefully and separately for each target biodiversity finance actor, to allow crosschecking information obtained from central and local biodiversity actors and avoid double counting.

The BER team also visited selected organizations at the central level, including DMSUPF, VNFOREST, DFISH, and BCA, as well as 6 PAs, selected to represent PAs in different eco-regions (i.e. the northern, central and southern regions of Viet Nam) and of different management types (i.e., MARD-managed NP vs. provincial managed NP; terrestrial PA vs. marine PA; NP vs. NR vs. Species Protected Area). Target PAs visited for additional information collection and data verification include the Ba Vi NP (Hanoi), Cuc Phuong NP (Ninh Binh Province), Son Tra NR (Da Nang), Cu Lao Cham MPA (Quang Nam Province), Tram Chim NP (Dong Thap Province) and Phu My Species and Habitat Conservation Area (Kien Giang Province).

Information on biodiversity-related ODA was collected from the OECD database and double checked against information provided by key donors (i.e., ADB, WB, JICA, etc.) as well as against information obtained from state management organizations (through questionnaires).

Social sector: A questionnaire was sent, and follow-up visit was made, to VNFF to collect data on:

- PFES revenue and disbursement during 2011 – 2015.
- Deposits on offset plantations (replacement forests) in the case of forest land allocations for other land use purposes.
- Programs and activities supported by VNFF during 2011 – 2015.

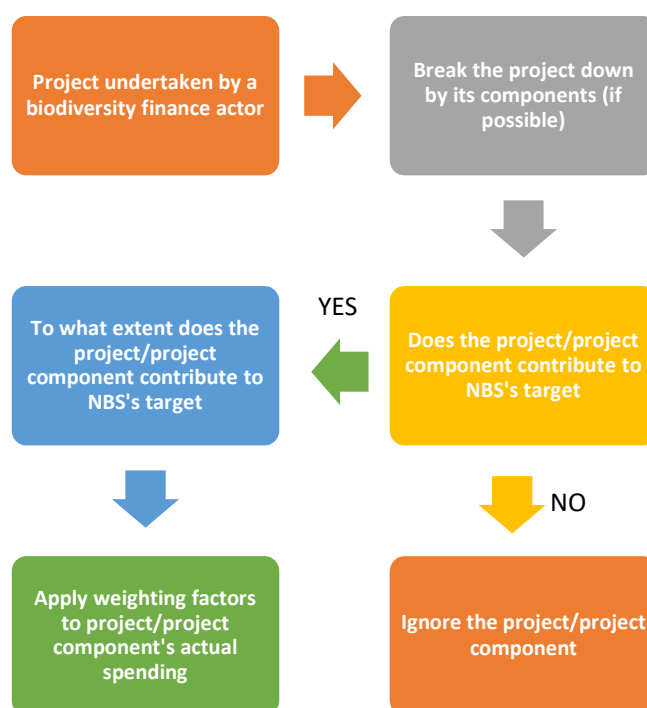
Private sector: Information and data were obtained from databases of key technical biodiversity partners in Viet Nam, including the International Union for the Conservation of Nature (IUCN), the World Wildlife Fund (WWF), Fauna and Flora International (FFI), etc., and double checked with data obtained from PAs where their biodiversity conservation activities were implemented during 2011 – 2015.

2.4 Data analysis

All data and information related to biodiversity expenditures were checked to avoid double counting among key biodiversity finance actors. For example, ODA funding allocated to 6 MARD-managed NPs is only counted as biodiversity finance if such amount was not included in the biodiversity finance allocations by state agencies, otherwise it was exempted from biodiversity-related ODA funds. Or, for example, with the total government funding for the Gene Bank allocated to MOST, any relevant finance amounts re-allocated to different ministries (i.e., MARD, MONRE, DOH, etc.) were excluded from their ministerial expenditures.

Once double counting was examined and excluded, all data and information were aggregated into a database according to biodiversity finance actors, and reclassified by biodiversity targets to which any biodiversity finance contributed, based on analysis of the purpose of investment. Subsequently, a weighting factor was applied - the percentage attribution to the identified specific biodiversity target - to reflect the extent to which programs/projects or its components contribute to achieving biodiversity conservation targets.

In determining the biodiversity expenditure weighting factors for available finance, the BER team classified government's regular expenditures (i.e. salaries, supplements, operation apparatus, etc.) and investment (i.e. in infrastructures and facilities serving biodiversity conservation and enhancement purposes) allocated to state biodiversity management organizations at both the central and local level as 100% biodiversity expenditure. Meanwhile, expenditures of programs/projects funded from government budget, ODA, social funds and private financing sources and implemented/managed by state biodiversity management organizations and other organizations were categorized, weighted and aggregated as in the scheme below:



The weighting factors used to quantify any program/project or its components as to the percentage attributable to achieving any of the biodiversity targets (see Table 1) are presented in Table 2, while an example of the weighting factor application is presented in Box 1.

Based on biodiversity expenditure data collected in the period of 2011 - 2015, it is possible to estimate future expenditures following BIOFIN guidance on 6 possible costing approaches, including: incremental budgeting, historical projection, cost modeling, activities-based costing and results-based costing. Particularly, in the case of the Viet Nam BER, historical projection approach was used. Accordingly, the total future biodiversity expenditure was estimated based on the trend and the regression relationship between the past biodiversity expenditure and other economic factors.

Table 2 *Weighting factors applied to biodiversity expenditures*

Level	Biodiversity related weighting class	Example Criteria
High relevance	75 - 100%	Program/Project or its component explicitly state a predominant biodiversity objective, or belong to a government program dedicated to biodiversity conservation and development.
Medium relevance	50 – 74%	Program/Project or its component has clearly stated secondary objectives related to biodiversity conservation and development.
Low relevance	25 – 49%	Program/Project or its component includes activities that indirectly contribute to biodiversity conservation and development, but biodiversity benefits are not explicitly listed in project objectives or the stated results/outcomes.
Marginal relevance	1 – 24%	Program /Project or its component includes activities that have none to marginal links to biodiversity; biodiversity benefits are not explicitly listed in project objectives or stated results/outcomes.

Box 1: Application of weighting factors in Forest Sector Development Project (FSDP)

This 10-year project (from 2005 – 2015) financed by the WB, GEF and Government of Vietnam and implemented by MARD aimed to achieve sustainable management of plantation forests and the conservation of biodiversity in Special Use Forests (SUFs). The project comprised of 4 components, including:

Component 1: Institutional Development (US\$ 3.35 million) aimed to assist the Government in strengthening the enabling environment for sustainable forest management and biodiversity conservation by:

- *Revising selected policies and regulations based on field implementation experiences with regard to management of production plantation forest and SUFs.*
- *Establishing farm forestry groups to facilitate the development of smallholder forestry.*
- *Promoting certification of plantation forests in selected areas to ensure social and environmental sustainability and higher prices and improved and secured market access for participating households.*

Component 2: Smallholder Plantation Forest (US\$74,29 million) aimed to establish forest plantations based on different cropping systems in Quang Nam, Quang Ngai, Binh Dinh, and Thua Thien Hue provinces through:

- *Participatory site selection* involving village consultations and technical and environmental screening of proposed sites.
- *Land allocation and Land Use right Certificate (LUC)* which were eligibility criteria for the investment credit.
- *Extension and services delivery* to assist smallholders in all aspects of plantation forestry;
- *Plantation design and management.*
- *Plantation investments* in the form of credits to eligible households in a revolving fund until 2036.

Component 3: Special Use Forest (US\$15.97 million) aimed to improve the conservation and sustainable use of biodiversity resources in priority SUFs and increase the reliability of SUF funding through the establishment of an innovative financing mechanism by:

- *Establishing and Operating the Vietnam Conservation Fund (VCF)* including the fund management structure and procedures; administration of a competitive small grants program for SUFs; and monitoring, reporting, and dissemination of lessons learned. The VCF would be open-ended and could be replenished at the end of the project by other donors based on the evaluation performance.
- *Improving SUF planning and implementation* with a focus on site-specific conservation needs assessment, development of operational management plans, strengthening of capacity of SUF Management Boards to establish co-management agreements with local communities; and strengthening of field implementation capacity; and operationalization of a site-specific monitoring and evaluation system.

Component 4: Project Management and Monitoring and Evaluation (US\$17.84 million) aimed to facilitate efficient project implementation and the coordination among various government agencies at central, provincial, district and commune levels as well as undertaking project-specific monitoring and ensuring effective collaboration and cooperation with other partners in the FSDP Partnership in accordance with the signed MOA and related principles.

Based on the information provided on specific focus of each component, the BER team designed a weighting factor approach for FSDP’s expenditures:

Component	Sub-component	Relevant NBS’s target	weighting factor	Rationale
Institutional Development	Revising selected policies and regulations based on field implementation experiences with regard to management of production plantation forest and SUFs	Control of activities which negatively impact on biodiversity (i.e, control of overexploitation and illegal exploitation; control of land-use	75%	This component has a clear objective of strengthening forest management and biodiversity consevation. However, none of its funding was used
	Establishing farm forestry groups to facilitate the development of smallholder forestry			

	Promoting certification of plantation forests in selected areas to ensure social and environmental sustainability and higher prices and improved and secured market access for participating households	conversion toward reducing impact on biodiversity)		for on-site biodiversity conservation purpose.
Smallholder Plantation Forest	Participatory site selection involving village consultations and technical and environmental screening of proposed sites	Control of activities which negatively impact on biodiversity (i.e., control of overexploitation and illegal exploitation; control of land-use conversion toward reducing impact on biodiversity)	25%	This component includes activities that have no direct link to biodiversity but help to improve income of people living near SUFs, therefore, indirectly reduce pressure on natural resource exploitation in SUFs
	Land allocation and LUC as eligibility criteria for the investment credit.			
	Extension and services delivery to assist smallholders in all aspects of plantation forestry;			
	Plantation design and management			
	Plantation investments in the form of credits to eligible households in a revolving fund until 2036			
Special Use Forest	Establishing and Operating the VCF, including the fund management structure and procedures; administration of a competitive small grants program for SUFs	Conservation of natural ecosystems (i.e., investment in protected areas)	100%	Clear objective of improving conservation and sustainable use of biodiversity resource in SUFs
	Improving SUF planning and implementation			
Project Management and Monitoring and Evaluation	None	None	10%	No direct link to biodiversity, only facilitates the implementation of the whole project, therefore to some extent contributes to biodiversity conservation
Subsequently, to obtain an estimate of biodiversity expenditure for the PSDP, the BER team multiplied the the annual disbursement amount of each project component during the 2011-2015 period with the appropriate weighting factors identified in the table above.				

2.5. Limitations

There are many challenges that may affect the overall estimate of total annual biodiversity expenditure for the 2011 – 2015 period for the whole country. The BER study specifically notes the following limitations:

- In general, data are limited, and their availability and accessibility is highly dependent on biodiversity finance actors, with almost none of these actors having a separate system for monitoring and tracking biodiversity financial flows by funding source or by biodiversity target.
- Cross-checking of data and information was challenging; the analysis involved many biodiversity finance actors with variations in terms of their understanding of the term “biodiversity expenditure”
- While general information on the financing for biodiversity conservation related projects is mostly available, quantitative data or information for individual components/objectives, budget lines or yearly spending are limited, making it difficult to apply sub-target categorization and weighting percentages.

In most cases, the BER team assumed that financial flows were distributed equally among all years during the duration of a program/project.

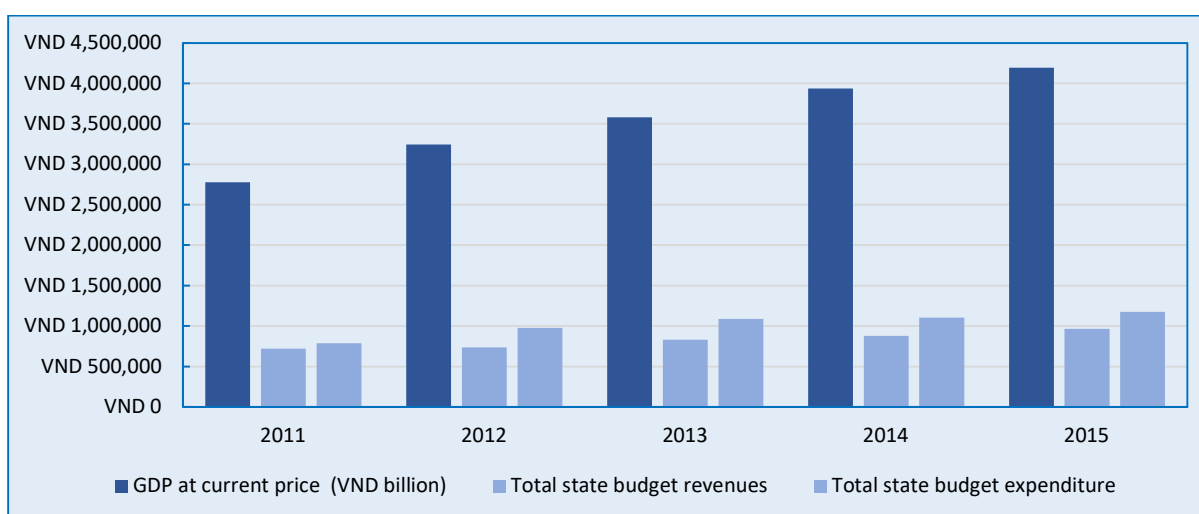
- The BER study did not include an analysis of the divergence between budgeted, approved and allocated financing and actual expenditure, therefore no conclusions can be drawn on commitments of the government and/or donors towards actually distributing and spending as budgeted and approved.
- Private biodiversity expenditure: Very limited and difficult to be cross-checked.

3 NATIONAL CONTEXT OF THE VIET NAM BER

3.1 National account and state budget in the period of 2011 - 2015

According to MOF, during 2011-2015, Viet Nam's economy faced many external and internal difficulties and challenges, but due to significant efforts of the government, the economy gradually recovered and gained positive results, as shown by an average growth rate of 5.91% annually between 2011 and 2015 (MOF, 2015). During the same period, the total Gross Domestic Product (GDP) increased gradually from VND 2,779,800 billion (USD 123.55 billion) in 2011 to VND 4,192,862 billion (USD 186.35 billion) in 2015. Total state budget revenues constantly increased and accounted for 23.6% of GDP during 2011-2015. Meanwhile, budget spending slightly exceeded budget revenues, leading to challenges in balancing the state budget, overspending and low budget accumulation for development (Figure 2).

Figure 2 Viet Nam's state budget during the period 2011-2015



Notes: Unit – billion VND; Source: MOF and GSO (2011-2015).

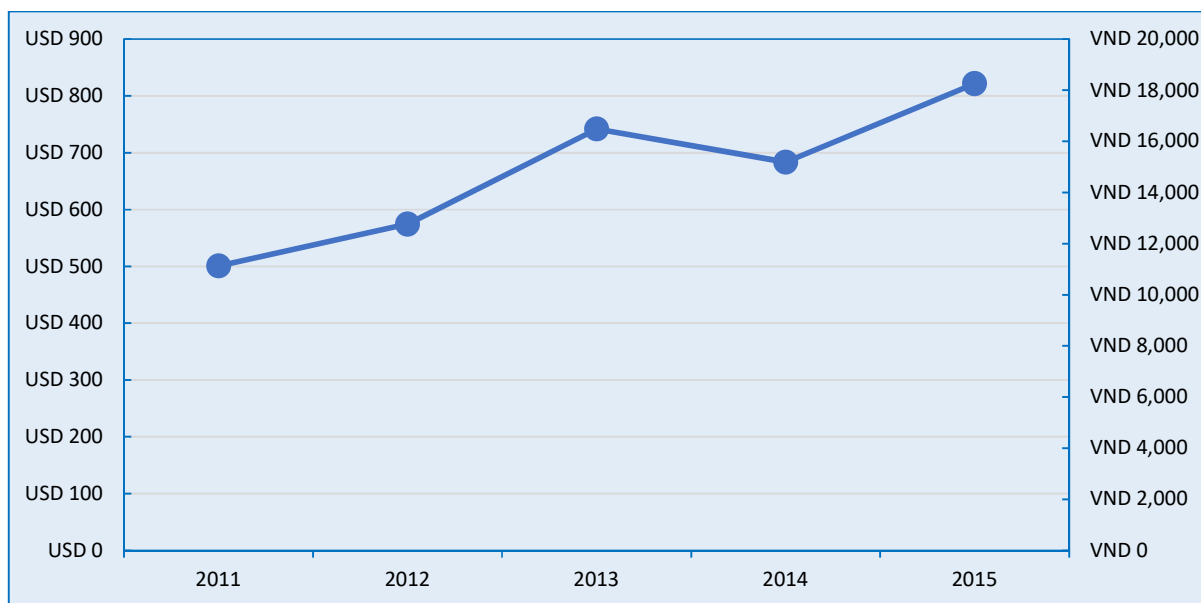
3.2 Environmental expenditure during 2011 - 2015

Biodiversity conservation is one of the priorities in Viet Nam's environment protection policy, and the government budget includes a budget line for the financing of environmental protection activities. Environmental protection funding is allocated annually from the state budget for environment-related activities at both central and local levels, in line with Joint Circular No.45/2010/BTC-BTNMT, dated 30 March 2010, of MOF and MONRE (Figure 3; Table 3). Central budget financing is spent on:

- developing and adjusting environmental protection strategies, plans, technical processes, technical guidelines, technical and economic norms, environmental technical regulations, environmental protection programs and schemes under central authority implementation;
- (ii) developing, monitoring and publishing plans on environmental protection at regional and national levels;
- (iii) supporting environmental pollution control and waste management;
- (iv) handling environmental pollution disasters; and
- (v) supporting the operational management of state owned PAs, including the maintenance and upgrading of facilities for housing and breeding of rare and precious animal species at risk of extinction.

Locally allocated budgets are spent on locally-owned tasks having similar content to tasks funded from central budget sources, including: support for the operational management of provincially managed PAs, the maintenance and upgrading of facilities for housing and breeding of rare and precious animal species at risk of extinction. According to MONRE (2014b), the government budget spending on environmental protection is one of the key financial sources for biodiversity conservation at both the central and local level in Viet Nam. **However, biodiversity expenditure as a share of the government's overall expenditure on environmental protection is not fixed.** The share varies from year to year, depending on the government budget availability, the government's short-term and long-term biodiversity management plans and especially the priority given to biodiversity compared to other areas in the field of environmental protection and economic development.

Figure 3 Total Government's expenditure on environment protection during 2011-2015



Notes: Unit billion VND / million USD; Source: MOF and GSO (2011-2015).

Table 3 Expenditure on environment as a share of GDP and other economic indicators

Indicator		2011	2012	2013	2014	2015	Average per year
Expenditure on environment protection	VND billion	11,264	12,919	16,686	15,375	18,483	14,945
	USD million	500.62	574.18	741.60	683.33	821.46	500.62
Expenditure on environment protection as a proportion of GDP (%)		0.41	0.40	0.47	0.39	0.44	0.42
Expenditure on environment protection as a proportion of total budget expenditure (%)		1.43	1.32	1.53	1.39	1.57	1.45
Expenditure on environment protection as a proportion of development investment (%)		5.41	4.81	6.14	6.19	7.80	6.07
Expenditure on environment protection as proportion of expenditure on economics and environment protection ⁶ (%)		24.73	22.72	25.19	22.14	22.01	23.36

⁶ From 2013 backwards including expenditure on science, technology and environment.

Source: MOF and GSO (2011-2015).

Between 2011 and 2015, the total government expenditures on environmental protection almost doubled, from VND 11,264 billion (USD 500.6 million) in 2011 to VND 18,483 billion (USD 821.6 million) in 2015, an average growth rate of 14% per year (Figure 3; Table 3). For the same period, the average ratio of expenditure on environment to the GDP, total budget expenditure, expenditure for development investment and expenditure on economics and environment protection was 0.42%; 1.45%; 6.07%; and 23.36%, respectively (Table 3). It is noted that currently, most of environment spending is for supporting environment pollution control and waste management and for handling environmental pollution disasters.

3.3 Tracked government spending on biodiversity in 2011 – 2015

According to MOF Decision No. 33/2008/QD-BTC, dated 2 June 2008, on promulgating the State Budget Index (applicable to the 2009 to 2016 budget years), government expenses for activities related to nature conservation and biodiversity conservation are included in the category of expenditure for environmental protection (category code 280), and can be tracked under sub-category 287. However, the Decision did not specify which types of expenditure should be recorded, neither how they should be recorded.

With Circular No.324/2016/TT-BTC, adopted on 4 February 2017 (replacing Decision No. 33/2008/QD-BTC) (applicable for the 2017 budget year), government expenses for nature conservation and biodiversity conservation were categorized (sub-category 271) under environmental protection (category 250), including expenditures and investments for investigation, monitoring and analysis; solid and liquid waste treatment; nature conservation and biodiversity conservation; responding to climate change, and other environmental protection activities. Government expenses for environmental protection do not cover the financing of state management activities of MONRE and DONRE, neither on training nor scientific research.

Circular No.324/2016/TT-BTC also specifies accounting rules in general, and for nature conservation and biodiversity conservation activities in particular. Accordingly, if a project has many objectives/outcomes, its main objectives is the base for identifying the appropriate (sub)category. Table 4 presents government expenditures for nature conservation and biodiversity under sub-category 287 for the 2011-2015 period.

Table 4 Government expenditure on nature conservation and biodiversity

State budget expenditure	2011	2012	2013	2014	2015	Total
Item 287 (unit: VND billion)	230.11	298.31	343.73	388.36	445.37	1,696.82
Item 287 (unit: USD million)	10.23	12.86	15.27	17.26	19.79	75.41

Source: MOF (2011 – 2016); numbers include expenditures from both central and provincial budgets.

4 KEY SOURCES OF BIODIVERSITY FUNDING

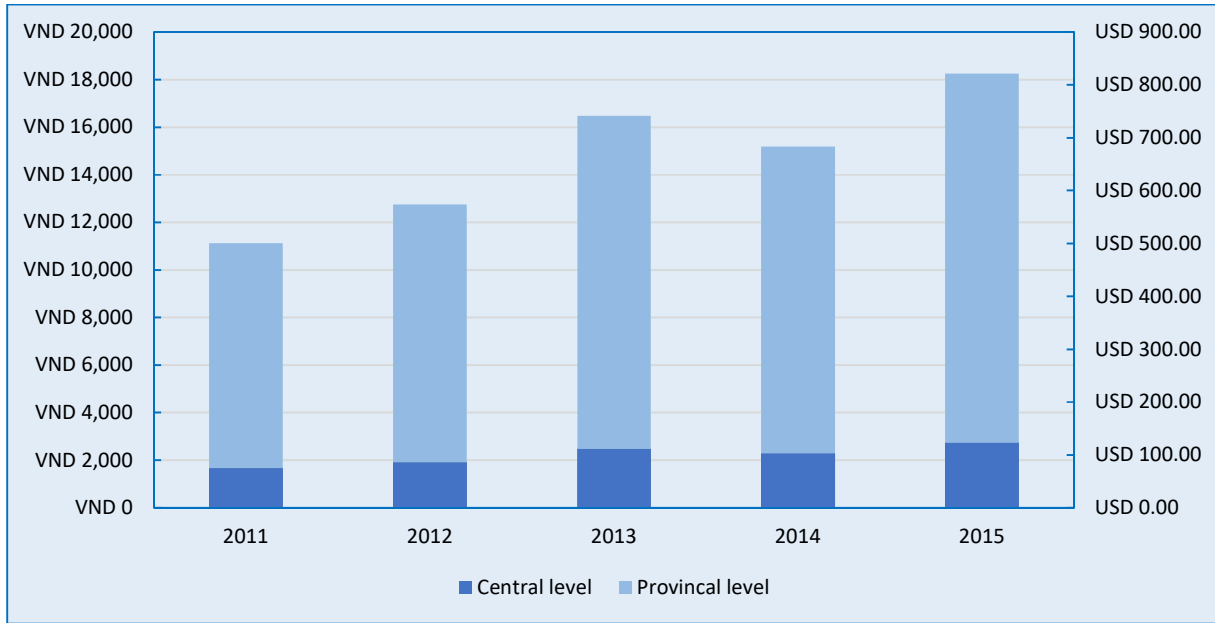
4.1 State budget

According to the Law on Biodiversity (2008), the government has committed to allocate budget finance for biodiversity-related activities. The government budget is sourced from taxes, charges and fees; revenue from economic activities of the state; contributions by organizations and individuals; aid and other revenues as provided by law. It is an important source of biodiversity financing and is allocated to central and local (provincial) biodiversity state management agencies through five channels:

- Recurrent expenditure, used for following purposes:
 - Monitoring, reviewing, managing information and data on biodiversity; biodiversity database.
 - Developing reports on the status of biodiversity, on the status of PAs; formulating, monitoring, evaluating Master Plans, programs and projects for biodiversity conservation.
 - Formulating, appraising the list of endangered rare and precious species requiring protection, the list of invasive alien species, the list of wildlife species prohibited for exploitation in the wild, the list of wild species allowed for regulated exploitation, the list of genetic resources prohibited for export; conducting investigations and assessment in order to amend and supplement such lists at regular intervals.
 - Management of state-owned PAs and biodiversity conservation facilities.
 - Developing and testing models for the conservation and sustainable use of biodiversity.
 - Information and education on legislation and regulations, to raise awareness about the conservation and sustainable use of biodiversity; training and enhancing technical expertise on biodiversity; international cooperation for the conservation and sustainable use of biodiversity.
- Development investment, used for following purposes:
 - Conducting basic surveys on biodiversity.
 - Restoring natural ecosystems.
 - Conserving species on the list of endangered precious and rare species prioritized for protection.
 - Investing in constructing, upgrading and renovating state-owned biodiversity conservation facilities.
 - Implementing programs for the control, isolation and extermination of invasive alien species.
 - Making other investments related to biodiversity conservation and sustainable use of biodiversity in accordance with adopted legislation.
- Investment for the implementation of biodiversity-related national strategies, programs and projects in different sectors.
- ODA - as part of the government budget, in line with the Law of State Budget (2011) - used for the formulation of investment projects only.
- Trust Funds, which mobilize social and private financial support in various fields, including biodiversity.

Recurrent expenditure is mainly allocated from the government's expenditure on the environment, which account for 0.42% of the GDP and 1% of government budget allocations to central and provincial entities, which for 2011-2015 internally was structured at a ratio of 15% - 85%, respectively. Figure 4 presents the total and proportion of environmental expenditure allocation in Viet Nam during 2011-2015.

Figure 4 Proportion of recurrent environment expenditures for central and provincial levels, 2011-2015

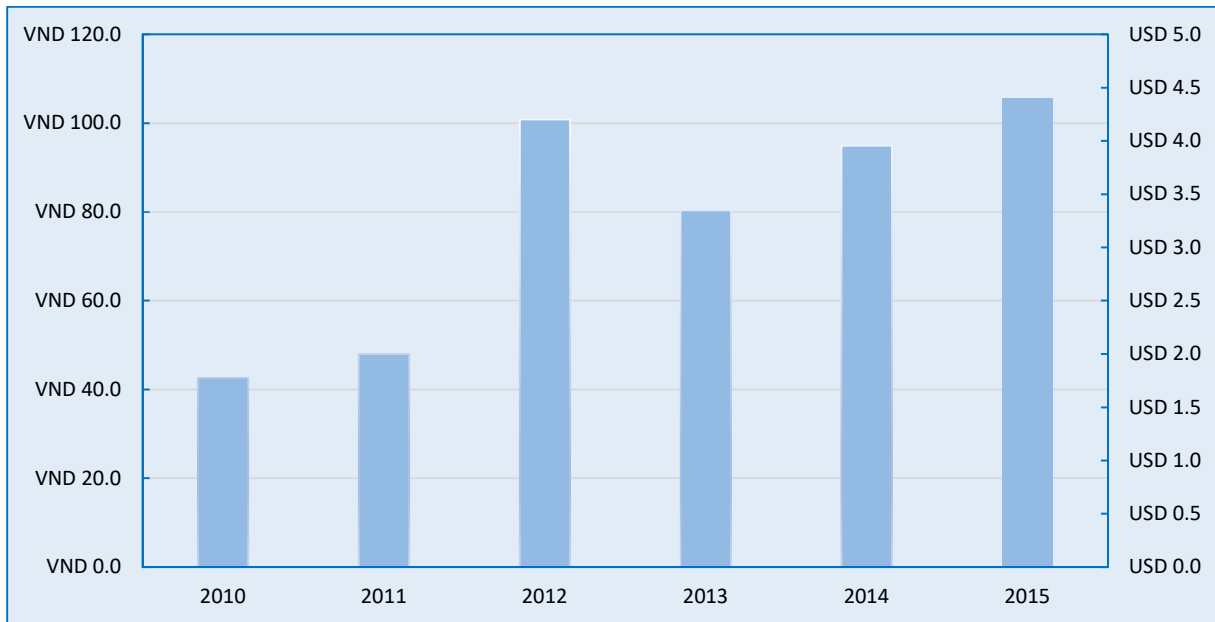


Notes: Unit – billion VND / million USD; Source: MOF and GSO (2011-2015).

In addition to the government expenditure on the environment, other promising sources for biodiversity finance include expenditure on science and technology, on economics, and on education and training.

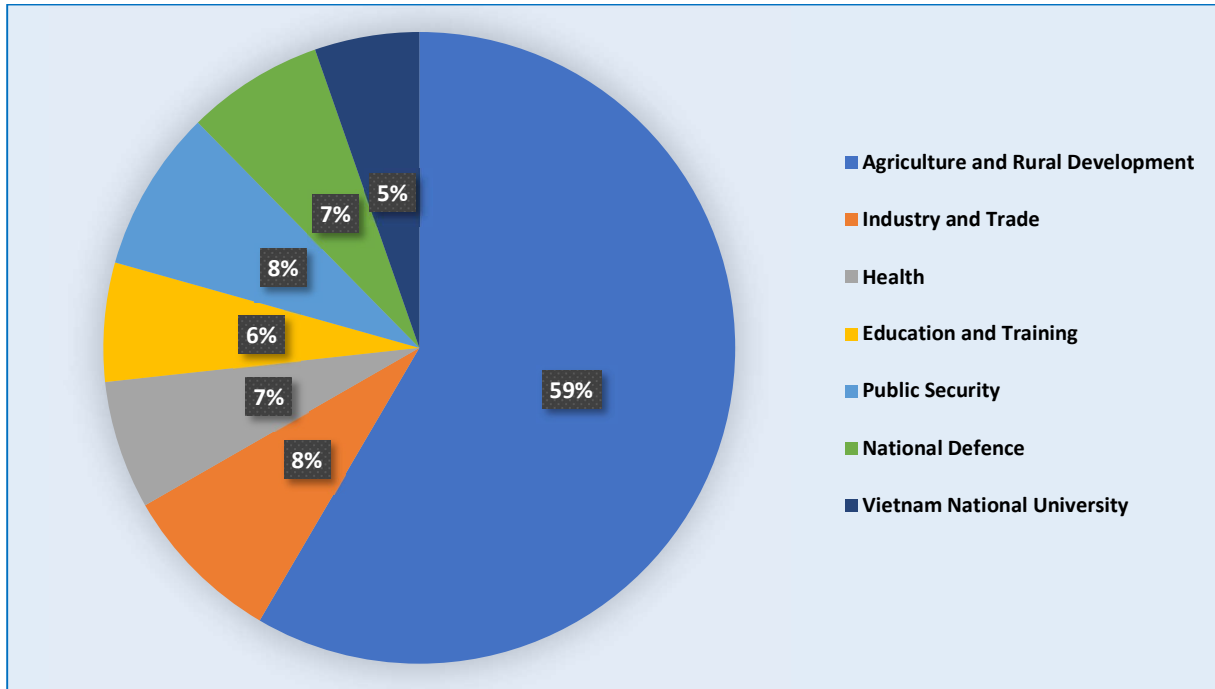
During 2010-2014, funding allocated from expenditure sources on science and technology to the Gene Bank Program, managed by MOST, increased rapidly from VND 20 billion (USD 0.89 million) in 2010 to VND 91 billion (USD 4.04 million) in 2014 (MOST, 2014; Figure 5, Figure 6).

Figure 5 Annual government financing for the Gene Bank Program



Notes: Unit – billion VND / million USD; Source: MOF and GSO (2011-2015). Source: MOST (2014).

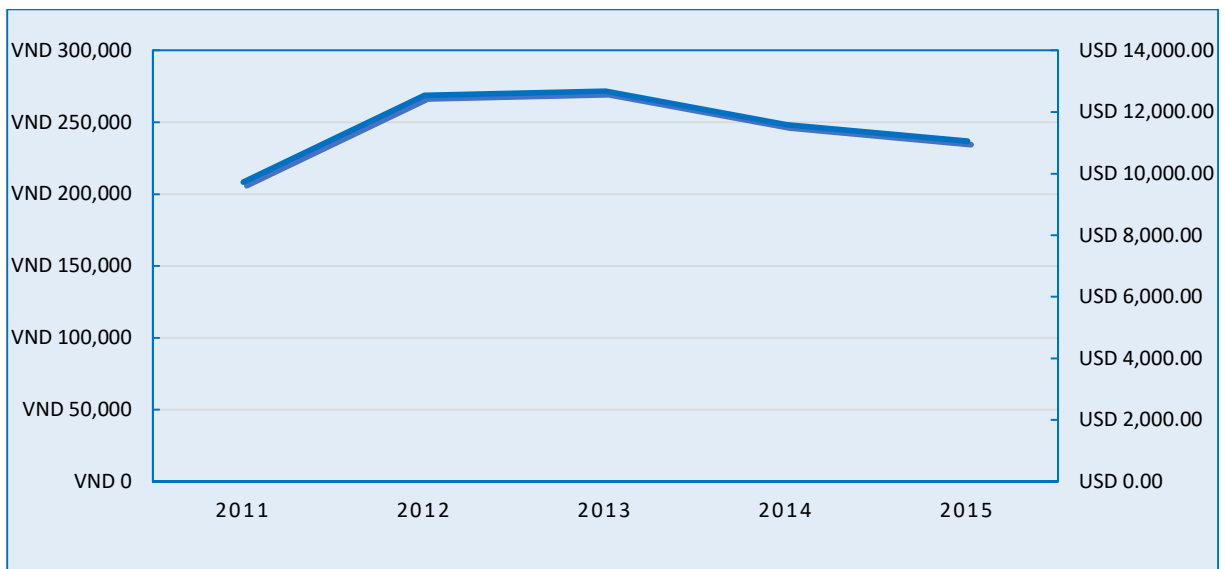
Figure 6 Government financing for the Gene Bank Program by sector



Notes: Percentages – averages of 2010-2014; Source: MOST (2014).

Development investment is mainly allocated from government development investment sources for environment protection, which has been receiving more attention during 2011 - 2015 than during the previous period 2006 – 2010 (MONRE, 2015b). Allocations are used for strengthening and upgrading environmental infrastructure, facilities and equipment, including infrastructure, facilities and equipment for biodiversity conservation such as offices of NPs, Wildlife Rescue Centers, office equipment, etc. Figure 7 presents the government budget allocations for overall development investment during 2011-2015.

Figure 7 Government budget allocation for development investment during 2011-2015

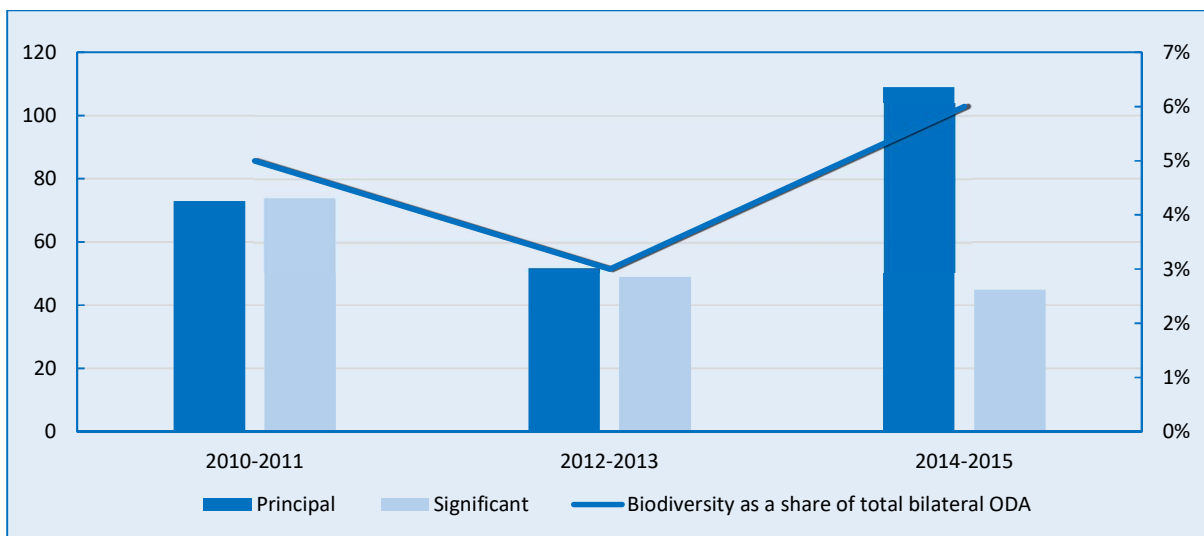


Notes: Unit – billion VND / million USD; Source: MOF and GSO (2011-2015).

Investment for implementation of biodiversity related national strategies, priority programs of different sectors always was a priority commitment of the government, to mobilize and allocate financial resources for the implementation of approved national strategies and priority programs in different sectors, including natural resources, environment, agriculture, forestry, etc., including biodiversity-related ones (Annex 8).

On ODA funds, between 2011 and 2015, Viet Nam was among the highest-ranked recipients of bilateral and multilateral development finance in the world, with overall USD 3,632 million received from all donors (OECD, 2017). During the same period, Viet Nam ranked among the 10 countries receiving bilateral biodiversity-related ODA (e.g., together with Brazil, India, Turkey, Ukraine, Colombia, Ethiopia, Indonesia, Philippines and Kenya), annually averaging nearly USD 150 million, to a total of USD 402 million, or 4.7% of the total bilateral ODA to Viet Nam (OECD, 2015). Of the total biodiversity-related ODA, USD 234 million (58.2%) targeted biodiversity as the principal objective, implying that these activities would not have been funded if not for their biodiversity-related goals; the remaining USD 168 million (41.8%) targeted biodiversity as a secondary or significant objective, indicating that biodiversity is being mainstreamed into development co-operation activities in Viet Nam with other primary objectives. (Figure 8).

Figure 8 Biodiversity related bilateral ODA to Viet Nam in 2011-2015



Notes: Unit – million USD; Source: OECD (2015).

As such, ODA financing is a critical source for biodiversity conservation in Viet Nam, significantly adding to the government budget, both in the past as well as in the foreseeable future. A large proportion of ODA investment for biodiversity conservation in Viet Nam comes from multilateral (UNDP, WB, ADB, EU) and bilateral (JICA, GIZ, Danida, Netherlands Embassy) sources. Donor assistance has been used to support Viet Nam in fulfilling its obligations under multilateral environmental agreements to which the country has become a contracting party. Biodiversity-related ODA projects for 2011-2015 are listed in Annex 9.

Trust funds (TFs) are a relative new investment vehicle; the government has committed to establish, finance and operate a significant number of TFs, to finance sectoral development activities, including biodiversity conservation. For example, the government provided a one-off contribution of VND 100 billion (USD 4.4 million) to the VNFF, and to the Viet Nam Environment Protection Fund (VEPF), to increase VEPF's capital from VND 500 billion (USD 2.2 million) to VND 1,000 billion (USD 44.44 million) within 3 years (2015 – 2017) (Prime Minister's Decision No. 02/2014/QD-Ttg). The VEPF is the national TF for environmental protection, providing preferential loans or financial resources for environment protection activities, and climate change adaptation and mitigation measures, not covered under budget financing from the state budget.

4.2 Social financial source

Social finance is an approach for mobilizing private capital, from individuals, enterprises, etc., to achieve social and environmental goals. TFs, such as the VNFF, VEPF, the Viet Nam Fund for Aquatic Resources Reproduction (VIFARR), the Community Development Fund (CDF), and others are representatives of social finance resources for biodiversity. Out of these TFs, VNFF is the most relevant to biodiversity. VNFF was established based on Government Decree 05/2008/ND-CP, dated 14 January 2008, to mobilize financing from societal sources as additional capital for direct investment in forest protection and development activities, the socialization of forest management, and the strengthening of awareness and responsibility among those benefiting from forests and those directly impacting on forests. VNFF operates on a non-profit basis, with an initial one-off state contribution to secure maintaining the TF's long-term stable operations. Besides initial state funding support, the TF's financial resources are obtained from compulsory PFES contributions, external donor support, contributions from entrusted funds of domestic and foreign individuals, other sources.

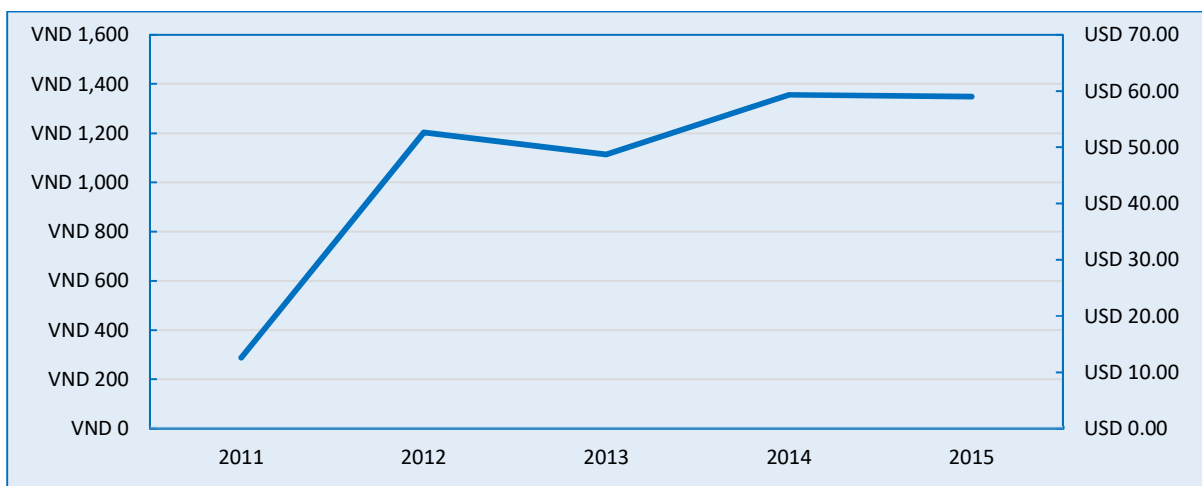
In recent years, the majority of VNFF revenues are provided by PFES, following the adoption of Government Decree 99/2010/ND-CP, dated 24 September 2010, which stipulates beneficiaries of forest environmental services to pay for these services to the owners of the forests that provide such services, in particular:

- Hydropower plants shall pay for forest services related to soil protection, erosion control and reduced sedimentation of reservoirs, rivers and streams, and the regulation of water flow and maintenance of water sources for hydropower generation, initially at the rate of VND 20 per kilowatt-hour (kWh) of commercial electricity, recently increased to VND 36 per kWh.
- Producers-suppliers of clean water shall pay for forest services related to the regulation and maintenance of water sources, initially at the rate of VND 40 per m³ of commercial water, recently increased to VND 52 per m³.
- Industrial companies using water in production processes abstracted directly from surface or groundwater sources shall pay for forest services related to the regulation and maintenance of water sources for production, currently at the pilot rate of VND 50 per m³ of water abstracted.
- Tourism service providers that benefit from forest services shall pay for the protection of natural landscapes and the conservation of biodiversity, at the rate of 1-2% of turnover.
- Individuals and organizations benefiting from forest carbon sequestration, services provided by spawning grounds, natural feeds and seeds, water for aquaculture, etc. should pay at the rate determined by PPCs.

Figure 9 presents the VNFF revenues collected using the PFES mechanism for the period 2011-2015.

Along with PFES, revenue payments for reforestation, linked to obtaining approval for the conversion of land from the forest land use category into another land use purpose (i.e., conversion from forested land to infrastructure for hydropower or other economic activity, or to public land) is also a significant source for VNFF revenues. Between 2008 and 2015, the total revenue from the conversion of forest was VND 956,500 million (USD 42.5 million) (VNFF, 2017). In addition, VNFF received financial support from various organizations, including the Trust Fund for Forests (TFF), GIZ, VFD, CIFOR, USAID, IUCN, ADB, etc. During 2011-2013, together these organizations contributed around VND 7,584 million (USD 0.34 million) to support VNFF with the implementation of the PFES program as well as non-project activities, including the development of the informative Viet Nam PFES database, training on financial management of VNFF the implementation of the PFES policy, and revision and supplementation of Decree No.157 (VNFF, 2017).

Figure 9 Revenue generated through PFES during 2011-2015



Notes: Unit – billion VND / million USD; Source - VNFF (2016).

In general, VNFF is a promising social finance resource for future support to biodiversity, because PFES revenues increased rapidly during 2016 and 2017 and are expected to increase further when all listed forest environmental services are paid correctly and in full. Other TFs like VEPF, VIFARR and CDF are promising as well, but currently biodiversity is not among their priority topics. For example, VEPF focuses on abating industrial environment pollution, the treatment of waste and the resolving of pollution impacts on the environment, while CDF focusing on rural community development projects. Other TFs are established but not yet fully operational, e.g., VIFARR was re-established by end 2017.

4.3 Funding from domestic and foreign organization and individuals

Some private domestic and international companies and organizations have provided grants to individuals, NGOs, community-based organizations, research centers, educational institutions, PAs, etc. to support actions for biodiversity conservation and sustainable use.

Between 2011 and 2015, there were at least 20 on-going biodiversity-related projects receiving grant support from domestic and international organizations, representing an annual average value of USD 60 million. A list of grant-financed biodiversity projects is presented in Annex 10.

Several private-sector companies have also contributed to biodiversity conservation in Viet Nam, through their own projects. For example, under the Clean Development Mechanism (CDM), one of the flexible mechanisms defined in the Kyoto Protocol, Honda Viet Nam invested VND 3.5 billion (USD 146,000) for planting 309 ha of forest in Hoa Binh province during 2008-2016 and VND 4.9 billion (USD 205,000) for planting 490 ha forests in Bac Kan province during 2013-2015. Meanwhile, Holcim Viet Nam – a cement company, located in Kien Giang province – during 2008-2010 invested USD 60,000 per year for the conservation of natural grassland in the Mekong Delta, and during 2008-2012 invested USD 1,000,000 for conservation and restoration of lime mountain ecosystems in Kien Giang province. Another company, Coca Cola Viet Nam, contributed USD 1.2 million between 2008 and 2015 for activities aimed at strengthening biodiversity protection in Tram Chim NP and enhancing the livelihood of local communities living in the NP's buffer zone, to reduce anthropogenic pressures on the NP.

5. BIODIVERSITY EXPENDITURE BY SECTOR, AGENCY AND CATEGORY

5.1 Public sector

5.1.1 Expenditure from state budget

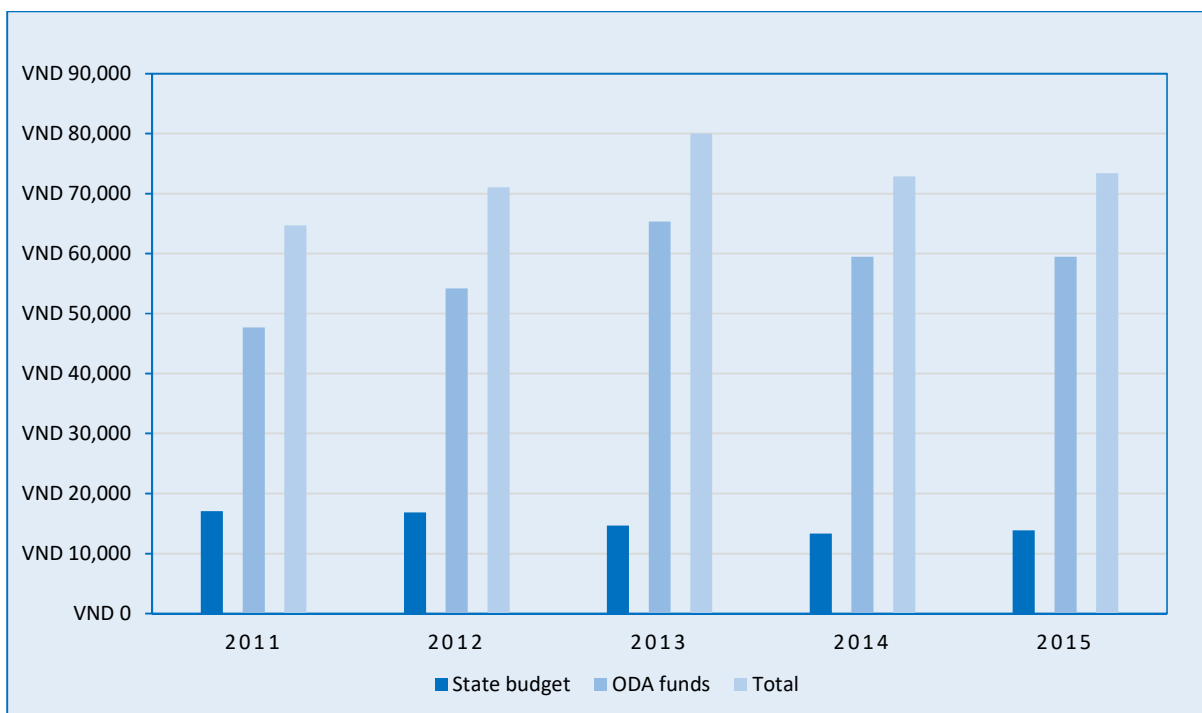
5.1.1.1 Expenditure of biodiversity state management agencies at central level

a) Expenditure of BCA - MONRE

BCA is a subsidiary unit of MONRE, responsible for the development of the NBS, with support from UNDP and the Global Environment Facility (GEF), as well as for developing and adopting regulations and instruments in support of the implementation of the Convention on Biological Diversity (CBD) in Viet Nam, including the system for the classification and identification of high conservation value areas, biodiversity offset criteria, biodiversity monitoring, etc. BCA is also the lead agency for the development of the national biodiversity database (with support from JICA) and the development of a wetland conservation and management program (with UNDP-GEF). BCA also acts as the focal point for several biodiversity-related international treaties, conventions and agreements, including the CBD, the Nagoya Protocol on Access and Benefit Sharing (ABS), the Ramsar Convention on Wetlands, and others.

During 2011 and 2015, BCA spent approximately VND 362,008 million (USD 16,09 million), of which VND 75,782 million (USD 3.37 million) was earmarked as government recurrent expenditure and VND 286,226 million (USD 12.72 million) was ODA co-financing. BCA's expenditures showed some interannual dynamics, slight increase from 2011 to 2013, and decreases from 2013 to 2015 (Figure 10).

Figure 10 Annual expenditure for biodiversity by BCA during 2011-2015



Notes: Unit – million VND; Source - Synthesized by the author based on information provided by MONRE.

On average, BCA spent 15.3% of its total expenditures, equivalent to VND 11,400 million (USD 0,51 million), to cover salaries and operational costs (i.e., raw materials, energy, office supplies, maintenance and purchase of specialized equipment) and 84.7% for undertaking biodiversity-related tasks, examples of which include

(i) the implementation of the Global Tiger Conservation initiative in Viet Nam; (ii) the inventory, survey and preparation of dossiers in support of establishing wetlands of international importance (Ramsar sites); (iii) the inventory and reporting on invasive alien species in Viet Nam; (iv) the development of the NBS in Viet Nam; (v) the integration of biodiversity conservation into local land-use planning; and (vi) the development of a national biodiversity database. BCA's expenditures were allocated 100% biodiversity expenditures.

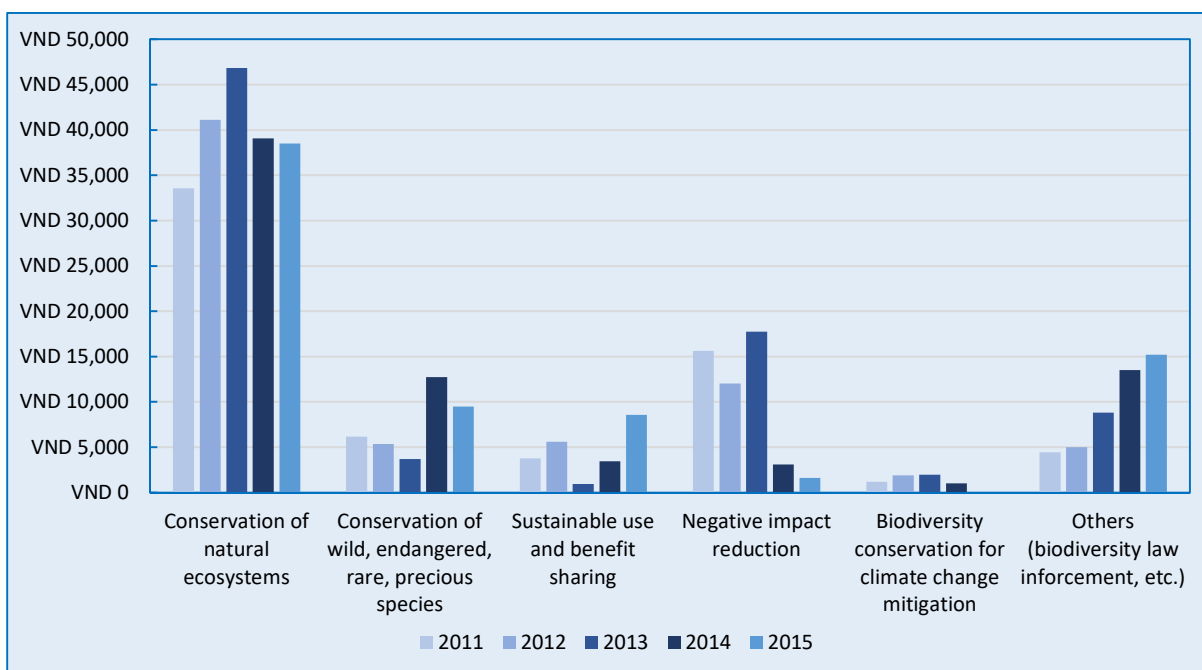
Table 5 and Figure 11 below summarizes analysis results of BCA's expenditures by year and category during 2011-2015 period.

Table 5 Biodiversity expenditure of BCA classified by NBS major tasks and by year

Biodiversity category	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	33,570	41,103	46,843	39,050	38,477	199,043
Conservation of wild and endangered, rare and precious species of plants and animals	6,159	5,368	3,689	12,730	9,490	37,436
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	3,750	5,638	924	3,468	8,587	22,367
Control of activities negatively impacting on biodiversity	15,615	12,035	17,750	3,100	1,650	50,150
Biodiversity conservation in the context of climate change	1,204	1,890	1,970	1,007	0	6,071
Others (awareness raising, biodiversity law enforcement)	4,450	5,000	8,800	13,500	15,191	46,941
Total	64,748	71,034	79,976	72,855	73,395	362,008

Notes: Unit – billion VND; Source - estimated by the author based on information provided by BCA-MONRE.

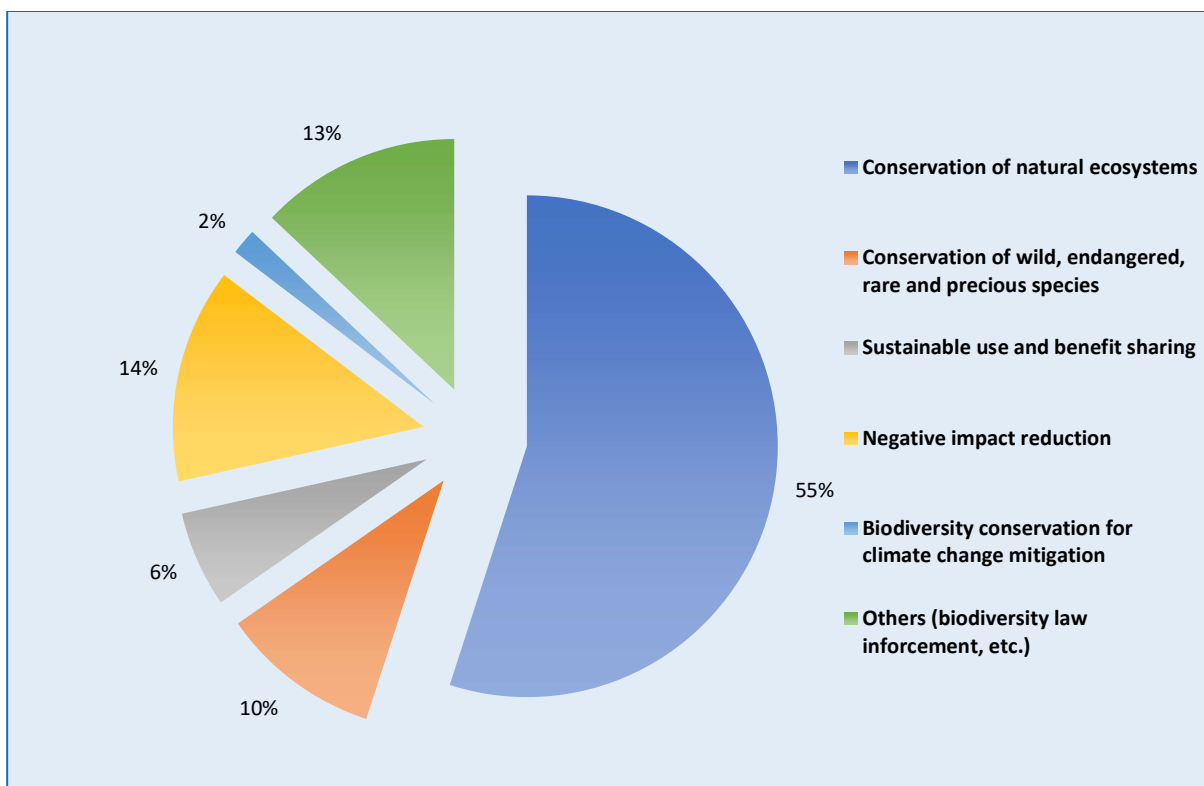
Figure 11 Biodiversity expenditure of BCA classified by NBS major tasks and by year



Notes: Unit – million VND; Source - synthesized by the author based on information provided by BCA-MONRE.

As also indicated in Table 5 and Figure 11, overall BCA expenditures during the whole period of 2011-2015 predominantly contributed to the “conservation of natural ecosystems”, followed by “negative impact reduction” and the “conservation of wild, endangered, rare and precious species” and other biodiversity related purposes (Figure 12).

Figure 12 BCA’s biodiversity expenditure share by NBS’s major tasks in the period of 2011-2015



Source: Synthesized by the author based on information provided by BCA – MONRE.

b) Expenditure of VNFOREST - MARD

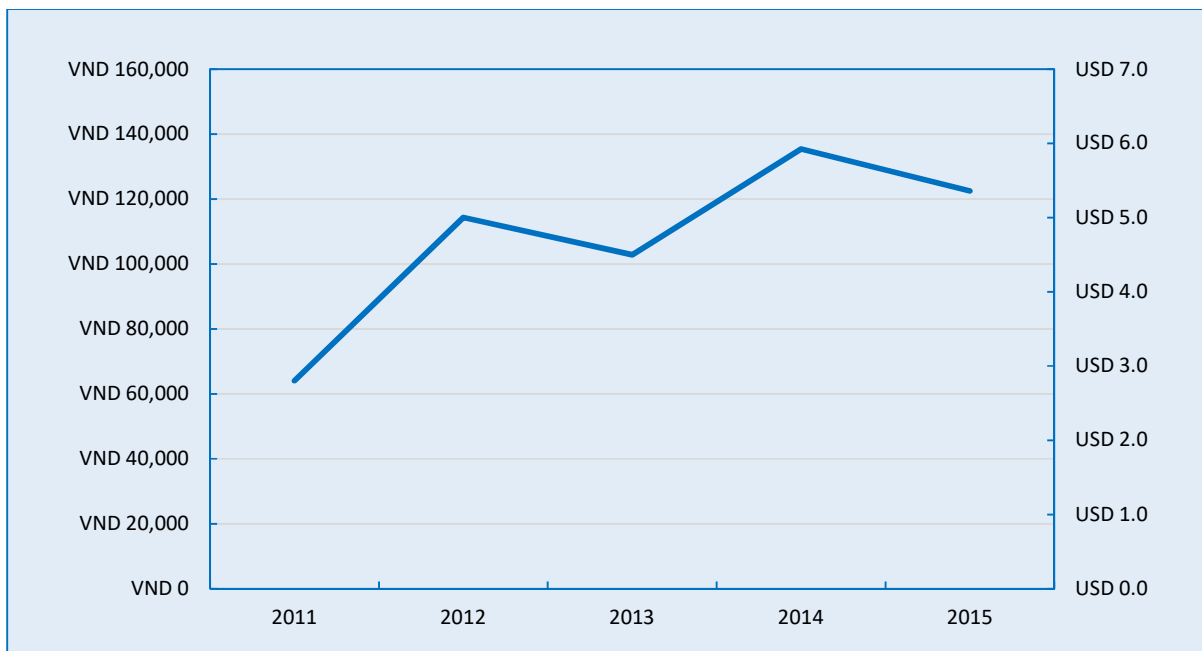
VNFOREST is one of the line agencies under MARD, responsible for national-level forest management, including Special Use Forests (SUF) and wildlife protection. Both VNFOREST and VEA of MONRE share functions and tasks related to the management of biodiversity in Viet Nam. Especially, the DMSUPF of VNFOREST and the BCA of VEA have designated responsibilities as focal points for the implementation of many biodiversity-related programs.

During 2011-2015, VNFOREST spent a total of around VND 539,805 million (USD 23.96 million) on:

- Salaries of staff and operational costs of 6 NPs, managed by VNFOREST: Tam Dao NP, Ba Vi NP, Cuc Phuong NP, Bach Ma NP, Cat Tien NP, Yok Don NP (approximately 78% of total expenditures).
- Salaries of staff and operational costs of DMSUPF (approximately 13% of total expenditures).
- Implementation costs of assigned regular and incidental activities implemented by DMSUPF, 6 NPs and a number of line agencies under VNFOREST (approximately 6% of total expenditures).
- Other relevant operational costs of DMSUPF and 6 NPs (approximately 3% of the total expenditure).

Table 6 and Figure 13 present VNFOREST’s biodiversity expenditure by year and classified according to their contribution to the major tasks of the NBS.

Figure 13 Annual expenditure for biodiversity by VNFOREST during 2011-2015



Notes: Unit – million VND/ million USD; Source - Synthesized by the author based on information provided by VNFOREST.

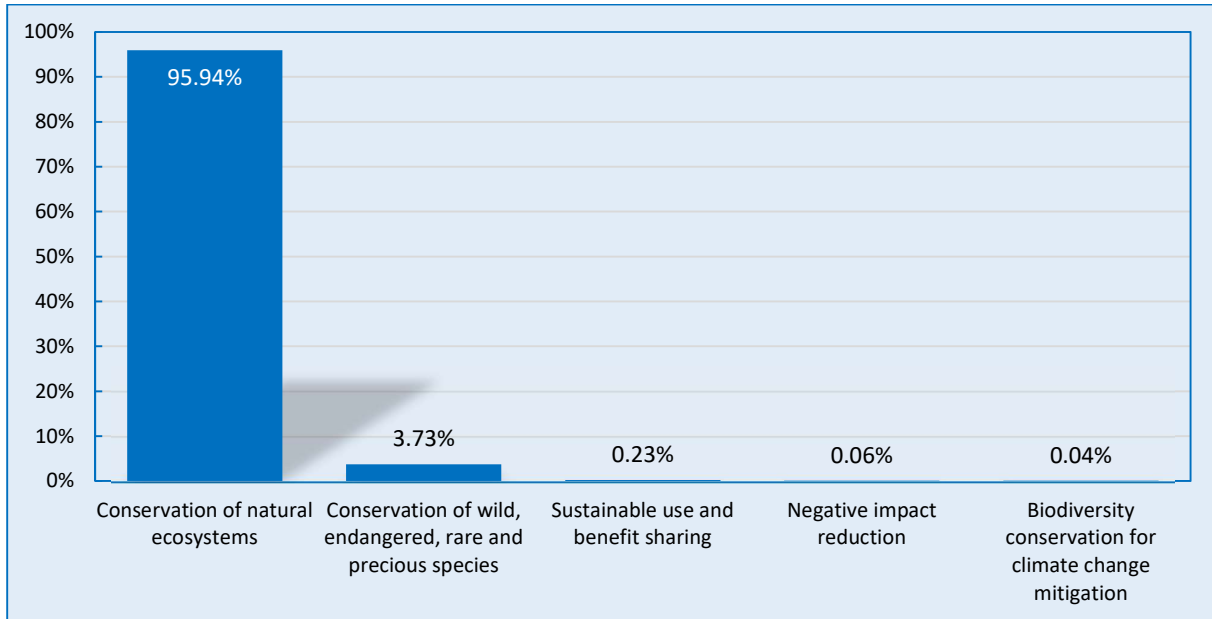
Table 6 Biodiversity expenditure of VNFOREST classified by NBS major tasks and by year.

NBS target	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	58,677	104,904	101,075	130,655	121,897	517,209
Conservation of wild and endangered, rare and precious species of plants and animals	3,912	9,158	1,733	4,750	577	20,130
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	1,246	0	0	0	0	1,246
Control of activities negatively impacting on biodiversity	0	300	0	0	0	300
Biodiversity conservation in the context of climate change	200	0	0	0	0	200
Total	64,035	114,362	102,808	135,405	122,474	539,085

Notes: Unit – million VND; Source - estimated by the author based on information provided by VNFOREST-MARD.

As shown in Figure 14, the total of VNFOREST’s biodiversity expenditure for the period 2011-2015 can be almost exclusively (95.94%) attributed to the “conservation of natural ecosystems”, with expenditure in support of other NBS targets almost negligibly low.

Figure 14 Biodiversity expenditure of VNFOREST classified by NBS major tasks and by year



Source: Synthesized by the author based on information provided by VNFOREST.

c) Expenditure of DFISH – MARD

Being a subordinate agency under MARD, DFISH is responsible for state management of fishery resources, specifically for activities related to: (i) contributing to the Viet Nam Red Book, publishing the list of aquatic species in need of protection, regeneration and development; (ii) developing and publishing criteria for the classification of inland water conservation areas and marine conservation areas related to fisheries resources; (iii) guiding and enforcing the implementation of regulations on aquatic habitat protection, the conservation, regeneration and development of fisheries resources, of measures to protect the environment of aquatic ecosystems, the conservation of the gene bank and aquatic biodiversity; (iv) organizing the inventory and assessment of fisheries resources; and (v) managing populations of endangered, precious and rare aquatic species.

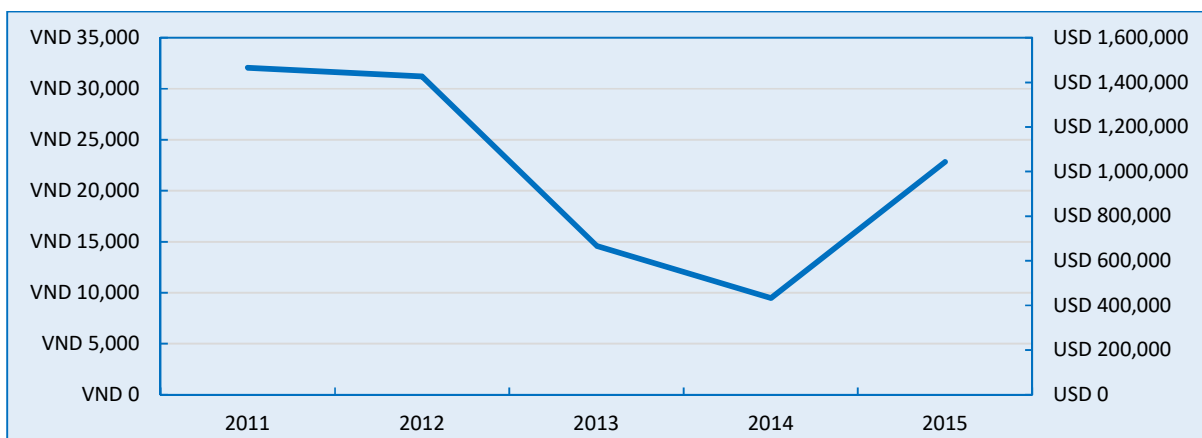
During the period 2011 to 2015, DFISH spent in total 92.6% its resources on activities in support of:

- Prime Minister Decision No. 485/2008/QĐ-TTg on approving the scheme for the protection of endangered precious and rare aquatic species to 2015 and vision to 2020.
- Prime Minister Decision No. 47/2006/QĐ-TTg, dated 1 March 2006, on the Master Plan on basic survey and management of marine resources and environment up to 2010 and vision to 2020, which focuses on the implementation of baseline surveys of natural conditions, natural resources and the marine environment, providing inputs for sustainable development of marine, coastal and island areas.
- Prime Minister Decision No.188/QĐ-TTg, dated 13 February 2012, on approving the Program on the protection and development of fisheries resources up to 2020.
- Activities for the regeneration of aquatic resources.

The remaining 7.4% of the DFISH expenditures was used to cover salaries, wages and operational costs.

Figure 15 below shows DFISH spending for fishery resource conservation and development in 2011 – 2015.

Figure 15 Annual expenditure for biodiversity by DFISH during 2011-2015



Notes: Unit – million VND; Source - synthesized by the author based on information provided by DFISH.

According to Figure 15, between 2011 and 2015, DFISH spent in total VND 110,139 million (USD 4.9 million), contributing to the NBS’s major task of sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity.

d) Expenditure of Department of Science and Technology for Economic Technical Branches (Gene Bank Program) - MOST

The Gene Bank program is the only MOST program with targets clearly relevant to biodiversity. According to Circular No. 18/2010/TT-BKHCHN of MOST regulating the scientific and technological management mission on gene banks in Viet Nam, the program focuses on three tasks, including: (i) conservation of genetic resources, (ii) exploitation and development of genetic resources; and (iii) evaluation of genetic resources.

Between 2011 and 2015, the Gene Bank program was financed from the state budget (MOST, 2014). Of financing allocated, 40% was spent on genetic resources conservation activities implemented by different ministries – by MARD for conserving genetic resources in fishery, agriculture, forestry and seeds; by MOH for conserving pharmaceutical genetic resources; by the Ministry of Industry and Trade (MOIT) for conserving plants and microorganisms used in industry and food processing, etc.; 55% was spent on the targeted exploitation and development of genetic resources – annually around 20 national level assignments for the exploitation and development of genetic resources are issued, with on average VND 2,8 billion (USD 124,000) allocated per assignment; while 5% was spent on the evaluation of genetic resources.

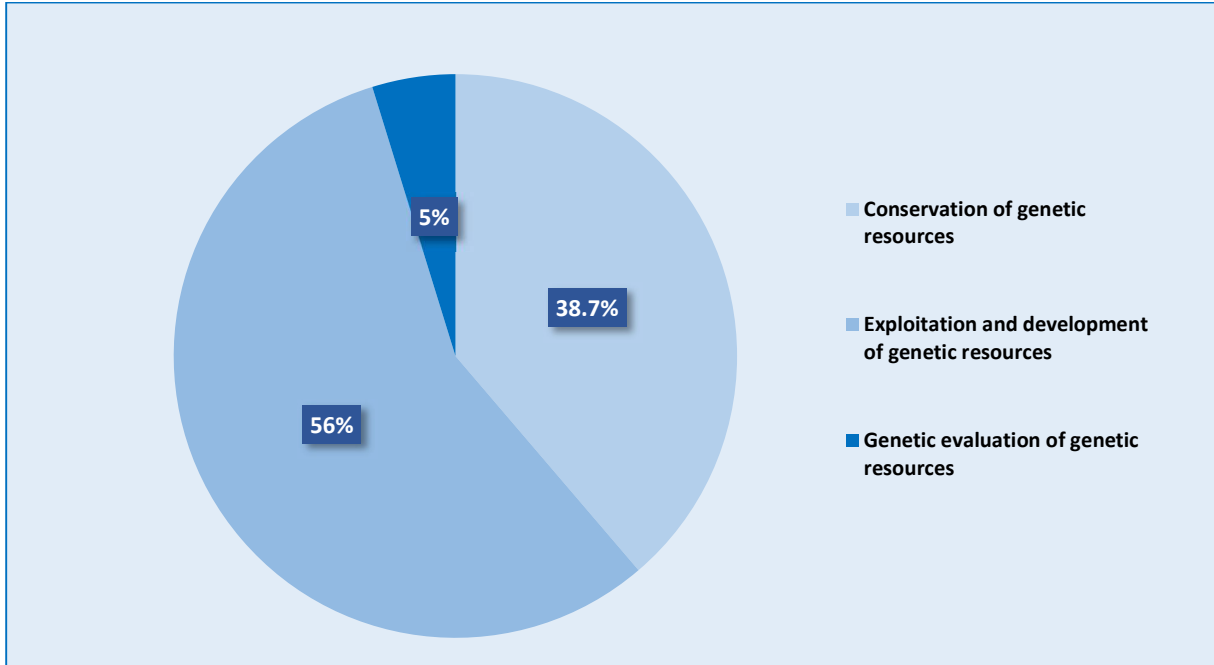
The Gene Bank program’s expenditure for 2011-2015 - approximately VND 402,850 million (USD 17.9 million) - was considered 100% as biodiversity expenditure, assigned to the major task of “conservation of wild, endangered, rare and precious species” in Viet Nam’s NBS (Table 7, Figure 16).

Table 7 Stage budget allocations to the Gene Bank program for 2011-2015

Gene bank program's target	2011	2012	2013	2014	2015	Total
Conservation of genetic resources	20,000	34,500	35,350	36,000	38,000	163,850
Exploitation and development of genetic resources	25,000	60,000	40,000	53,000	61,000	239,000
Genetic evaluation of genetic resources	2,250	4,725	3,768	4,450	4,950	20,143
Total	45,000	94,500	75,350	89,000	99,000	402,850

Notes; Units – million VND; Source - estimated by the author based on information provided by MOST.

Figure 16 State Budget share allocated for Gene Bank Program’s activities

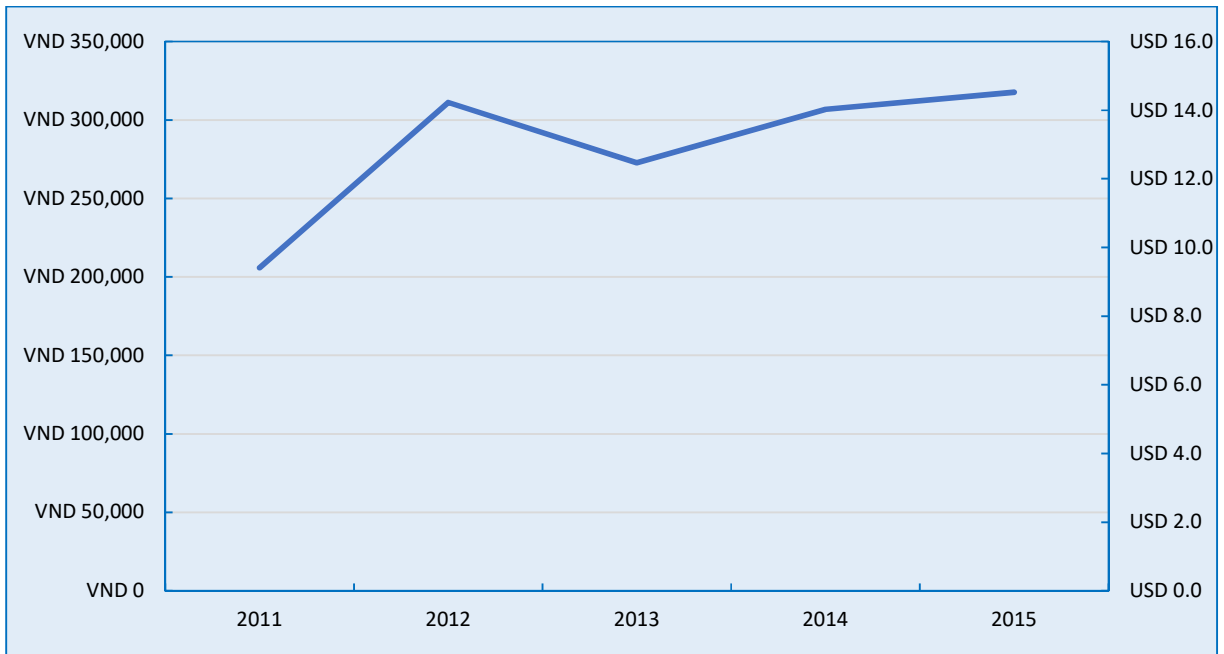


Source: Synthesized by the author based on information provided by MOST.

e) Summary of biodiversity expenditure of biodiversity state management agencies at central level

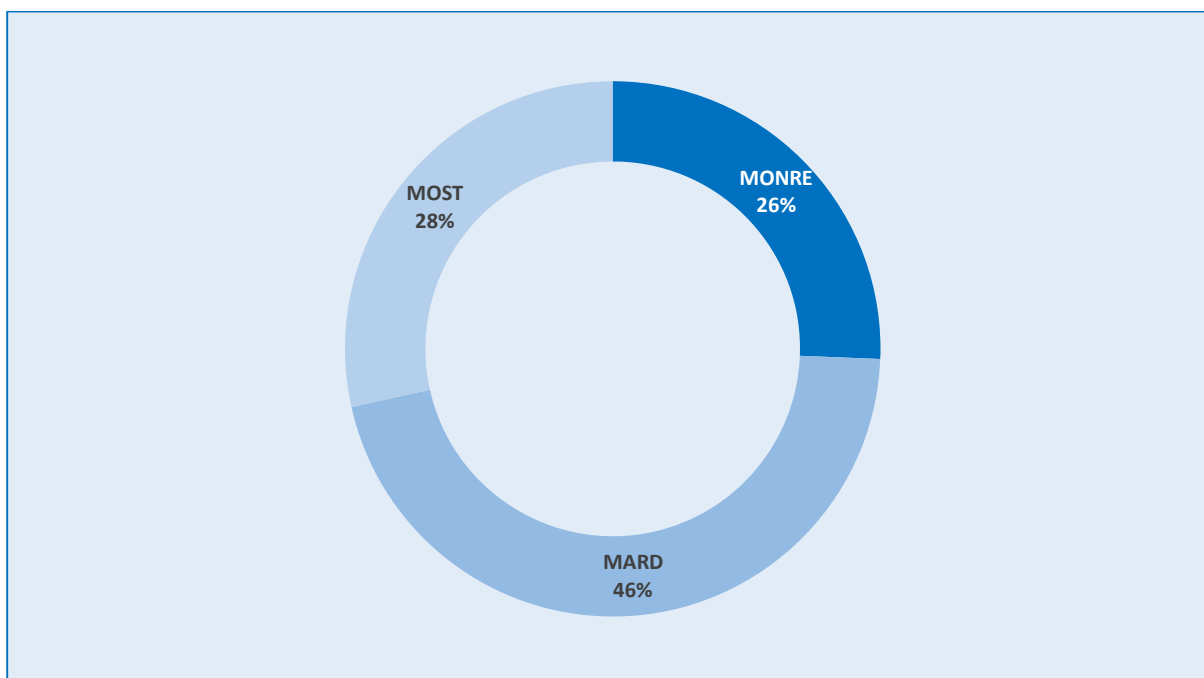
Figure 17 and Figure 18 summarize the biodiversity expenditures by key biodiversity state management agencies at central level for the years 2011 to 2015.

Figure 17 Total biodiversity expenditure from key central-level state organizations



Notes: Unit – million VND / million USD; Source - synthesized by the author based on information from MONRE, MARD and MOST.

Figure 18 Percentage biodiversity expenditure by key central-level state management agencies



Source: Synthesized by the author based on information from MONRE, MARD and MOST.

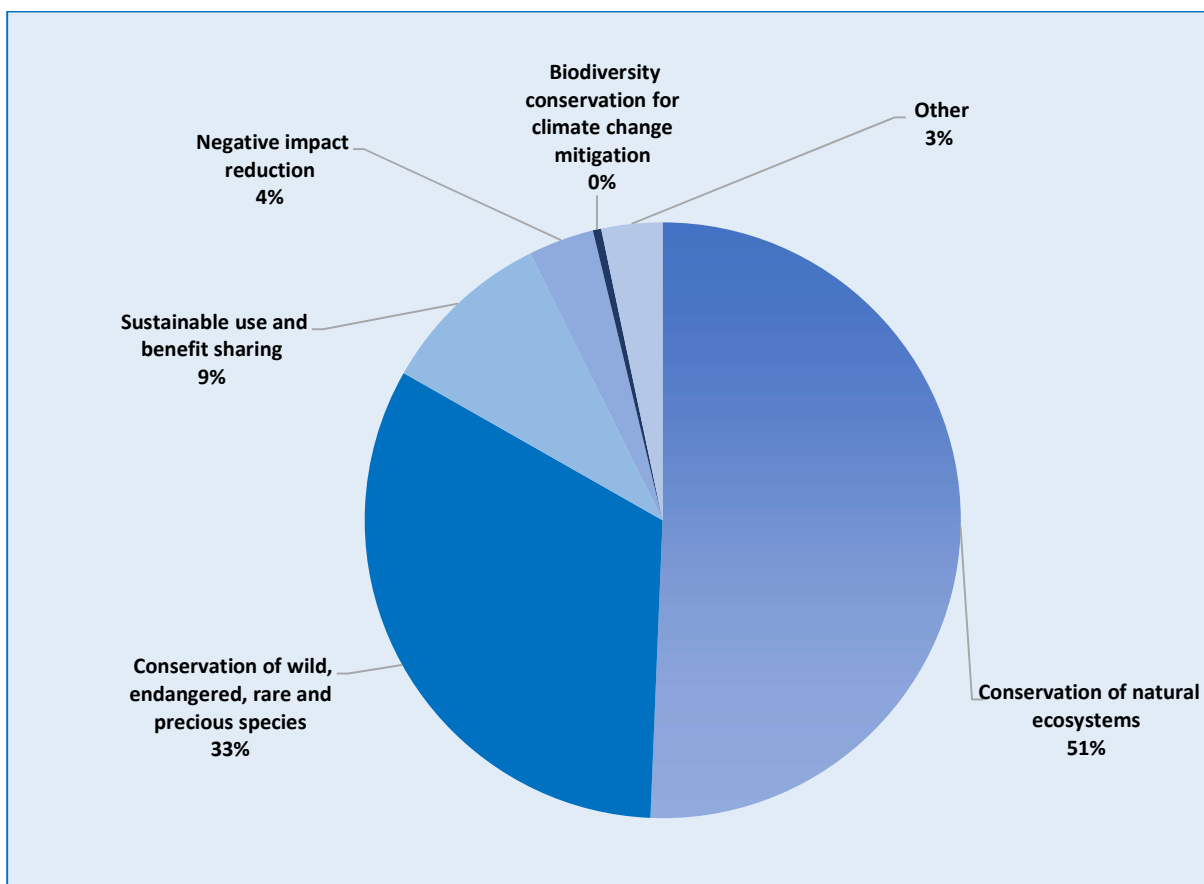
Total expenditure for biodiversity by MONRE, MARD and MOST between 2011 and 2015 amounted to VND 1,414,081 million (USD 62.85 million; Figure 17, Figure 18), with the highest amount spent by MARD (46%), followed by MOST (28%), via direct and indirect (via partner Ministries in line with assigned responsibilities) allocations for the Gene Bank program, and MONRE (26%). The 2011-2015 biodiversity expenditure of MARD, MOST and MONRE relevant to the major task categories of the NBS is presented in Table 8 and Figure 19.

Table 8 Biodiversity expenditure of MONRE, MARD and MOST by major tasks of the NBS

NPS major task	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	92,247	146,007	147,918	169,705	160,374	716,252
Conservation of wild and endangered, rare and precious species of plants and animals	55,071	109,026	80,772	106,480	109,067	460,416
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	37,050	36,834	15,534	12,943	31,391	133,752
Control of activities negatively impacting on biodiversity	15,615	12,335	17,750	3,100	1,650	50,450
Biodiversity conservation in the context of climate change	1,404	1,890	1,970	1,007	0	6,271
Other	4,450	5,000	8,800	13,500	15,191	46,941
Total	205,837	311,092	272,744	306,735	317,673	1,414,081

Notes: Unit – million VND; Source - synthesized by the author.

Figure 19 Relative biodiversity expenditure to NBS major tasks by MARD, MOST, MONRE for 2011-2015



Source: Synthesized by the author.

5.1.1.2. Expenditure of biodiversity state management agencies at provincial level

a. Biodiversity expenditure of DONREs

The distribution of the questionnaire (Annex 5) on biodiversity expenditure among all 63 DONREs in Viet Nam resulted in feedback responses received from 25 municipal and provincial DONREs (40%; Annex 11), the characteristics of which are summarized in Table 9, and their biodiversity expenditure between 2011 and 2015 is synthesized in Figure 20 and Table 10.

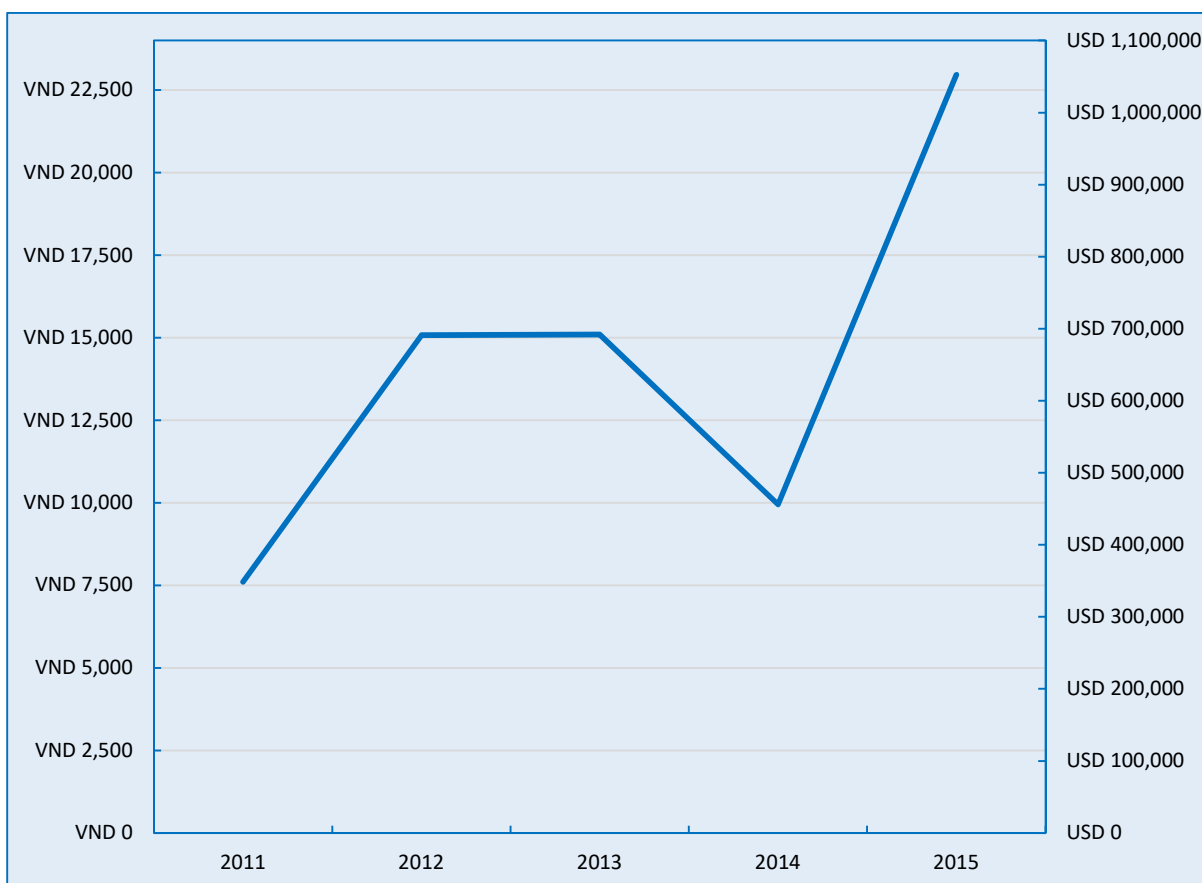
Table 9 Summary features of 25 municipal and provincial DONREs participating in the BER

Variable	Unit	Mean	Standard Deviation	Minimum	Maximum
Natural area	km ²	5,037.1	2,960.7	1,380.0	14,174
Population	1,000 persons	1,431.2	1,274.3	313.0	6,983
Number of PAs		2.7	2.0	0.0	7
Total area of PAs	Ha	30,526.0	34,819.7	0.0	125,362
Total area forest land	Ha	27,381.3	33,308.8	0.0	125,156

Source: Synthesized by the author from obtained DONREs' questionnaires.

On average, annually between 2011 and 2015 each DONRE spent VND 304, 603, 604, 398 and 918 million (USD 13,500, 26,800, 28,840, 17,700 and 40,800) (Table 10), respectively. Among others, biodiversity expenditures contributed to the development of provincial biodiversity conservation master plans, development of provincial biodiversity databases, and the implementation of training and awareness raising for biodiversity conservation. Table 9 shows that DONREs' biodiversity expenditure significantly varied between provinces and years, depending on different factors like funding availability, provincial short-term and long-term plans, the importance of biodiversity to the provincial economy and environment, etc.

Figure 20 Total biodiversity expenditure of 25 DONREs between 2011 and 2015



Notes: Unit – million VND / USD; Source - synthesized by the author based on data provided by 25 DONREs.

Table 10 Statistical information on biodiversity expenditures of 25 DONREs by year

Year	Mean	Standard Deviation	Minimum	Maximum
2011	304.2	470.1	0	1,423
2012	603.2	1,318.7	0	6,266
2013	604.1	1,640.0	0	7,989
2014	398.0	601.1	0	1,813
2015	918.4	1,366.4	0	5,446
Total 2011 – 2015	2,828	4,471.9	57	22,414

Notes: Unit – million VND; Source - synthesized by the author based on data provided by 25 DONREs.

The relationship between DONREs’ biodiversity expenditure and factors considered to be of key relevance to determining the amount of financial support from DONRE to biodiversity was analyzed using the following functional linear regression analysis, the results of which are presented in Table 11:

$$totalexp_i = \alpha_i + \beta_i area_i + \gamma_i pop_i + \delta_i numbpa_i + \varepsilon_i totpaarea_i + \epsilon_i flarea_i + \mu_i$$

In which:

$i=1, 2, 3, 4, 5.....25$

$totalexp_i$: total biodiversity expenditure of DONRE_{*i*}

α : the intercept

$\beta, \gamma, \delta, \varepsilon, \epsilon$: slope value

$area_i$: natural area of the province where DONRE_{*i*} is located (unit: km²)

pop_i : population of the city/province where DONRE_{*i*} is located (unit: 1,000 people)

$numbpa$: number of PAs available in the city/province, where DONRE_{*i*} is located

$totpaarea_i$: total area of PAs available in the city/province, where DONRE_{*i*} is located (unit: ha)

$flarea_i$: total forest land area of the city/province, where DONRE_{*i*} is located (unit: ha)

μ : error term

Table 11 Linear regression estimation on parameters determining DONRE biodiversity expenditure

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totalexp	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]	-----
-----	-----	-----	-----	-----	-----	-----	-----
area	.5779664	.2199055	2.63	0.017	.1176988	1.038234	
pop	2.940616	.4312481	6.82	0.000	2.038003	3.843229	
numbpa	256.3981	310.4587	0.83	0.419	-393.3994	906.1955	
totpaarea	-.4801859	.1707909	-2.81	0.011	-.8376553	-.1227165	
flarea	.4601064	.1742101	2.64	0.016	.0954805	.8247322	
_cons	-2929.369	1199.696	-2.44	0.025	-5440.361	-418.3772	
-----	-----	-----	-----	-----	-----	-----	-----

The linear regression analysis shows that all pre-selected variables except “number of existing PAs in the province” (numbpa) are statistically significant (t-value>1.96), with the variables “natural area” (area), “population” (pop) and “total forest land area” (flarea) having a positive relationship with DONREs’ total expenditure for 2011-2015, while the variable “total area of PAs in the city/province” has a negative relationship. This implies that, using city/province data on natural area, population, total area of existing PAs, total area of forest land, it is possible to estimate biodiversity expenditure of other DONREs in Viet Nam.

The key source for DONRE’s biodiversity expenditure is state budget allocations for the environment, which are based on a weighted set of provincial variables - 48% for urban and population features, 45% for industrial production and environment issues, 2% for PAs and 5% for factors influencing natural forests (MONRE, 2015) – the total biodiversity expenditure by all DONREs was estimated using population statistics, the variable which was the most significant (p-value=0.000) for estimating DONREs biodiversity expenditure. Accordingly, combining biodiversity expenditure and population statistics of the 25 cities and provinces of which DONRE’s provided quantitative biodiversity expenditure data, the average biodiversity expenditure per person was obtained. Subsequently, using statistical information on the total population of Viet Nam for 2011-2015⁷, the total biodiversity expenditures for all DONREs between 2011 and 2015 was estimated (Table 12).

⁷ World Bank statistics, available at <https://data.worldbank.org/country/vietnam>

Table 12 Estimated total biodiversity finance by DONREs in Viet Nam between 2011 and 2015

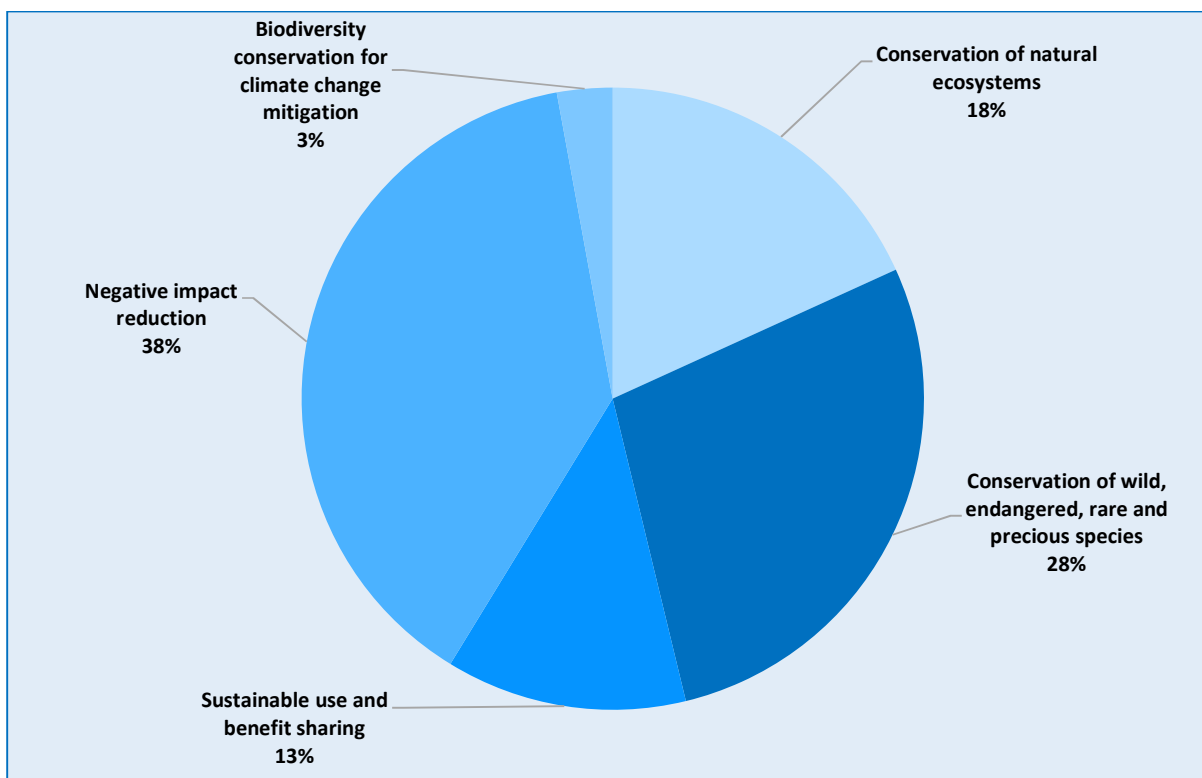
Indicator	2011	2012	2013	2014	2015
Biodiversity expenditure of 25 DONREs (million VND)	7,605	15,080	15,104	9,951	22,961
Average DONRE biodiversity expenditure per citizen (VND/person)	212.6	421.5	422.1	278.1	641.7
Population (million persons)	87,840	88,810	89,760	90,730	91,710
Estimated DONREs' total biodiversity expenditure (million VND)	18,671	37,431	37,890	25,233	58,853

Source: Estimated by the author.

Analysis of the biodiversity expenditure of 25 DONREs during 2011-2015 against the major tasks defined in the NBS shows that DONREs' biodiversity expenditure were allocated to the "Control of activities negatively impacting on biodiversity" (38%), followed by the "Conservation of wild and endangered, rare and precious species of plants and animals" (28%), the "Conservation of natural ecosystems" (18%), the "Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity" (13%) and the "Biodiversity conservation in the context of climate change" (3%) (Figure 21).

Based on DONREs' estimated total biodiversity expenditure for 2011-2015 and the results of the analysis of biodiversity expenditure by 25 DONREs against the major tasks of the NBS during 2011-2015, the estimated total biodiversity expenditure by DONREs for each NBS major task were obtained (Table 13).

Figure 21 Relative biodiversity expenditure by DONREs for NBS major tasks during 2011-2015



Source: Estimated by the author.

Table 13 Total biodiversity expenditure by DONREs for NBS major tasks during 2011-2015

NBS major task	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	3,361	6,738	6,820	4,542	10,594	32,054
Conservation of wild and endangered, rare and precious species of plants and animals	5,228	10,481	10,609	7,065	16,479	49,862
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	2,427	4,866	4,926	3,280	7,651	23,150
Control of activities negatively impacting on biodiversity	7,095	14,224	14,398	9,589	22,364	67,670
Biodiversity conservation in the context of climate change	560	1,123	1,137	757	1,766	5,342
Total	18,671	37,431	37,890	25,233	58,853	178,078

Notes: Unit – million VND; Source - estimated by the author.

b. Biodiversity expenditure of DARDs

The distribution of a questionnaire (Annex 6) on biodiversity expenditure among all DARDs in Viet Nam resulted in feedback responses received from 21 municipal and provincial DARDs (33%; Annex 12). However, only 17 out of 21 municipalities/provinces provided clear and quantified information, suitable for further analysis, the characteristics of which are summarized in Table 14, while brief information on their biodiversity expenditure between 2011 and 2015 is synthesized in Figure 22 and Table 15.

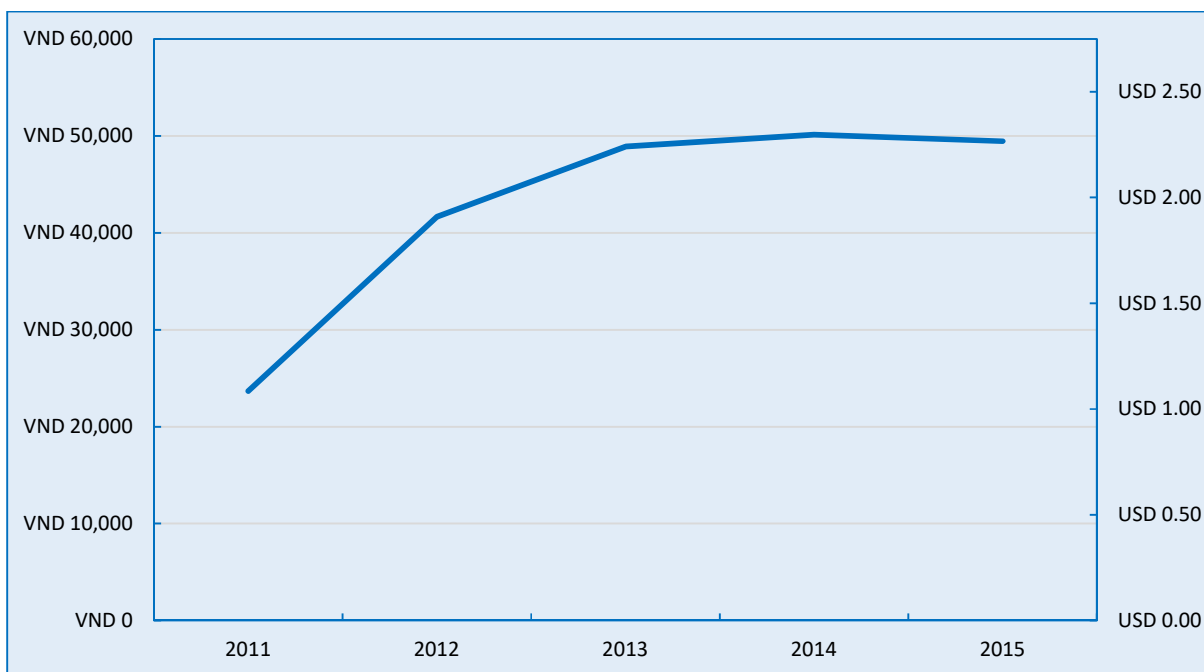
Table 14 Summary features of 17 municipal and provincial DARDs participating in the BER

Variable	Mean	Standard Deviation	Minimum	Maximum
Natural area (km ²)	3,879.4	2,803.5	823	10,438
Population (1,000 persons)	1,689.6	1,647.8	554	7,821
Number of PAs in the province	2.1	2.1	0	6
Total area of PAs (ha)	25,163.7	37,009.9	0	125,362
Total forest land (ha)	20,641.1	33,958.5	0	125,156
Number of PAs managed by DARD	0.8	1.3	0	5

Source: Synthesized by the author from information provided by DARDs.

In general, during 2011 and 2015, the average spending per year on biodiversity related activities by 17 DARDs shows to exceed average annual biodiversity expenditures by 25 DONREs during the same period by nearly 4.3 times – VND 12,360 million compared to VND 2,828 million, while also the average biodiversity expenditure of DARDs showed less interannual variation, as indicated by lower standard deviations. However, Table 15 shows that still biodiversity expenditure considerably varied among the DARDs, depending on different factors like (funding availability, provincial short-term and long-term plans, the importance of biodiversity to the provincial economy and environment, etc.

Figure 22 Total annual biodiversity expenditures of 17 DARDs during 2011-2015



Notes: Unit – million VND / million USD; Source - synthesized by the author from information provided by DARDs.

Table 15 Statistic information on biodiversity expenditures of 17 DARDs by year

Year	Mean	Standard Deviation	Minimum	Maximum
2011	1,392.7	1,921.7	0	6,799
2012	2,450.1	2,863.7	0	8,521
2013	2,876.2	3,240.2	0	9,490
2014	2,948.2	3,453.8	0	10,560
2015	2,908.5	3,517.0	258	10,370
For 2011 - 2015	12,360	14,234.1	505	45,372

Notes: Unit – million VND; Source - synthesized by the author from information provided by DARDs.

The relationship between DARDs’ biodiversity expenditure and pre-selected factors considered to be of key relevance to determining the amount of financial support allocated by DARDs to biodiversity was analyzed using the following functional linear regression analysis, the results of which are presented in Table 16

$$totalexpi = \alpha_i + \beta_i area_i + \gamma_i pop_i + \delta_i numbpa_i + \varepsilon_i totpaarea_i + \epsilon_i flarea_i + \zeta_i dardpa_i + \mu_i$$

In which:

i=1, 2, 3, 4, 5.....17

α : the intercept

$\beta, \gamma, \delta, \varepsilon, \epsilon$: slope value

area_i: natural area of the province where DARD_i is located (unit: km²)

totalexpi_i: total biodiversity expenditure of DARD_i

pop_i: population of the city/province where DARD_i is located (unit: 1,000 people)
 numbpa: number of PAs in the city/province, where DARD_i is located
 totpaarea_i: total area of PAs in the city/province, where DARD_i is located (unit: ha)
 flarea_i: total forest land area in the city/province, where DONRE_i is located (unit: ha)
 dardpa_i: number of PAs managed by DARD_i
 μ: error term

Table 16 *Linear regression estimation on parameters determining DARD biodiversity expenditure*

	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
area	-4.814003	3.341169	-1.44	0.184	-12.37225	2.744247
pop	-2.038834	2.341335	-0.87	0.406	-7.335301	3.257634
numbpa	1695.76	2548.441	0.67	0.522	-4069.214	7460.734
totpaarea	.7167531	.983197	0.73	0.305	-1.507393	2.940899
flarea	-.5845192	.9319773	-0.63	0.546	-2.692798	1.52376
dardpa	-2331.79	3269.76	-0.71	0.494	-9728.502	5064.922
_cons	27229.67	9561.242	2.85	0.019	5600.642	48858.71

The results of the linear regression analysis show that none of the pre-selected variables are statistically significant (t-value>1.96). As such, these results imply that, unlike for DONREs, it is not possible to estimate biodiversity expenditure of other DARDs in Viet Nam using the regression analysis. Therefore, the BER Viet Nam team estimated the total biodiversity expenditure by all DARDs in any year based on the total biodiversity expenditure of 17 observed DARDs (Table 17).

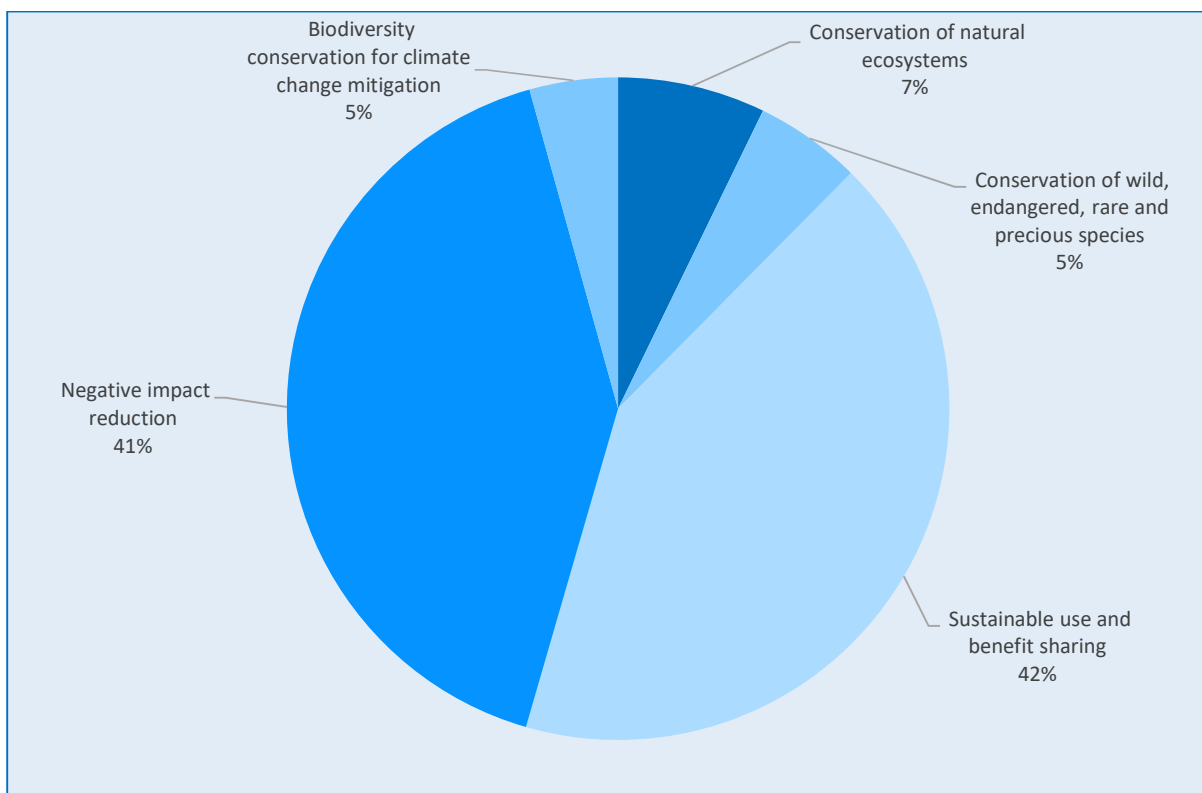
Table 17 *Estimated total biodiversity expenditure by DARDs during 2011 – 2015*

Indicator	2011	2012	2013	2014	2015	Total
Total biodiversity expenditure of 17 DARDs having provided information (million VND)	23,676	41,651	48,895	50,120	49,445	213,787
Total biodiversity expenditure of 63 DARDs (million VND)	87,740	154,354	181,199	185,739	183,237	792,269

Notes: multiplication factor 3.70589 (63 provinces over 17 provinces); Source - estimated by the author.

Analysis of the biodiversity expenditure of 17 DARDs during 2011-2015 against the major tasks defined in the NBS shows that the largest proportion of DARDs' biodiversity expenditure was allocated to "Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity" (42%), followed by "Control of activities negatively impacting on biodiversity" (41%), "Conservation of natural ecosystems" (7%), "Conservation of wild and endangered, rare and precious species of plants and animals" (5%), and "Biodiversity conservation in the context of climate change" (5%) (Figure23).

Figure 23 Relative biodiversity expenditure by DARDs for NBS major tasks during 2011-2015



Source: synthesized by the author from information provided by DARDs.

Based on DARDs' estimated total biodiversity expenditure for 2011-2015 (Table 17) and the results of the analysis of biodiversity expenditure by 17 DARDs against the major tasks of the NBS during 2011-2015, the estimated total biodiversity expenditure by DARDs for each NBS major task were obtained (Table 18).

Table 18 Total biodiversity expenditure by DARDs for NBS major tasks during 2011-2015

NBS major tasks	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	6,142	10,805	12,684	13,002	12,827	55,459
Conservation of wild and endangered, rare and precious species of plants and animals	4,387	7,718	9,060	9,287	9,162	39,613
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	36,851	64,829	76,104	78,010	76,960	332,753
Control of activities negatively impacting on biodiversity	35,974	63,285	74,292	76,153	75,127	324,830
Biodiversity conservation in the context of climate change	4,387	7,718	9,060	9,287	9,162	39,613
Total	87,740	154,354	181,199	185,739	183,237	792,269

Notes: Unit – million VND; Source - estimated by the author.

5.1.1.3. Expenditure of protected areas

According to Minister of Natural Resources and Environment Decision No. 1107, dated 12 May 2015, promulgating the list of PAs under the Law of Biodiversity, by 2015 Viet Nam had 31 NPs covering 1,117,456 ha; 64 NRs covering 1,139,763 ha; 16 Species and Habitat Protected Areas covering 80,321 ha and 55 Landscape Protected Areas covering 95,112 ha. Also, according to Prime Minister Decision No. 742/QD-TTg, dated 26 May 2012, by 2012 Viet Nam had established 9 Marine PAs covering 159,077 ha.

The distribution of a questionnaire (Annex 7) on biodiversity expenditure among all PAs in Viet Nam resulted in feedback responses received from 30 provincial-level PAs, including 1 MPA, 12 NPs, 13 NRs and 4 Species and Habitat Protected Areas (Annex 13). The total area covered by these 30 PAs amounts to 730,987 ha (32.3% of the total area of 164 PAs), of which 611,936 ha is covered by forests (31.5% of the total area of 164 PAs). The characteristics of the 30 PAs are summarized in Table 19. Information on biodiversity expenditure by 30 PAs between 2011 and 2015 is synthesized in Table 20, showing that their average biodiversity expenditure increased during that period, from VND 5,760 million (USD 0.21 million) per PA in 2011 to VND 13,987 million (USD 0.62 million) per PA in 2015.

Table 19 General features of 30 Protected Areas participating in the BER

Sample	Variable	Unit	# PAs	Mean	Standard Deviation	Minimum	Maximum
All PAs	Natural area of PA	ha	30	24,366	27,796	16	123,326
	Forest land area of PA	ha	30	20,398	25,788	16	115,310
Marine PA	Natural area of PA	ha	1	23,500	n/a	23,500	23,500
	Forest land area of PA	ha	1	1,549	n/a	1,549	1,549
National Park	Natural area of PA	ha	12	31,812	37,056	2,783	123,326
	Forest land area of PA	ha	12	26,732	35,947	2,726	115,310
Nature Reserve	Natural area of PA	ha	13	24,822	19,154	5,873	79,694
	Forest land area of PA	ha	13	22,086	14,807	5,285	61,752
Species and Habitat PA	Natural area of PA	ha	4	765	870	16	2,010
	Forest land area of PA	ha	4	620	840	16	1,800

Source: synthesized by the author from information provided by PAs.

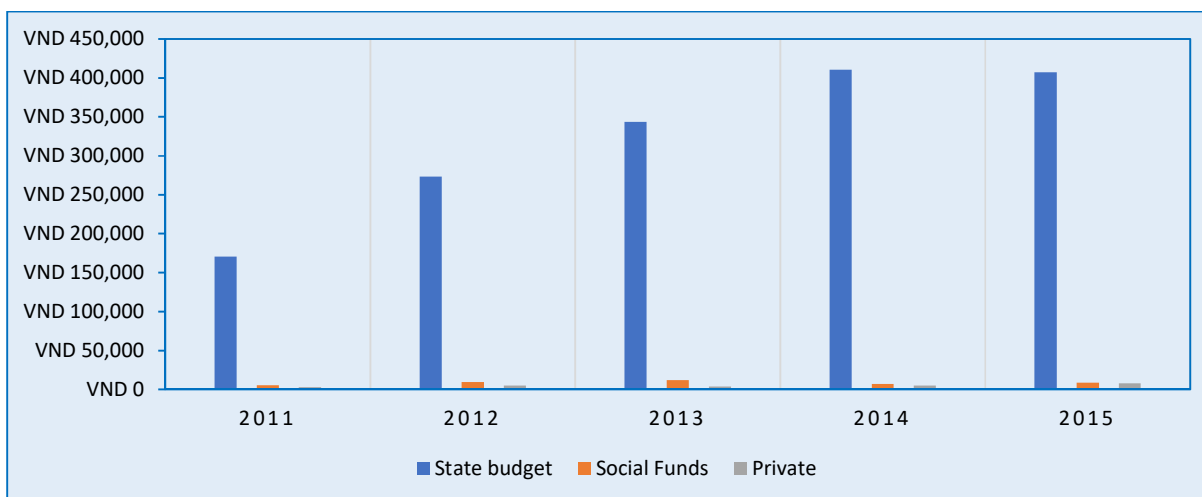
With respect to total biodiversity expenditure by 30 observed PAs, between 2011 and 2015, these PAs spent an estimated VND 1,672,966 million (USD 74.36 million) on maintaining the operations of the PA Management Boards and on biodiversity-related activities, of which 95.9% was provided by the state budget, 2.6% was received from social funds and only 1.5% from private investments. The BER Viet Nam team assessed these figures as reasonable, in line with data collected through field trips by the BER team to 6 PAs in the northern, Central and southern regions of Viet Nam, and also consistent with figures reported by Berghöfer. et al (2017), who noted that the majority (>90%) of PA funding is received from the state budget and only a minor proportion (<10%) from other sources (Figure 24).

Table 20 Total annual biodiversity expenditures by 30 PAs during 2011-2015

Sample	Year	# PAs	Mean	Standard Deviation	Minimum	Maximum
General sample (30 PAs)	2011	30	5,760	7,540	0	26,285
	2012	30	9,239	11,537	0	39,990
	2013	30	11,589	13,131	0	41,193
	2014	30	13,824	15,297	0	44,316
	2015	30	13,987	17,640	490	78,251
Marine Protected Area (1 PA)	2011	1	0	.	0	0
	2012	1	5	.	5	5
	2013	1	2,530	.	2,530	2,530
	2014	1	3,231	.	3,231	3,231
	2015	1	6,302	.	6,302	6,302
National Park (12 PAs)	2011	12	11,716	8,980	0	26,285
	2012	12	18,113	13,604	0	39,990
	2013	12	23,377	13,544	2,134	41,193
	2014	12	28,737	14,082	1,787	44,316
	2015	12	28,890	20,082	1,787	78,251
Nature Reserve (13 PAs)	2011	13	2,039	1,864	0	5,987
	2012	13	3,690	4,039	0	13,413
	2013	13	4,016	3,519	0	11,174
	2014	13	3,971	3,090	0	8,607
	2015	13	3,970	2,922	490	9,180
Species and Habitat Protected Area (4 PAs)	2011	4	1,425	1,391	0	3,188
	2012	4	2,957	3,659	700	8,393
	2013	4	3,104	4,119	626	9,255
	2014	4	3,758	3,731	1,362	9,298
	2015	4	3,758	3,569	1,615	9,096

Notes: Unit – million Dongs; Source - synthesized by the author from information provided by PAs.

Figure 24 Biodiversity expenditure by source and year for 30 PAs participating in the BER



Notes: Unit – million VND; Source: synthesized by the author from information provided by PAs.

It is noted that for 2011-2015, the PAs in Viet Nam - regardless whether they are managed by MARD or by a PPC, are terrestrial or marine - spent most of the financial resources obtained (65 – 95%) on wages, salary supplements, and for covering the operational costs of the PA Management Boards. Overall, only a minor share (5-35%) of the total expenditure benefitted the protection and development of biodiversity (Box 2).

Table 21 Average biodiversity expenditure per hectare for different types of PAs

Types of PAs	2011	2012	2013	2014	2015
General sample (30 PAs)	0.24	0.38	0.48	0.57	0.57
Marine Protected area (1 PA)	0.12	1.22	1.21	0.85	1.16
National Park (12 PAs)	0.44	0.68	0.87	1.08	1.08
Nature Reserve (13 PAs)	0.08	0.15	0.16	0.16	0.16
Species and Habitat Protected Areas (4 PAs)	1.86	2.77	2.18	1.27	1.21

Note: Unit – million VND per hectare; Source - Estimated by the author.

Using available data on PA-size and annual expenditure, the average expenditure per hectare was estimated (Table 21). The results are consistent with results of previous studies on PA financing in Viet Nam, by Lucy Emerton, Pham Xuan Phuong and Ha Thi Mung (2011)⁸; Dang Thuy Nga (2012)⁹, and Nguyen N.X (2015)¹⁰. Accordingly, it is concluded that the average biodiversity expenditure per hectare for specific PA categories, estimated based the data provided by 30 PAs, can be used for estimating the total biodiversity expenditure of all existing terrestrial and marine PAs for 2011-2015, using available data on total areal cover per PA type. Thus, between 2011 and 2015 existing PAs spent in total VND 5,977,749 million (USD 256.68 million) on biodiversity related activities (Table 22).

⁸ This study examined public funding of 16 PAs, including 11 provincially-managed and 5 MARD-managed NPs and NRs. Results showed a total annual funding to PAs of USD 1,010/km²/year (USD 24.5/ha/year or VND 247,000/ha/year).

⁹ This study reviewed 6 NPs, including: Bidoup-Nui Ba NP, Chu Yang Sin NP, Xuan Thuy NP, Tien Hai NP, Bai Tu Long NP and Cat Ba NP, showing that their total public funding ranged from VND 84,210 to 2,960,265, with an average of VND 903,660 per ha in 2011.

¹⁰ This study analyzed 44 PAs, including 41 provincially-managed and 3 MARD-managed NPs and NRs, showing a total annual public funding of USD 25.8/ha (VND 58,000/ha) in 2015.

Box 2: Expenditures of selected PAs

a. Expenditures of Cuc Phuong National Park

Cuc Phuong NP is located in three provinces, Ninh Binh, Thanh Hoa and Hoa Binh. It was Viet Nam's first NP, is the country's largest, and is one of the most important sites for biodiversity in Viet Nam. Cuc Phuong NP is home to an amazing diversity of flora and fauna species, including 97 mammals, most notable endangered langurs; 300 birds; 36 reptiles; 17 amphibians; 11 fish; 2,000 vascular plants, and thousands of insects. A number of species are listed in Viet Nam's Red Book of endangered species.

During 2011 and 2015, the total revenue of Cuc Phuong was VND 148.85 billion, of which, VND 134.28 billion (90.2%) was allocated from the government budget, VND 10.52 billion from international donors, VND 4.04 billion from the tourism business.

In the same period, Cuc Phuong NP spent:

- VND 77.76 billion (52%) on salaries and salary-related expenditures.
- VND 14.75 billion (9.9%) for operational costs.
- VND 2.08 billion (1.4%) for the implementation of assigned regular tasks.
- VND 14.42 billion (9.7%) on investment in infrastructure (including animal rescue facilities); and
- VND 35.78 billion (24%) for the implementation of biodiversity conservation-related activities.

As such, during 2011-2015, 65% of the total expenditure of Cuc Phuong NP served to support the Management Board and only 35% was invested in biodiversity enhancement.

b. Expenditures of Cu Lao Cham Marine PA

Cu Lao Cham Marine PA is located in Hoi An town, Quang Nam province. The MPA covers 5,000 ha, including 165 ha of coral reef and 500 ha of aquatic plant life. The terrestrial and coastal ecosystems of the PA have been recognized as a UNESCO Biosphere Reserve on 26 May 2009, in confirmation of its rich biodiversity value.

Between 2011 and 2015, the total revenue of the PA was VND 16.24 billion, of which, 64.7% was received from the government budget, 27.7% from tourism business, and 7.6% from international donors.

Like Cuc Phuong NP and many other PAs in Viet Nam, the Cu Lao Cham PA spent approximately 32% of its resources (VND 4.87 billion) on the protection of wild and endangered species, with the remaining 78% spent on salaries and related expenditures.

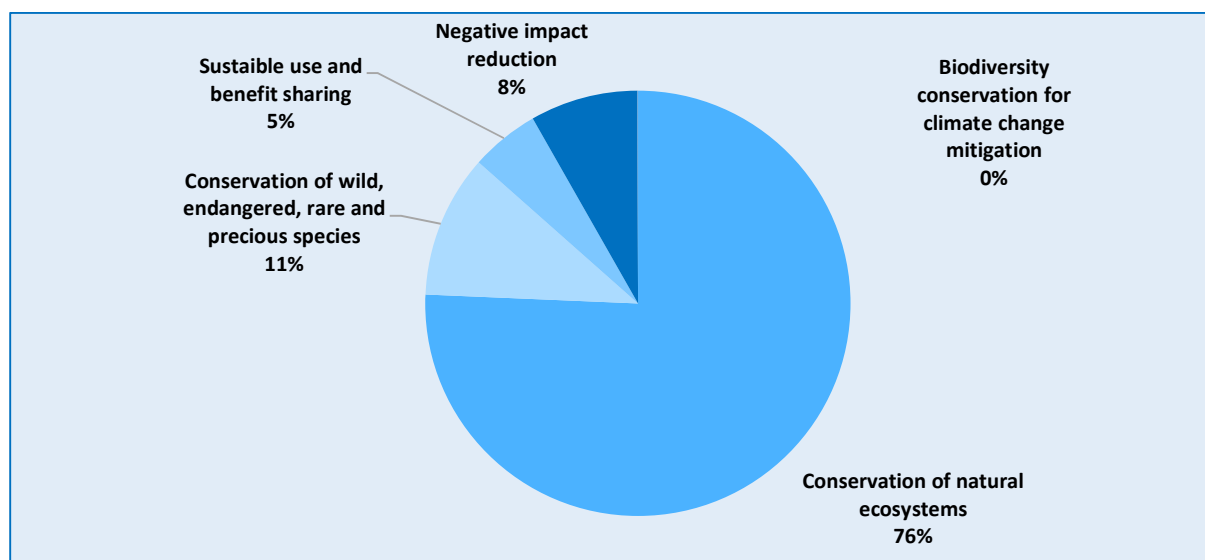
Table 22 Estimated total biodiversity expenditure per PA type during 2011-2015

PA type	2011	2012	2013	2014	2015	Total
Marine PAs	18,602	193,511	193,000	135,340	184,508	724,961
NPs (not including 6 MARD-managed NPs)	402,675	595,370	768,385	944,584	949,621	3,660,635
Nature Reserves	93,610	169,442	184,404	182,355	182,281	812,092
Species and Habitat PAs	149,636	222,315	174,907	102,055	97,259	746,173
Landscape PAs	3,906	7,071	7,695	7,609	7,606	33,888
Total	668,429	1,187,709	1,328,390	1,371,944	1,421,276	5,977,749

Notes: Unit – million VND; Source: Estimated by the author.

Analysis of the biodiversity expenditure by 30 PAs participating in the BER study against the major tasks of the NBS shows that the PAs predominantly allocated finances for “Conservation of natural ecosystems” (76%), followed by “Conservation of wild and endangered, rare and precious species of plants and animals” (11%), “Control of activities negatively impacting on biodiversity” (8%), “Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity” (5%) and “Biodiversity conservation in the context of climate change” (<1%) (Figure 25). Based on these relative contributions, the biodiversity expenditure by all PAs to various major tasks of the NBS was estimated (Table 23).

Figure 25 PA biodiversity expenditure by NBS target in 2011-2015



Source: Synthesized by the author.

Table 23 Total biodiversity expenditure by PAs for NBS major tasks during 2011-2015

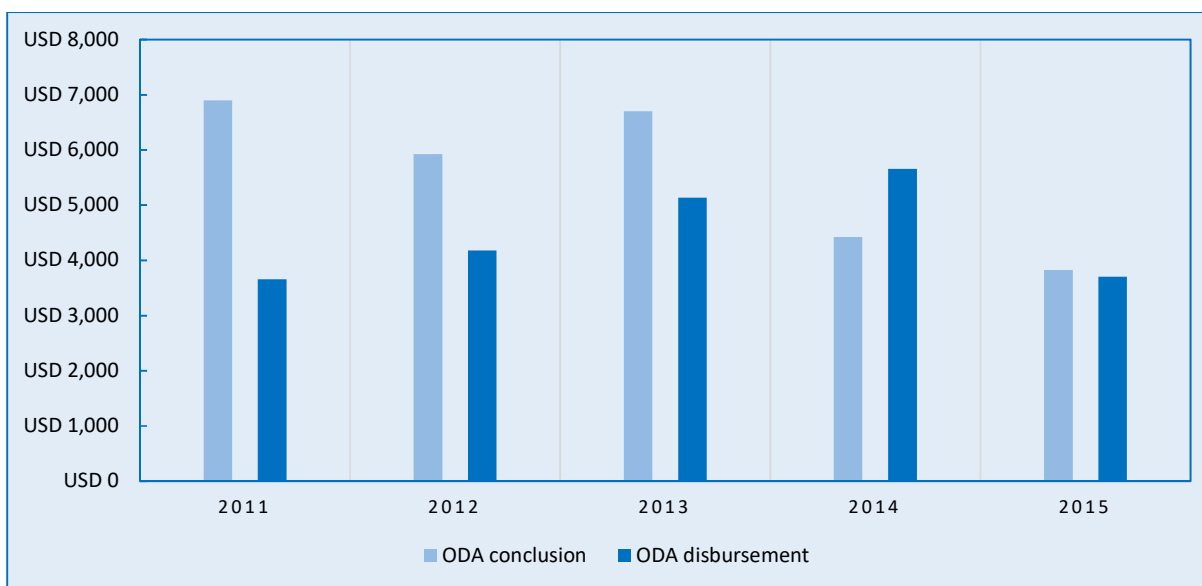
NBS major task	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	505,674	898,516	1,004,943	1,037,892	1,075,212	4,522,237
Conservation of wild and endangered, rare and precious species of plants and animals	72,830	129,409	144,737	149,482	154,857	651,315
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	34,879	61,975	69,316	71,589	74,163	311,923
Control of activities negatively impacting on biodiversity	54,829	97,424	108,964	112,537	116,583	490,338
Biodiversity conservation in the context of climate change	217	385	430	444	460	1,937
Total	668,429	1,187,709	1,328,390	1,371,944	1,421,276	5,977,749

Notes: Unit – million VND; Source: Estimated by the author.

5.1.2 Expenditure from ODA funds

According to Prime Minister Decision No. 251/QĐ-TTg, dated 17 February 2016 on approval for the “Orientation toward attraction, management and use of ODA and concessional loans from foreign donors in 2016 – 2020 period”, total ODA and concessional loans concluded and disbursed between 2011 and 2015 amounted to USD 27,782 million and 22,325 million, respectively (Figure 26). ODA funds were used to support the implementation of the five-year socio-economic development plan for the period 2011-2015, the implementation of building a complete infrastructure system serving the national target for industrialization and modernization for 2011-2015, and the implementation of national programs for 2011-2015, including biodiversity-related ones.

Figure 26 Total ODA conclusion and disbursement in the period 2011 – 2015



Notes: Unit – million USD; Source - Ministry of Planning and Investment (<http://mpi.gov.vn>).

Regarding the relative allocations of ODA financial resources, between 2011 and 2015, USD 9,913 million (35,68%) was allocated to transportation; USD 4,762 million (17,14%) to energy and industry; USD 5,181 million (18,65%) to urban development and environment, including water supply, sanitation, and climate change; USD 2,632 million (9,47%) to agriculture and rural development, including poverty reduction; USD 1,292 million (4,56%) to healthcare; USD 930 million (3,35%) to education and training; and USD 3,070 million (11,05%) to science and technology, capacity building, institutional enhancement (MPI, 2016).

Based on the OECD analysis on ODA support to Viet Nam between 2011 and 2015, which noted that biodiversity-related ODA accounted for 4.7% of all bilateral ODA to Viet Nam (OECD, 2015), the BER Viet Nam team assumed that biodiversity-related ODA accounted for 4.7% of the total ODA (e.g. sum of multilateral and bilateral ODA) disbursed during the same period (Table 24).

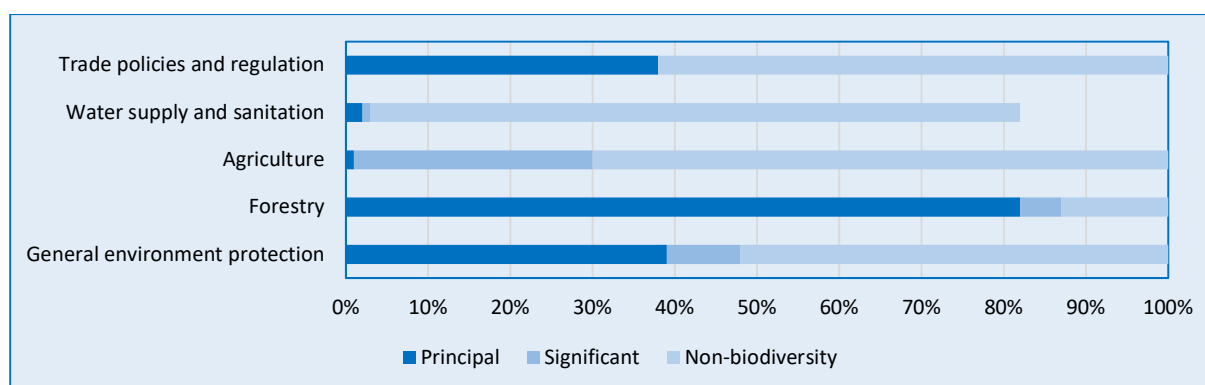
Table 24 Estimated annual biodiversity expenditure from ODA funds between 2011 and 2015

Indicator	2011	2012	2013	2014	2015
ODA disbursement (million USD)	3,660	4,183	5,137	5,655	3,700
Biodiversity-related ODA (million USD)	172.0	196.6	241.4	265.8	173.9

Source: Estimated by the author.

According to the OECD’s analysis, the main sectors receiving biodiversity-related ODA fund in Viet Nam include general environment protection, forestry, agriculture, water and sanitation, and trade policies and regulations, overall receiving 91% of the total biodiversity-related ODA funds. More specifically, total biodiversity-related ODA was mainly allocated to general environmental protection (65%), followed by forestry (10%), agriculture (9%), water supply and sanitation (5%) and trade policies and regulations (2%) (OECD, 2015). For each sector, the OECD also assessed the relative proportion of activities that target biodiversity as the “principal” or “significant” objective (Figure 27), based on which the BER Viet Nam team estimated the total biodiversity-related ODA funds for each sector (Table 25). Based on the assumption that expenditures for activities that address biodiversity as “principal target” are considered 100% biodiversity expenditure, and expenditures for activities that address biodiversity as “significant target” are considered 50% biodiversity expenditure, total biodiversity expenditure from ODA funds was estimated (Table 26).

Figure 27 Biodiversity shares of total ODA expenditure to different sectors between 2011 and 2015



Source: OECD (2015).

Table 25 Estimated biodiversity-related ODA funds by sector for 2011-2015

Sector	2011	2012	2013	2014	2015
General environment protection	111.8	127.8	156.9	172.8	113.0
<i>Biodiversity as principal target</i>	43.6	49.8	61.2	67.4	44.1
<i>Biodiversity as significant target</i>	10.1	11.5	14.1	15.5	10.2
Forestry	17.2	19.7	24.1	26.6	17.4
<i>Biodiversity as principal target</i>	14.1	16.1	19.8	21.8	14.3
<i>Biodiversity as significant target</i>	0.9	1.0	1.2	1.3	0.9
Agriculture	15.5	17.7	21.7	23.9	15.7
<i>Biodiversity as principal target</i>	0.2	0.2	0.2	0.2	0.2
<i>Biodiversity as significant target</i>	4.5	5.1	6.3	6.9	4.5
Water supply and sanitation	8.6	9.8	12.1	13.3	8.7
<i>Biodiversity as principal target</i>	0.2	0.2	0.2	0.3	0.2
<i>Biodiversity as significant target</i>	0.1	0.1	0.1	0.1	0.1
Trade policies and regulation	3.44	3.93	4.83	5.32	3.48
<i>Biodiversity as principal target</i>	1.31	1.49	1.83	2.02	1.32

Notes: Unit – million USD; Source - Estimated by the author.

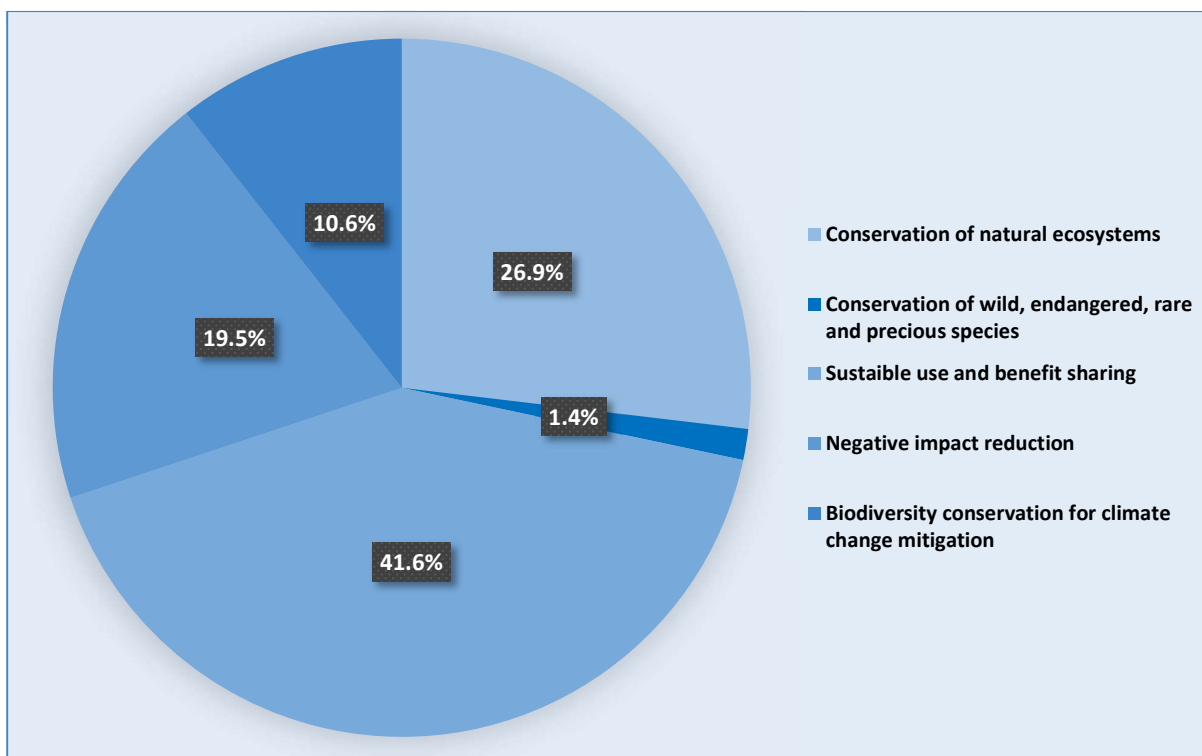
Table 26 *Estimated biodiversity expenditure from ODA funds by sector between 2011 and 2015*

Sector	2011	2012	2013	2014	2015	Total
General environment protection	48.64	55.59	68.27	75.15	49.17	296.82
Forestry	14.54	16.61	20.40	22.46	14.69	88.70
Agriculture	2.40	2.74	3.37	3.71	2.43	14.64
Water supply and sanitation	0.22	0.25	0.30	0.33	0.22	1.31
Trade policies and regulation	1.31	1.49	1.83	2.02	1.32	7.98
Total	67.10	76.68	94.17	103.67	67.83	409.45

Notes: Unit – million USD; Source - Estimated by the author.

A topical analysis of biodiversity-related ODA projects implemented during 2011-2015 (Annex 9) shows that the relative contribution of biodiversity-related ODA expenditure to the major tasks of the NBS is the largest to “Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity” (42%), followed by “Conservation of natural ecosystems” (27%), “Control of activities negatively impacting on biodiversity” (19%), “Biodiversity conservation in the context of climate change” (11%), and “Conservation of wild and endangered, rare and precious species of plants and animals” (1%) (Figure 28), based on which subsequently the total ODA-related biodiversity expenditure for NBS major tasks was estimated (Table 27).

Figure 28 *Contribution of ODA-related biodiversity expenditure to NBS major tasks for 2011-2015*



Source: Estimated by the author.

Table 27 Total biodiversity expenditure from ODA funds to NBS major tasks for 2011-2015

NBS major task	2011		2012		2013		2014		2015	
	mil. USD	mil. VND	mil. USD	mil. VND	mil. USD	mil. VND	mil. USD	mil. VND	mil. USD	mil. VND
Conservation of natural ecosystems	18.0	406,030	20.6	464,050	25.3	569,884	27.9	627,350	18.2	410,467
Conservation of wild and endangered, rare and precious species of plants and animals	1.0	21,543.6	1.1	24,622	1.3	30,237	1.5	33,286	1.0	21,779
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	27.9	627,550	31.9	717,225	39.1	880,799	43.1	969,617	28.2	634,409
Control of activities negatively impacting on biodiversity	13.1	294,441	15.0	336,516	18.4	413,264	20.2	454,936	13.2	297,659
Biodiversity conservation in the context of climate change	7.1	160,102	8.1	182,980	10.0	224,712	11.0	247,371	7.2	161,852
Total	67.1	1,509,669	76.7	1,725,395	94.2	2,118,898	103.7	2,332,562	67.8	1,526,168

Source: Estimated by the author.

5.2 Social sector

For social sector-related biodiversity expenditure, the Viet Nam BER focuses on the expenditure of VNFF, established to mobilize societal resources and ensure a new, extrabudgetary finance resource sufficiently stable and sustainable for managing, protecting and developing forests, especially natural forests. By 31 July 2015, one central and 37 provincial VNFFs were established nationwide, which between 2011 and 2015 collected VND 5,226,025 million (USD 232.26 million) from forest environmental service users (PFES) and VND 533,026 million (USD 23.69 million) from payments for reforestation, for licensing the conversion from forest land use category to other land use purpose (MARD, 2017). VNFF revenue was used to (Table 28):

- Pay more than 5,000 forest owners (households, communities and other legal forest owners) as incentives for better management and protection of 5,87 million hectares of forests.
- Invest in improving facilities for better protection of forests (i.e., fire control, guard houses, etc.).
- Replant forests in case of conversion of land use category.
- Provide financial support for relevant activities and events (e.g. PFES conferences and workshops, PFES training and capacity building, communication and awareness raising).

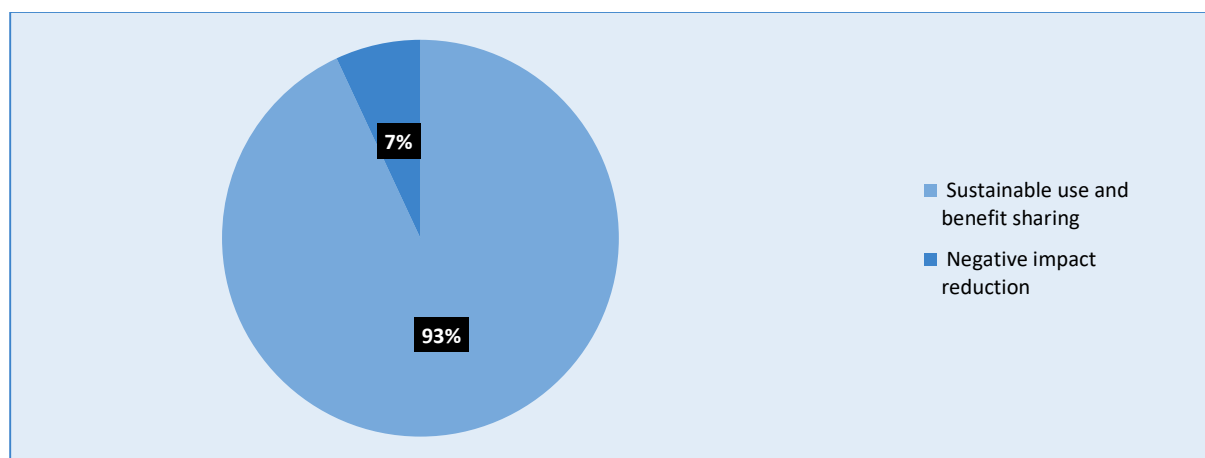
According to VNFF (2017), the average disbursement rate of PFES for 2011-2015 was 75%, while the disbursement rate for reforestation in 47.5%. Considering the recipient targets of VNFF disbursement, the relative contribution of VNFF expenditures to the major tasks of the NBS was assessed (Figure 29). Accordingly, between 2011 and 2015, all VNFFs allocated VND 4,369,077 million (USD 194.18 million), of which, VND 4,065,475 million (93%) was for “sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity” and VND 303,331 million (7%) for “control of activities negatively impacting on biodiversity” (Figure 29).

Table 28 Total VNFF expenditure by target and by year between 2011-2015

Target	2011	2012	2013	2014	2015	Total
PFES revenue paid to forest owners	171,739	958,975	835,373	1,043,978	1,047,618	4,057,683
Investment in improving forestry facilities	16,410	68,667	63,585	77,431	77,011	303,104
Reforestation				127	101	227
Support for PFES related activities	375	450	680	918	5,640	8,063
Total	188,523	1,028,093	899,638	1,122,453	1,130,370	4,369,077

Notes: Unit – million VND; Source - synthesized by the author based on VNFF PFES annual implementation reports.

Figure 29 Contribution of VNFF biodiversity expenditure to NBS major tasks for 2011-2015



Source: Synthesized by the author based on VNFF’s PFES annual implementation reports (2011-2016).

Table 29 Estimated biodiversity expenditure from VNFF to NBS major tasks for 2011-2015

NBS major task	2011	2012	2013	2014	2015
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	172,114	959,425	836,053	1,044,895	1,053,258
Control of activities negatively impacting on biodiversity	16,410	68,667	63,585	77,557	77,112

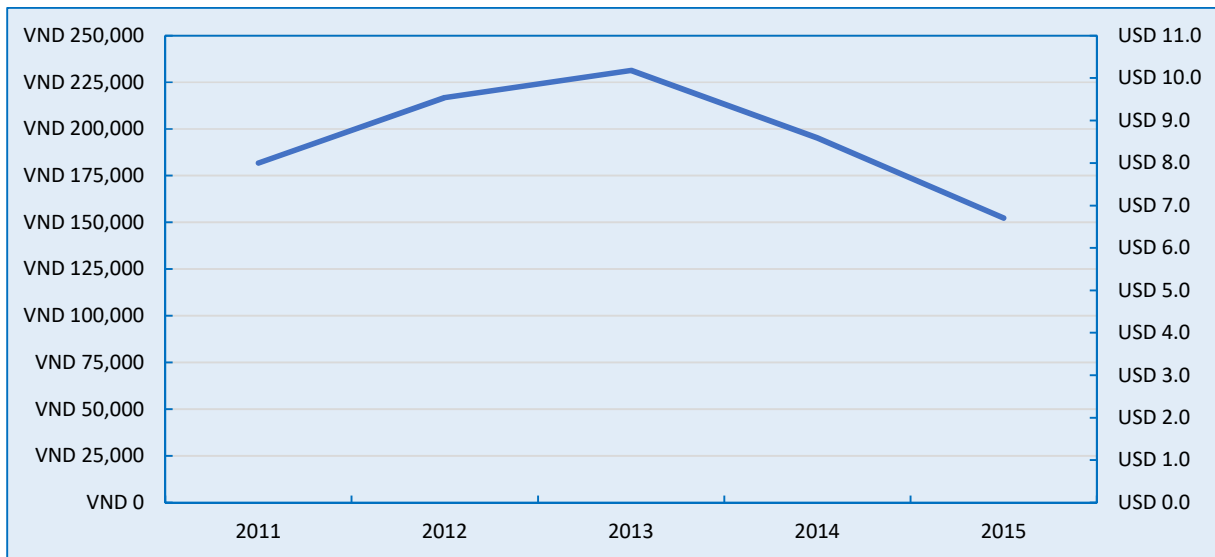
Notes: Unit – million VND; Source - estimated by the author.

5.3 Private sector

As mentioned earlier, some PAs, communities and NGOs, including WWF, FFI, BirdLife International, IUCN, Australian Research Environment Agency, and others, have received financial support for the implementation of biodiversity-related activities in Viet Nam from domestic and international private funds.

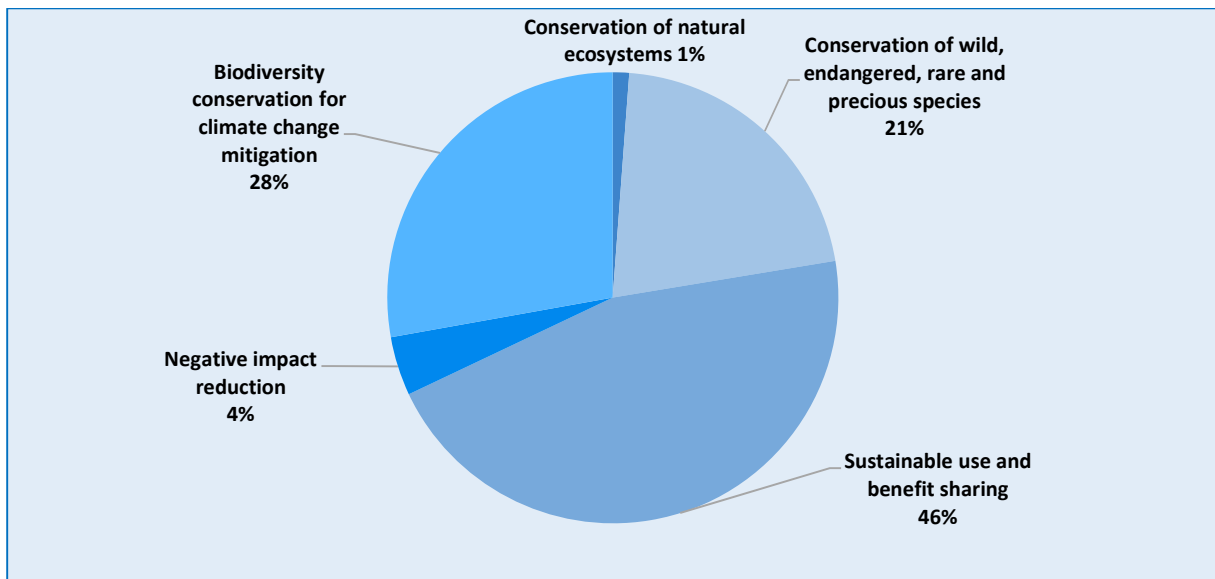
While the BER Viet Nam team recognizes that the information presented below is incomplete, its efforts identified around 20 biodiversity-related projects implemented by NGOs, including IUCN, WWF, Birdlife International as prominent international agencies, that between 2011 and 2015 assisted PAs, and communities located inside PA buffer zones, in strengthening the sustainable management and use of natural resources, the protection of rare and endangered species, the enhancement of awareness on the values and importance of biodiversity, and the piloting of PA community-based management.

Figure 30 Private financial contribution to biodiversity by year between 2011 and 2015



Notes: Unit – million VND, million USD; Source - synthesized by the author.

Figure 31 Private sector biodiversity expenditure by NBS major tasks



Source: Synthesized by the author.

Data collected from these projects show that between 2011 and 2015, private spending on biodiversity in Viet Nam was relatively high, but showed a trend to decrease, in line with the domestic and international economic context during this period (Figure 30). Meanwhile the total private expenditure on biodiversity amounted to VND 977,562 million (USD 43.4 million), with a focus on the sustainable use of natural resources, strengthening of the ecosystem-based approach to climate change adaptation, and the conservation of wild and endangered species (Figure 31).

At the same time, while between 2011 and 2015 the total private expenditures on biodiversity-related activities were considerably large, the direct investments to enhance the quantity and quality of PA ecosystems showed to be insignificant (<1%), which is consistent with data and information collected by the BIOFIN team in PAs in the northern, central and southern regions of Viet Nam. For example, the Coca Cola Company announced an investment of USD 1.2 million for strengthening the protection of natural ecosystem in Tram Chim NP between 2008-2015, but only spent VND 400 million (USD 17,000) on the NP, while the majority of the funds were used for community development activities. The estimated contribution of private sector expenditure to the major tasks of the NBS between 2011 and 2015 is presented in Table 30, excluding the insignificant amount spent directly in PAs to avoid double counting.

Table 30 Estimated biodiversity expenditure from private sector to NBS major tasks for 2011-2015

NBS major task	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	<i>insignificant</i>					
Conservation of wild and endangered, rare and precious species of plants and animals	38,562	45,984	49,062	41,407	32,311	207,326
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	82,877	98,827	105,443	88,991	69,441	445,579
Control of activities negatively impacting on biodiversity	7,709	9,192	9,808	8,277	6,459	41,445
Biodiversity conservation in the context of climate change	50,539	60,266	64,300	54,268	42,346	271,719
Total	181,824	216,817	231,333	195,239	152,349	977,562

Notes: Unit – million VND; Source - synthesized by the author.

5.3 Summary of biodiversity expenditure for Viet Nam

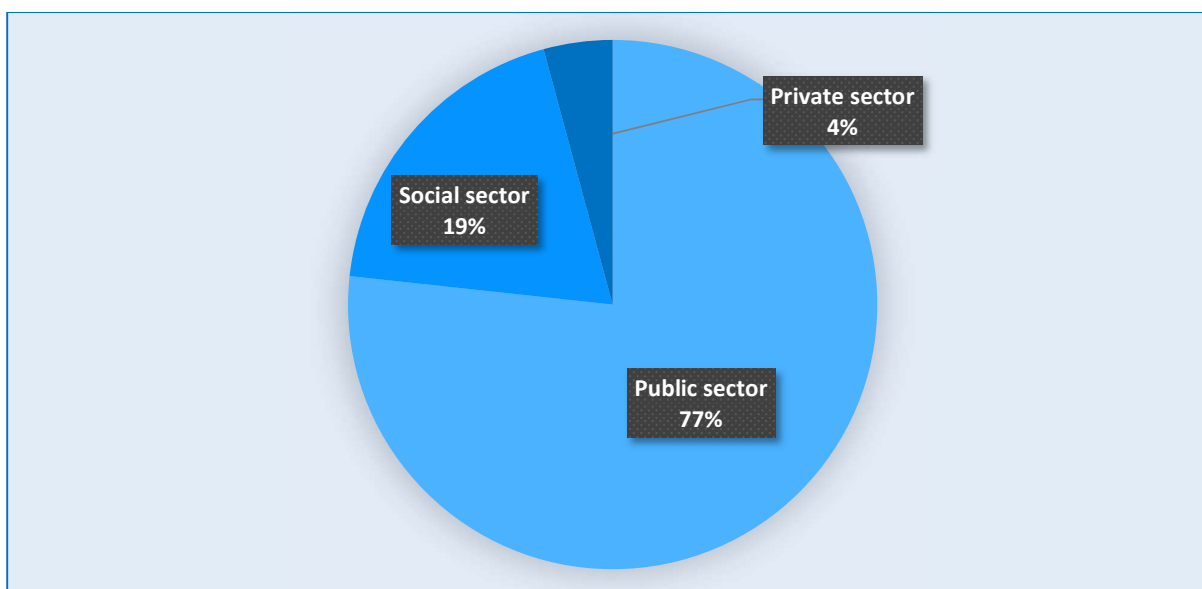
Combining estimates by the different sectors, as presented in the previous sections, the biodiversity-related expenditure in Viet Nam between 2011-2015 amounted to a total of VND 22,910,016 million (USD 1,018.2 million), equal to an annual average of VND 4,582,003 million (USD 203.65 million) spent on biodiversity-related activities, largely by the public sector (76.7%), followed by the social sector (19.1%) and the private sector (4.2%), with public spending decreasing, social spending increasing, and private spending remaining stable (Table 31; Figure 32; Figure 33). On average, the total biodiversity spending amounted to only 0.16% of the GDP, or 10% of government expenditures on environment protection (Table 32). With regard to NBS main tasks, between 2011 and 2015 most financial resource were allocated to “sustainable use, fair and equitable access and sharing benefits derived from ecosystems and biodiversity” (40%), followed by “Conservation of natural ecosystems” (34%), “Control of activities negatively impacting on biodiversity” (13%), and less than 10% for other NBS major tasks (Table 33).

Table 31 Biodiversity-related expenditure by sector between 2011-2015

Sector	2011	2012	2013	2014	2015	Total
Public sector	2,490,346	3,415,980	3,939,122	4,222,214	3,507,208	17,574,870
Social sector	188,523	1,028,093	899,638	1,122,453	1,130,370	4,369,077
Private sector	179,687	214,268	228,613	192,944	150,558	966,069
Total	2,858,556	4,658,341	5,067,373	5,537,610	4,788,136	22,910,016

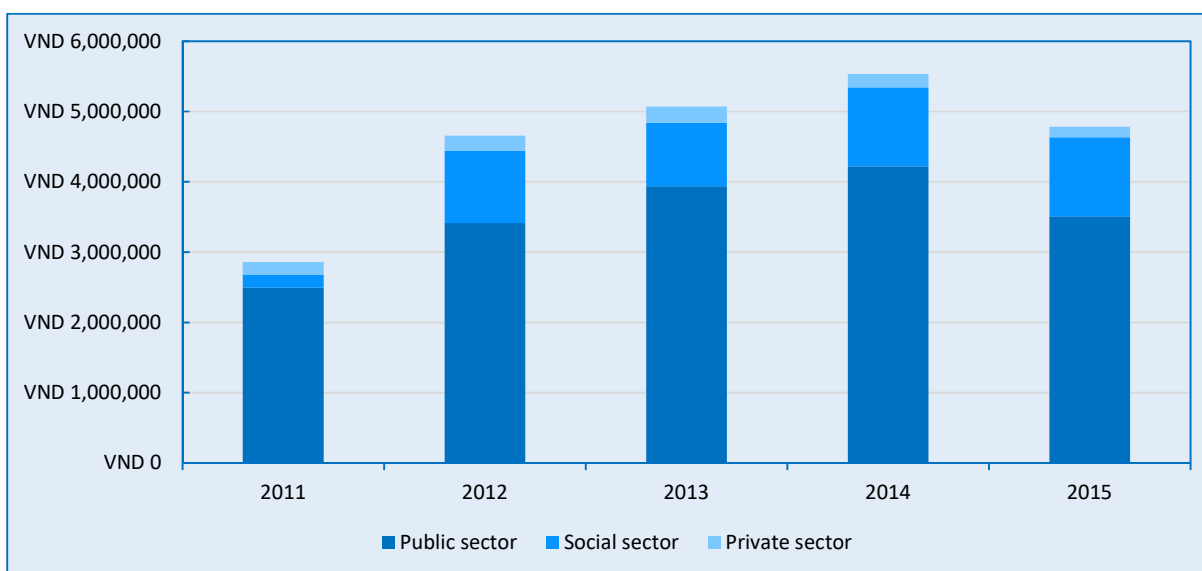
Notes: Unit – million VND; Source - Synthesized by the author.

Figure 32 Share of biodiversity-related expenditure by sector between 2011-2015



Source: Synthesized by the author.

Figure 33 Trends in biodiversity-related expenditure by sector between 2011-2015



Notes: Unit – million VND; Source: synthesized by the author.

Table 32 Total biodiversity expenditure in relation to GDP and other economic indicators

Indicator	2011	2012	2013	2014	2015	Average
As share of GDP	0.10%	0.17%	0.18%	0.20%	0.17%	0.16%
As share of total government's budget revenue	0.40%	0.65%	0.70%	0.77%	0.66%	0.64%
As share of government's total budget expenditure	0.36%	0.59%	0.64%	0.70%	0.61%	0.58%
As share of government's expenditure on development investment	1.37%	2.24%	2.43%	2.66%	2.30%	2.20%
As share of government's expenditure on environment protection	25.42%	36.06%	30.38%	36.03%	25.91%	30.76%
As share of expenditure on economics and environment protection	6.29%	10.23%	11.13%	12.16%	10.51%	10.06%

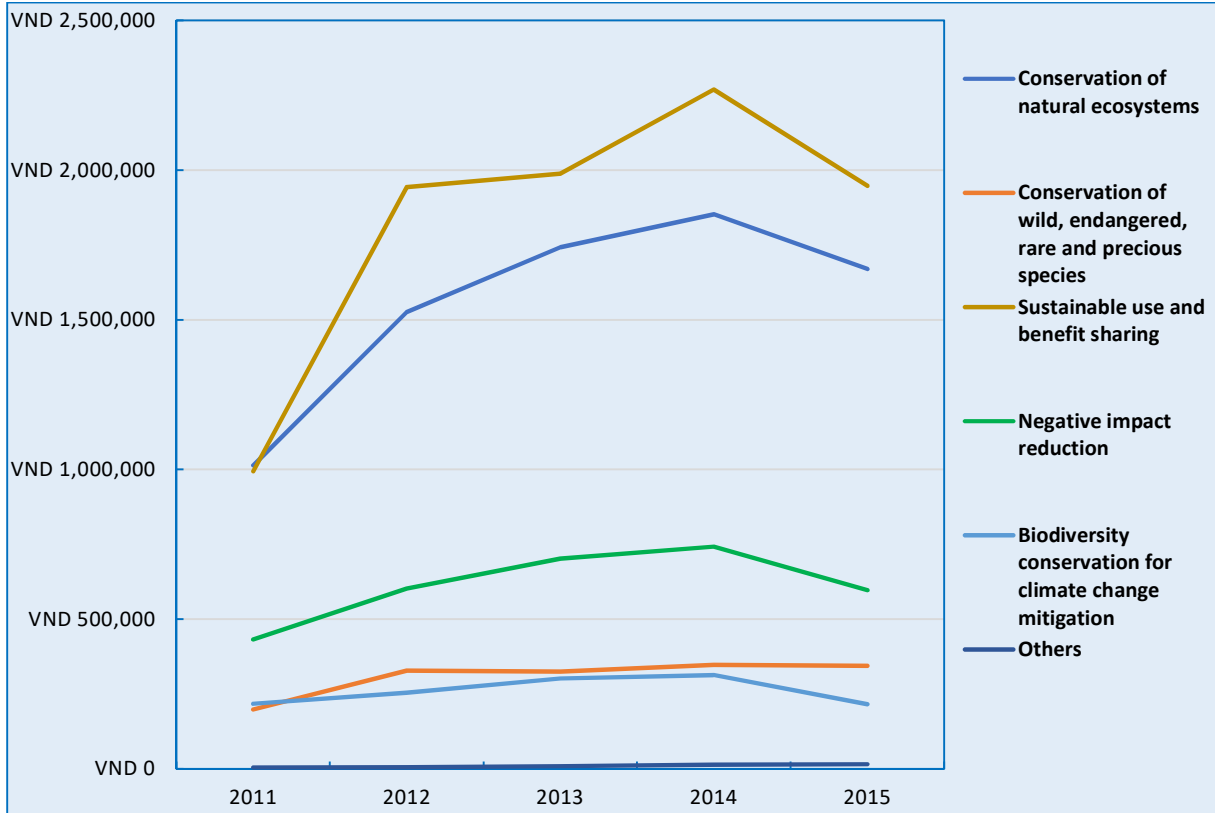
Source: Synthesized by the author.

Table 33 Estimated total biodiversity expenditure to NBS major tasks for 2011-2015

NBS major tasks	2011	2012	2013	2014	2015	Total
Conservation of natural ecosystems	1,013,454	1,526,115	1,742,250	1,852,491	1,669,474	7,803,785
Conservation of wild and endangered, rare and precious species of plants and animals	197,621	327,239	324,478	347,009	343,655	1,540,002
Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity	993,748	1,943,981	1,988,175	2,269,326	1,947,274	9,142,504
Control of activities negatively impacting on biodiversity	432,073	601,644	702,061	742,150	596,955	3,074,883
Biodiversity conservation in the context of climate change	217,210	254,362	301,610	313,135	215,587	1,301,903
Others	4,450	5,000	8,800	13,500	15,191	46,941
Total	2,858,556	4,658,341	5,067,374	5,537,610	4,788,136	22,910,016

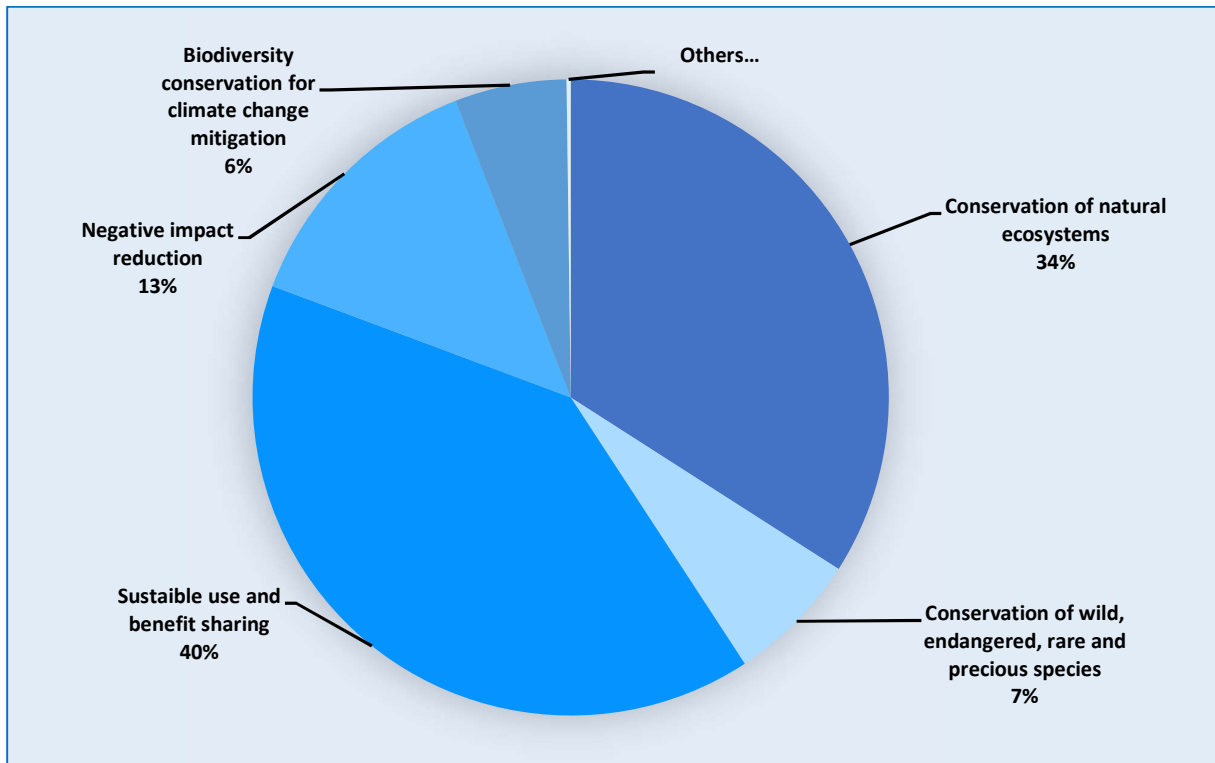
Notes: Unit – million VND; Source - synthesized by the author.

Figure 34 Trends in relative biodiversity expenditure to NBS major tasks between 2011-2015



Notes: Unit – million VND; Source: Synthesized by the author.

Figure 35 Relative biodiversity expenditure by NBS major tasks overall for 2011-2015



Source: Synthesized by the author.

6 PROJECTION OF FUTURE BIODIVERSITY EXPENDITURE

6.1. Correlation between total biodiversity expenditure and economic factors

To estimate the future volume of biodiversity expenditure under the business-as-usual scenario, the relationship between total biodiversity expenditure and a number of selected economic indicators - GDP, total state budget revenues, total state budget expenditure, state budget's expenditure on development investment and state budget on economics and environment protection - was analyzed for the period 2011-2015, using a hypothesized function given as:

$$\text{Intotexp}_i = \beta_0 + B_i \ln X_i + \varepsilon_i$$

In which:

i= 2011, 2012, 2013, 2014, 2015

Intotexp_i: logarithm of total biodiversity expenditure in year i

X_i: Economic indicators (GDP, total state budget revenues, total state budget expenditure, etc.)

The results of a linear regression analysis using a multitude of different independent variables showed that total biodiversity expenditure for 2011-2015 correlated best with the GDP for that period, with the logarithm of GDP as independent explaining 69.63% of the variability of the dependent variable, the logarithm of total biodiversity expenditure. In addition, the regression model is statistically significant, F(1,3)=6.88, p-value = 0.049<0.05, indicating that the regression results can be used to predict the future biodiversity expenditure based on GDP. As such, an increase of 1% of GDP will lead to an increase 1.32% of total biodiversity expenditure, with other factors remaining constant (Table 34).

Table 34 Regression analysis of total biodiversity expenditure and GDP for the period 2011-2015

Source	SS	df	MS	Number of obs = 5		
-----+-----				F(1, 3) =	6.88	
Model	.185544903	1	.185544903	Prob > F	= 0.0788	
Residual	.080933143	3	.026977714	R-squared	= 0.6963	
-----+-----				Adj R-squared	= 0.5950	
Total	.266478046	4	.066619512	Root MSE	= .16425	

Intotexp	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
-----+-----						
lnGDP	1.324224	.5049398	2.62	0.049	-.2827195	2.931168
_cons	-11.5519	7.61058	-1.52	0.226	-35.77216	12.66836

Source: Estimated by the author, based on statistical analyses with STATA 14.0.

6.2 Projected future biodiversity expenditure to 2030

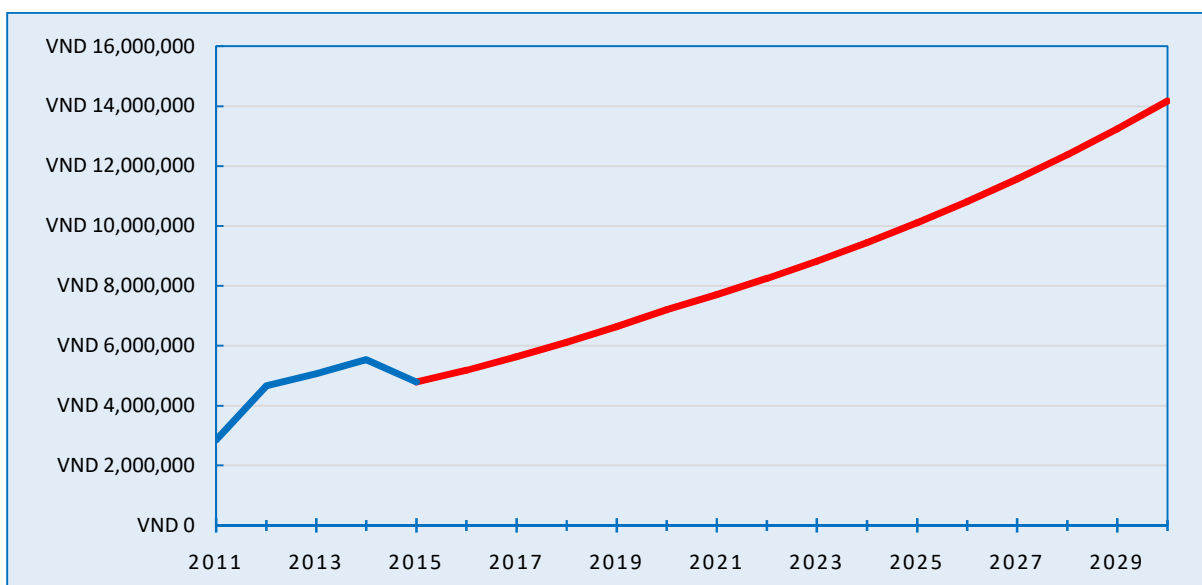
According to the economic analyses of HSBC (2012), JCER (2017) and the World Bank (2018), the forecasted average annual GDP growth rates of Viet Nam for the period 2010-2020, and 2020-2030 periods will be 5.7% and 5.3%, respectively. Using these forecasts, the future biodiversity expenditure of Viet Nam was estimated (Table 35; Figure 36).

Table 35 *Estimated biodiversity expenditure up to 2030*

Indicator	2016	2017	2018	2019	2020
GDP growth rate ¹¹	6.21%	6.66%	6.46%	6.47%	6.47%
Biodiversity expenditure growth rate	8.20%	8.79%	8.53%	8.54%	8.54%
Estimated biodiversity expenditure (million VND)	5,180,629	5,636,069	6,116,667	6,639,055	7,206,057
Indicator	2021	2022	2023	2024	2025
GDP growth rate ¹²	5.30%	5.30%	5.30%	5.30%	5.30%
Biodiversity expenditure growth rate	7.00%	7.00%	7.00%	7.00%	7.00%
Estimated biodiversity expenditure (million VND)	7,710,193	8,249,598	8,826,740	9,444,259	10,104,979
Indicator	2026	2027	2028	2029	2030
GDP growth rate ¹⁰	5.30%	5.30%	5.30%	5.30%	5.30%
Biodiversity expenditure growth rate	7.00%	7.00%	7.00%	7.00%	7.00%
Estimated biodiversity expenditure (million VND)	10,811,923	11,568,325	12,377,645	13,243,586	14,170,107

Source: Estimated by the author.

Figure 36 *Estimated biodiversity expenditure of Viet Nam up to 2030*



Notes: Unit – million VND; Source - estimated by the author.

¹¹ According to the World Bank forecast (2018).

¹² According to the HSBC (2012) and JCER (2017) forecasts.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusions

Between 2011 and 2015, Viet Nam spent a total of VND 22,910,016 million (US 1,018.2 million) on biodiversity, equal to an annual average of VND 4,582,003 million (USD 203.65 million). These figures are most likely an underestimation of the total expenditures, as the underlying BER report only focused on expenditures of selected finance actors at both central and local level, while many other actors - departments, agencies or institutions under MARD, MONRE, MOST, MOH, MPI, MOIT, other central level Ministries as well as PPCs – also allocate direct and indirect biodiversity expenditure, information of which could not be included in this BER, due to a limited access to accounting data and other useful sources across sectors, institutional domains and departments. Likewise, private biodiversity expenditure was synthesized from existing data and information obtained from selected NGOs, including IUCN, WWF, Birdlife International and FFI, while relevant expenditures by other prominent NGOs working to support biodiversity, such as Pan Nature, TRAFFIC, Wildlife Conservation Society, ENV, etc. could not yet be included.

The results of the BER to date show that the vast majority of biodiversity expenditures in Viet Nam is provided by government budget sources (77%), followed by social resources (19%) and the private sector (4%). This implies a great dependency on the government to protect the biodiversity resources of the country, considering that Viet Nam is still a developing country of which the economy over the years is facing many difficulties. At the same time, the total biodiversity expenditure only accounted for 0.16% and 0.58% of GDP and total government budget expenditure during 2011-2015, respectively, relative contributions which are only slightly higher than in other Southeast Asia countries, such as Thailand (0.1% of GDP, 0.05% of overall budget expenditure)¹³ and the Philippines (0.08% of GDP, 0.31% of overall budget expenditure¹⁴). It can also be noted that the level of financial expenditures on biodiversity conservation is insignificant compared to the benefits received by humans, the economy and the environment of the country; as noted in the BIOFIN Viet Nam PIR report (2018), agricultural ecosystems contribute 17-20% of the total GDP, while some 20 million people in Viet Nam rely on fisheries for their livelihood, and approximately 25 million people benefit from forest ecosystems. In addition, biodiversity provides a wide range of valuable indirect environmental services, including the provision of clean water, flood mitigation, erosion control and recreation, among others. A preliminary assessment conducted by Bann *et al.* (2016), exploring key ecosystem services and their values to the economy and local livelihoods in the Central Highlands of Viet Nam, shows that the ecosystem services of the Central Highlands were valued at USD 3.1 billion a year, by far exceeding the current expenditures from the 3 groups of sources combined.

Regarding the main tasks for biodiversity conservation as formulated in the NBS, between 2011 and 2015, biodiversity expenditure in Viet Nam primarily was attributed to “strengthening the sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity” (40%), followed by the conservation of natural ecosystems (34%), “activities to control negative impact on biodiversity” (13%), while less than 10% was allocated to the remaining major tasks agreed in the NBS. Considering that most investments for sustainable use are benefitting communities living in or near PAs, and aim to reduce community dependence on PAs (thus reduce pressures on PAs), it can be concluded that in Viet Nam between 2011 and 2015 priority was given to the conservation and protection of natural ecosystems in PAs. At the same time, prior studies also indicate that the overall volume of financial resources made available for biodiversity seems insufficient and inefficient, because biodiversity in Viet Nam continues to degrade, as

¹³ Thethach Chuaprapaisilp (2017), *Public, Private and Civil Society Biodiversity Expenditure Review in Thailand, Thailand*.

¹⁴ *BIOFIN Philippines (2016), Public and Private Biodiversity Expenditure Review, Philippines*.

evidenced by (i) the reduction in both quantity and quality of forest ecosystems; (ii) the increasing pollution - in load, concentration and toxicity - of inland water ecosystems by waste of industrial and domestic origin, as well as by chemical fertilizers and pesticides in agriculture; and (iii) the continuing transformation, overexploitation and habitat loss in marine and coastal ecosystems, increasing the risks of extinction of rare, precious and endangered species (MONRE, 2015).

The BER also established that financial resources allocated for the conservation of natural ecosystem in PAs to a large extent (i.e., about 65%) are spent on salaries and operational costs of the PA Management Boards as well as investment in PA infrastructure, while only a relatively small amount (about 35%) is spent on targeted conservation activities, as evidenced and confirmed by the current situation of many PAs, including: Ta Dung NP (Dak Nong province), Bu Gia Map (Binh Phuoc province), Biduop Nui Ba (Lam Dong province).

At the same time, the BER analysis for the 2011 – 2015 period showed that annual public spending on biodiversity was decreasing, while social spending was increasing and private spending remained stable.

7.1. Recommendations

The review of Viet Nam's biodiversity expenditure between 2011 and 2015 has identified a number of issues that need to be addressed to strengthen biodiversity conservation in the future, including:

- While Viet Nam has adopted a state budget categorization and attribution system which includes the recording of biodiversity expenditures as part of expenditures for environmental protection, the very large discrepancy between biodiversity expenditures recorded as formal government spending as per state budget index and the actual expenditures as estimated in this BER report confirms the need to improve the methodology for recording state expenditures on biodiversity as well as to strengthen the accuracy of data recording, to ensure the consistent and reliable tracking of the cash flow to biodiversity-related activities, and to allow for timely adjustments of financial allocations from different sources to achieve national biodiversity targets.
- While government budget spending remained the primary source covering biodiversity expenditures in recent years, its relative importance showed a decreasing trend during the period of analysis. To ensure coverage of the forecasted increase in biodiversity expenditures to 2030 under the business-as-usual scenario, the government of Viet Nam is recommended to develop a Biodiversity Finance Plan, elaborating opportunities for maintaining and strengthening government budget finance, i.e. by using government-regulated instruments, as well as strengthening the mobilization of financing from social and private sector sources, making use of an appropriate mixture of already applied and innovative finance solutions supported by education and awareness raising across communities and sectors on the importance of biodiversity and its services provided to the economy and society at large.
- Along with developing a Biodiversity Finance Plan for mobilizing additional finance resources from public, social and private sectors, state government departments and agencies as well as other actors financing biodiversity conservation in Viet Nam should focus on realigning existing financial flows, avoiding expenditures and deliver better on existing biodiversity expenditures, towards cost savings, efficiency gains and reduction of transaction costs, all to ensure that all allocated financing will synergistically support achieving Viet Nam's national biodiversity conservation targets.
- Building on the findings of the current BER, a follow-up BER should be conducted focusing on (i) expanding the quantification of biodiversity expenditure by public, social or private sector actors to include such actors for whom biodiversity conservation is of secondary importance, and apply appropriate weighting factors to incorporate such expenditures across national biodiversity targets; (ii) analyzing the linkages between budgeted, approved and allocated, and actual expenditures.

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Annexes

- Annex 1 Questionnaire on biodiversity expenditure of MONRE in 2011 - 2015
- Annex 2 Questionnaire on biodiversity expenditure of VNFOREST in 2011 - 2015
- Annex 3 Questionnaire on biodiversity expenditure of DOF in 2011 - 2015
- Annex 4 Questionnaire on biodiversity expenditure of MOST (Gene Bank Program) in 2011 - 2015
- Annex 5 Questionnaire on biodiversity expenditure of DONRE in 2011 - 2015
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- Annex 8 List of biodiversity related strategies and programs during 2011-2015
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Annex 1 Questionnaire on biodiversity expenditure of MONRE in 2011 - 2015

I. Expenditures from government budget for regular operation of BCA in 2011 – 2015 (unit: million dong)

Expenditure items	2011	2012	2013	2014	2015
Salary, wage					
Materials and power					
Investments on infrastructures and facilities					
Implementation of assigned regular activities					
Others (if applicable)					

II. Expenditures from government budget and ODA funds for the implementation of national strategies and target programs related to biodiversity¹ managed by VEA (or BCA) in 2011 – 2015

No	Title of national strategy/target program	Objectives	Implementing period	Financial source (Government budget, ODA, etc.)	Implementing organization	Actual expenditure (mil. dong)				
						2011	2012	2013	2014	2015
1										
2										
3										

¹ Strategy or program which aims at least one of following objectives: (i) conservation of natural ecosystems; (ii) Conservation of wild and domestic endangered, rare, and precious species of plants and animals, (iii) Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity; (iv) Control of activities which negatively impact on biodiversity; (v) Biodiversity conservation in the context of climate change.

III. Expenditures from international programs or projects managed by VEA (or BCA) on biodiversity related activities in 2011 - 2015

No	Title of international program or projects	Objectives	Implementing period	Donor (UNDP, WB, ADB, v.v)	Implementing organization	Actual expenditure (unit: mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											
4											
5											
6											
.....											

IV. Expenditures from Viet Nam Environment Fund for biodiversity related programs, projects, activities in 2011 - 2015

No	Title of program/project/activity	Objective	Implementing period	Implementing organization	Actual expenditure (mil. dongs)					Note
					2011	2012	2013	2014	2015	
1										
2										
3										
4										
5										
6										
.....										

THANK YOU VERY MUCH!

Annex 2 Questionnaire on biodiversity expenditure of VNFOREST in 2011 - 2015

I. Government's recurrent expenditure (wage, salary, supplements, operation apparatus) and investment (for infrastructures and facilities) in selected biodiversity state management organizations under VNFOREST in 2011 – 2015 (unit: mil. dongs)

Organization	2011	2012	2013	2014	2015
Department of Management of Special use and Protection Forest					
Ba Vi National Park					
Tam Dao National Park					
Cuc Phuong National Park					
Bach Ma National Park					
Cat Tien National Park					
York Don National Park					
Other organizations (if applicable)					

II. Expenditures from government budget and ODA funds (non-recurrent expenditures) for the implementation of national strategies and target programs related to biodiversity¹ in 2011 – 2015 in selected organization under VNFOREST

No	Title of national strategy/target program	Objectives	Implementing period	Financial source (Government budget, ODA, etc.)	Implementing organization	Actual expenditure (mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											

¹ Strategy or program which aims at least one of following objectives: (i) conservation of natural ecosystems; (ii) Conservation of wild and domestic endangered, rare, and precious species of plants and animals, (iii) Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity; (iv) Control of activities which negatively impact on biodiversity; (v) Biodiversity conservation in the context of climate change.

III. Expenditures from international programs or projects managed by VNFORST on biodiversity related activities in 2011 - 2015

No	Title of international program or project	Objectives	Implementing period	Donor (UNDP, WB, ADB, v.v)	Implementing organization	Actual expenditure (mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											

IV. Expenditures from Viet Nam Forest Protection and Development Fund for biodiversity related programs, projects, activities in 2011 – 2015

No	Title of program/project/activity	Objective	Implementing period	Implementing organization	Actual expenditure (mil. dongs)					Note
					2011	2012	2013	2014	2015	
1										
2										
3										

THANK YOU VERY MUCH!

Annex 3 Questionnaire on biodiversity expenditure of DOF in 2011 - 2015

I. Government's recurrent expenditure (wage, salary, supplements, operation apparatus) and investment (for infrastructures and facilities) for Department of fishery resource conservation and development in 2011 – 2015 (unit: mil. dongs)

Items	2011	2012	2013	2014	2015
Recurrent expenditure (wage, salary, operation apparatus)					
Investment (infrastructures and facilities)					
Implementation of assigned regular tasks on fishery resource conservation and development					
Other expenditures (if applicable)					

II. Expenditures from government budget and ODA funds for the implementation of national strategies and target programs (at both ministerial and national level) related to fishery resource conservation and development, managed by DOF, in 2011 – 2015

No	Title of national strategy/target program	Objectives	Implementing period	Financial source (Government budget, ODA, etc.)	Implementing organization	Actual expenditure (mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											

III. Expenditures from international programs or projects managed by DOF on fishery resource conservation and development in 2011 - 2015

No	Title of international program or project	Objectives	Implementing period	Donor (UNDP, WB, ADB, v.v)	Implementing organization	Actual expenditure (mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											
4											
5											
6											
7											

THANK YOU VERY MUCH!

Annex 4 Questionnaire on biodiversity expenditure of MOST (Gene Bank Program) in 2011 - 2015

1. Government's expenditure on assigned regular tasks under Gene Bank Program managed by Department of Science and Technology for Economic Technical Branches in 2011 – 2015

No.	Title of task (conservation of genetic resources, exploitation and development of genetic resources, evaluation of genetic resources)	Objective	Actual expenditure (unit: mil. dongs)					Note
			2011	2012	2013	2014	2015	
1								
2								
3								
.....								

2. Government budget's expenditures for Gene Bank's tasks (at national, ministerial and provincial levels), managed by Department of Science and Technology for Economic Technical Branches in 2011 - 2015

No	Level	Actual expenditure (unit: mil. dongs)					Note
		2011	2012	2013	2014	2015	
1	National level						
2	Ministerial level						
3	Provincial level						
.....							

3. Government budget's investment for facilities of units belonging to Gene Bank Network in 2011 - 2015

Investment items	Actual expenditure (unit: mil. dong)					Note
	2011	2012	2013	2014	2015	

4. Expenditures from international programs or projects belonging Gene Bank Program managed by Department of Science and Technology for Economic Technical Branches in 2011 - 2015

No	Title of international program or project	Objectives	Implementing period	Donor (UNDP, WB, ADB, v.v)	Implementing organization	Actual expenditure (mil. dong)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											
4											
.....											

THANK YOU VERY MUCH!

Annex 5 Questionnaire on biodiversity expenditure of DONRE in 2011 - 2015

I. General information

1. Full name of DONRE :
2. Address
3. Telephone number:Website (if applicable):.....

II. Biodiversity expenditure of DONRE

1. Government's recurrent expenditure (wage, salary, supplements, operation apparatus) and investment (for infrastructures and facilities) in selected biodiversity state management subordinate units of DONRE in 2011 – 2015 (unit: mil. dongs)

Organization	2011	2012	2013	2014	2015
Environment Protection Agency					
National Parks/Protected Areas managed by DONRE					
Others (if applicable)					

2. Expenditures from central budget and provincial budget for the implementation of national strategies and target programs related to biodiversity conservation activities managed by DONRE in 2011 – 2015

No	Title of national strategy/target program	Objectives	Implementing period	Financial source (Government budget, ODA, etc.)	Implementing organization	Actual expenditure (mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											

3. Expenditures from international or domestic programs or projects related to biodiversity conservation activities managed by DONRE in 2011 – 2015

No	Title of international program or project	Objectives	Implementing period	Donor	Implementing organization	Actual expenditure (mil. dong)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											
.....											

THANK YOU VERY MUCH!

Annex 6 Questionnaire on biodiversity expenditure of DARD in 2011 - 2015

I. General information

1. Full name of DARD :
2. Address
3. Telephone number:Website (if applicable):.....

II. Biodiversity expenditure of DARD

1. Government's recurrent expenditure (wage, salary, supplements, operation apparatus) and investment (for infrastructures and facilities) in selected biodiversity state management subordinate units of DARD in 2011 – 2015 (unit: mil. dong)

Organization	2011	2012	2013	2014	2015
Forest Ranger Agency					
Plant Protection Agency					
National Parks/Protected Areas managed by DARD					
Others (if applicable)					

2. Expenditures from central budget and provincial budget for the implementation of national strategies and target programs related to biodiversity conservation activities managed by DARD in 2011 – 2015

No	Title of national strategy/target program	Objectives	Implementing period	Financial source (Government budget, ODA, etc.)	Implementing organization	Actual expenditure (mil. dong)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											

3. Expenditures from international or domestic programs or projects related to biodiversity conservation activities managed by DARD in 2011 – 2015

No	Title of international program or project	Objectives	Implementing period	Donor	Implementing organization	Actual expenditure (mil. dongs)					Note
						2011	2012	2013	2014	2015	
1											
2											
3											
.....											

THANK YOU VERY MUCH!

Annex 7 Questionnaire on biodiversity expenditure of Protected Area in 2011 - 2015

I. General information

1. Name of protected area:
 2. Address:
 3. Phone:Website (if applicable):.....
 4. Key functions and tasks of protected area:
-

II. Key funding sources of PA in 2011-2015 and (expected) 2020 – 2030 (unit: mil. dong)

No.	Category	2011	2012	2013	2014	2015	2020	2030
1	Allocations from government budget ¹							
1.1	<i>Government's expenditure on environment</i>							
1.2	<i>Government's expenditure on economics</i>							
1.3	.....						
1.4	.....						
2	Grants ²							
2.1	<i>Granted by.....</i>							
2.2	<i>Granted by</i>							
2.3	.....						
3	Additional revenues							
4	Other (please specific)							

III. Expenditures from government budget for the implementation of assigned regular tasks of protected area during 2011 – 2020 and expected amount for the period of 2020 – 2030 (unit: mil. dong)³

¹ Please specify PA's funding sources from government budget by years

² Please specify PA's funding sources from donors by year

³ Please state expenditure categories (including, current and non-current expenditures) from government budget lines listed in Section II.

No	Expenditure category	2011	2012	2013	2014	2015	2020	2030
I	Expenditure on environment							
1	<i>Conservation of natural ecosystem</i>							
2	<i>Conservation of wild and domestic endangered, rare, and precious species of plants and animals</i>							
3	<i>Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity</i>							
4	<i>Control of activities which negatively impact on biodiversity</i>							
5	<i>Biodiversity conservation in the context of climate change</i>							
II	Expenditure on economics							
1	.....						
2	.....						
3	.....						
4	.....						
5	.....						
III	Other funding source							
1	.....						
2	.....						
3	.....						
4	.....						
5	.....						
VI	Other funding source							
1								
2								
3								
4								
5								

III. Expenditures from government budget non-recurrent expenditures), ODA funds and international grants for the implementation of national strategies, target programs, assignments and activities related to biodiversity¹ in the protected area during 2011 – 2015

No	Title of program, assignment, project or activities	Overall objective(s)	Activities carried out at protected area	Implementing period	Funding source	Implementing organization	Actual expenditure (unit: mil. dong)					Note
							2011	2012	2013	2014	2015	
1												
2												
3												
4												
5												

THANK YOU VERY MUCH!

VERIFICATION OF THE PA

.....Date.....Month.....year 2017

Director of the PA

(Signed and stamped)

¹ Strategy or program which aims at least one of following objectives: (i) conservation of natural ecosystems; (ii) Conservation of wild and domestic endangered, rare, and precious species of plants and animals, (iii) Sustainable use, fair and equitable access and sharing of benefits derived from ecosystems and biodiversity; (iv) Control of activities which negatively impact on biodiversity; (v) Biodiversity conservation in the context of climate change.

Annex 8 List of biodiversity related strategies and programs during 2011-2015

No.	Strategy / Program	Overall objective	Legal basis	Organization of implementation	Budgeted financial source
1	Integrated Coastal Management Programme (also known as Program 158) for the North Central Region and Central Coastal Provinces up to 2010 and orientation towards 2020 (5 major tasks)	<ul style="list-style-type: none"> To enhance the capacity to manage, protect, utilize and exploit natural resources and the environment for the sustainable development of the provinces and cities directly under the Central Government in the North Central and Central Coast regions through application of the integrated coastal management measure 	Decision 158/QD-TTg, dated October 09, 2007, of Prime Minister, on Approving the program on Integrated Coastal management of the North Central Region and Central Coastal Provinces up to 2010 and orientation towards 2020	<ul style="list-style-type: none"> MONRE acts as the national key agency for the implementation Relevant ministries, sectors and provinces and cities directly under Central Government are implementing bodies 	<ul style="list-style-type: none"> Initial government budget to 2010 of VND 150 billion (US 7.5 million) and a further VND 500 billion (US 25 million) earmarked for activities to 2020. PEMSEA (under SDS-SEA Strategy) supported VND 9.5 billion (475 mil.) for 2010 – 2013.
2	National Strategy for Environmental Protection (NSEP) by 2020 and the orientation towards 2030 (13 majors tasks including: sustainable and efficient exploitation and utilization of natural resources, natural conservation and biodiversity)	<ul style="list-style-type: none"> To control and reduce environmental pollution increment, natural resource depletion, and biodiversity degradation to the basic level To continue improve habitat quality and enhance capacity to actively response to climate change, towards the goal of sustainable development of the country 	Decision No.1216/QD-TTg, dated 05/09/2012 of Prime Minister on Approving the National Strategy for Environmental Protection by 2020 and the orientation towards 2030;	<ul style="list-style-type: none"> MONRE acts as the national key agency for the implementation Relevant ministries, sectors and provinces and cities are implementing bodies 	<ul style="list-style-type: none"> Government budget ODA Enterprises and individuals should arrange capital or borrow capital from credit organization, VDPF or local environmental protection fund Grant from donors in line with agreements with donors
3	National Strategy on Green Growth for the period 2011-2020 with vision to 2050 (3 main tasks)	<ul style="list-style-type: none"> Green growth, towards the low-carbon economy, natural capital enrichment has become a decisive tendency in sustainable economic development; reduction in emissions and increase in the possibility to absorb greenhouse gases is becoming mandatory and 	Decision No.1393/QD-TTg, dated 25/09/2012, of Prime Minister, on Approving the National Strategy on Green Growth	<ul style="list-style-type: none"> MPI acts as the focal agency for green growth; MONRE acts as the standing body of the National Committee on Climate Change 	<ul style="list-style-type: none"> Government budget ODA Technical assistance from other countries and international organizations

		important targets in socio-economic development		<ul style="list-style-type: none"> Relevant ministries and in-line organizations cooperates with above ministries to implement the strategy 	<ul style="list-style-type: none"> Approximately, there is a need of USD 30 billion by 2020 to implement the strategy (current budget and ODA only meet 10% of the demand)
4	Strategy on sustainable exploitation and use of marine natural resources and marine environment protection by 2020, with a vision to 2030(5 main tasks)	<ul style="list-style-type: none"> Better understanding of the sea, the potential advantages, the negative impact from the sea; promote the exploitation and use of marine natural resources in a sustainable way; preserve the quality of the water environment; maintain the ecological functions and biological productivity of marine ecosystems contribute to successful implementation of the Marine Strategy for Viet Nam in 2020, the goal of sustainable development of the country 	Decision No.1570/QD-TTg dated 06/09/2013 of the Prime Minister on Approving the Strategy on sustainable exploitation and use of marine natural resources and marine environment protection by 2020, with a vision to 2030	<ul style="list-style-type: none"> MONRE acts as focal point Relevant ministries, sectors, PPC centrally run cities and coastal agencies and organizations are implementing bodies 	<ul style="list-style-type: none"> Central government budget Provincial government budget Community fundraising
5	Master plan of nation-wide biodiversity conservation by 2020, with a vision to 2030(6 priority programs)	<ul style="list-style-type: none"> Ensuring important natural ecosystems, the endangered, precious and rare species and genetic resources are conserved and sustainably developed; maintaining and developing the ecosystem services to adapt to climate change in order to promote sustainable development of the country 	Decision No. 45/QD-TTg dated January 08, 2014, approving master plan of nation-wide biodiversity conservation by 2020, with a vision to 2030	<ul style="list-style-type: none"> MONRE acts as focal point Ministries and ministerial-level agencies, PPC are implementing bodies 	<ul style="list-style-type: none"> Central government budget and international financial support Provincial government budget and other self-raised funds
6	Strategy for management of special-use forests, marine protected areas and inland water protected areas in Viet Nam until 2020 and vision to 2030	<ul style="list-style-type: none"> Put area of special-use forests, marine protected areas and inland water protected areas attain to 9% of area of terrestrial territory and 0.24% of Viet Nam sea areas The special-use forests, marine protected areas and inland water protected areas will be managed with management method. Control the endangered, precious and rare species in special-use forests, marine protected areas and inland water protected areas; conservation and development of quantity of precious and rare species being threatened 	Decision No. 218/QD-TTg dated February 07, 2014, approving Strategy for management of special-use forests, marine protected areas and inland water protected areas in Viet Nam until 2020 and vision to 2030	MARD will take prime responsibility for the implementation of the Strategy	<ul style="list-style-type: none"> Central government budget plus international sponsor Provincial government budget

		<ul style="list-style-type: none"> • Effective implementation of international commitments on natural conservation, biodiversity 			
7	National Biodiversity Strategy by 2020, vision to 2030(5 main tasks, 7 priority programs)	<ul style="list-style-type: none"> • Significant natural ecosystems, endangered species, precious and rare species are conserved and used sustainably in order to contribute to the development of the country in the direction of green economy and actively respond to climate change 	Decision No.1250/QĐ-TTg dated July 31, 2013 approving National Biodiversity Strategy by 2020, vision to 2030	MONRE, MARD, MOST, MOS shall cooperate to implement the Strategy	<ul style="list-style-type: none"> • Central government budget and international financial support • Provincial government budget and other self-raised funds
8	Strategy of Agriculture and Rural Development for period 2011 - 2020	<ul style="list-style-type: none"> • Period 2010 - 2015: Restore the growth, increase the efficiency of agricultural production; promote grassroots democracy, mobilize community strength for rural development; increase income and reduce poverty rates, protect the environment • Period 2016 - 2020: comprehensive agricultural development, increase income and living conditions improvement for of rural residents 	Decision No.3310/BNN-KH, dated October 12, 2009 approving Strategy of Agriculture and Rural Development for period 2011 - 2020	MARD will take prime responsibility for the implementation of the Strategy	<ul style="list-style-type: none"> • Central government budget
9	Fisheries Development Strategy(4 main tasks)	<ul style="list-style-type: none"> • Fisheries development towards quality and sustainability, food hygiene and safety, environmental protection, protection and resource development and social security; actively adapt to the impacts of climate change; At the same time, close cooperation between fisheries development and contribution to the protection of national sovereignty and security and defense in the sea areas 	The Decision No 1690/QĐ-TTg, dated September 16, 2010, approving the fisheries development strategy	MARD will take prime responsibility for the implementation of the Strategy	<ul style="list-style-type: none"> • Central government budget
10	Viet Nam's Forestry Development Strategy in the 2006 - 2020 period (5 main tasks)	<ul style="list-style-type: none"> • To establish, manage, protect, develop and use in a sustainable manner 16.24 million ha of land planned for forestry; to increase the rate of land with forests to 42-43% by 2010 and 47% by 2020; • To ensure wide participation of all economic sectors and social organizations in forestry development to make more contributions to 	Decision No.18/2007/QĐ-TTg of February 05, 2007 approving Viet Nam's forestry Development Strategy in the 2006-2020 period	MARD will take prime responsibility for the implementation of the Strategy	<ul style="list-style-type: none"> • Demand for investment capital in the 2006-2010 period: VND 33,885.34 billion. • Government budget: 23.9%, state credit: 15.6%; ODA capital: 13.1%; State owned

		socio-economic development, eco-environmental protection, conservation of biodiversity and provision of environmental services			enterprises and cooperatives: 11.3%; FDI: 24.5%
11	Forest protection and development plan during 2011-2020 (3 main tasks, 9 key programs / projects)	<ul style="list-style-type: none"> • To properly protect existing forest areas; to effectively and sustainably use forest resources and planned forestry land; • To raise the forest coverage to 42-43% by 2015 and 44-45% by 2020; to increase forest yield, quality and value; to restructure the forestry sector toward raising its added value; to basically meet domestic and export demands for timber and forest products; • To generate more jobs and raise incomes for people living on forestry, contributing to eradicating hunger, reducing poverty and maintaining security and defense. 	Decision No. 57/QD-TTg of January 9, 2012, approving the forest protection and development plan during 2011-2020	MARD leads the implementation of the Plan	<ul style="list-style-type: none"> • In 2011 - 2012: the government budget had allocated VND1,925 billion (VND715 billion in 2011 and VND1,210 billion in 2012). • The demand for budget capital for 3 years (2013 - 2015) is 6,137 billion VND, an average of 2,045 billion VND per year

Source: Compiled by the author.

Annex 9 List of biodiversity projects financed from ODA during 2011-2015

No.	Project title	Overall objective	Specific Objectives / Outcomes	Duration	Funding (USD)	Donor	Responsible agencies
Multilateral Financing Source							
1	Forest Sector Development Project (FSDP)	To achieve sustainable management of (plantation) forests and the conservation of biodiversity in special use forests to enhance the contribution of forestry to rural poverty reduction and global environmental protection	<p>Strengthening the enabling environment for sustainable forest management and biodiversity conservation</p> <p>Establish forest plantations and promote small-scale tree growing by rural communities, many of whom are poor, based on different cropping systems, including fast-growing plantations, mixed forestry-agriculture crops, and fruit trees</p> <p>Improve the conservation and sustainable use of biodiversity in priority special use forests and increase the reliability of special use forest funding through the establishment of an innovative financing mechanism</p> <p>Piloting of independent certification of smallholder plantations</p>	2005 - 2013	86,500,000	IDA-WB, GEF, Government of Finland, Netherland, European Union, Government of Viet Nam	MARD
2	Forests for livelihood Improvement in The Central Highlands (FLITCH)	Reduce the rate of household poverty, narrow the income gap of the poor than the average household in the province's forest-based livelihoods to 6 project provinces	<p>Strengthening of management and use of forests and forest land in the project area</p> <p>Sustainable forest management and biodiversity conservation</p> <p>Development of planting high-yield production, protection forests, special-use forests and other silvicultural activities contributing to the biodiversity conservation</p> <p>To address the essential needs of infrastructure to economic development, the social projects</p> <p>To contribute to improving the livelihoods of forest-dependent people in 60 communes</p>	2007 - 2014	91,260,000	ADB	MARD
3	UN-REDD Viet Nam Programme	To assist the Government of Viet Nam in developing an effective REDD regime in Viet Nam and to contribute to	Outcome 1: Improved institutional and technical capacity for national coordination to manage REDD activities in Viet Nam	2009 - 2012	4,384,756	UNDP, UNEP, FAO	MARD

		reduction of regional displacement of emissions	Outcome 2: Improved capacity to manage REDD and provide other Payment for Ecological Services at provincial and district levels through sustainable development planning and implementation Outcome 3: Improved knowledge of approaches to reduce regional displacement of emissions				
4	Project for Ecosystem Services (ProEcoServ)	To reduce threats to globally important biodiversity through integrating the findings and tools of ecosystem service assessments in policy and decision making	Development of policy support tools Strengthening of the policy environment (support for implementation of policies) Bridging the science-policy interface	2010 - 2015	25,917,188	UNEP, GEF	MONRE
5	Wildlife Consumption in Viet Nam: Reforming Policies and Practices to Strengthen Biodiversity Conservation	Specific investment loan to strengthen biodiversity conservation through significant reduction of illegal wildlife consumption in Viet Nam	Reduce consumption of wildlife which is itself a driver of the illegal trade, and thus substantively contributes to the national efforts of Viet Nam on reducing the illegal trade of wildlife, and to the global efforts of the bank on promoting biodiversity conservation Supports the country in meeting its obligations under the Convention on International Trade in Endangered Species of Wild Flora and Fauna and the CBD	2011 - 2015	2,916,200	GEF, WB	MONRE
6	Removing Barriers Hindering Protected Area Management Effectiveness in Viet Nam	To secure a sustainably financed PA system, to conserve globally significant biodiversity	A comprehensive and harmonized legal and policy framework supports sustainable PA financing Clear and harmonized institutional mandates and processes support sustainable PA financing mechanisms Knowledge and experience of sustainable financing options developed through demonstrations Information on biodiversity and PA status supports PA management and builds public support for the PA system	2011 - 2015	22,077,403	GEF, UNDP, Viet Nam Government, IUCN	MONRE, MARD
7	Greater Mekong Sub Region Biodiversity Conservation	To integrate biodiversity conservation, climate resilience and sustainable forest management in the Trung Truong Son landscape	Strengthen planning and management of the biodiversity and forests in the protected areas and their surroundings in the Trung Truong Son landscape Landscapes conservation measures at the community level in the protected areas and their surroundings to facilitate	2011 - 2019	34,000,000	ADB, GEF	MARD

	Corridors Project		financial sustainability and reduce greenhouse gas emissions				
8	Developing National Biodiversity Strategy and Action plan and mainstreaming Biodiversity Conservation into Provincial Planning	To strengthen biodiversity conservation in Viet Nam by the articulation of nationally agreed targets and action plan for national and provincial level implementation to fulfil its obligation under the CBD	10-year NBSAP with clear institutional design and financing plan approved by government by 12/2012 Biodiversity status, trends, and actions communicated nationally and internationally Provincial capacity for NBSAP implementation, including biodiversity financing, enhanced and mechanism in place to report on biodiversity status and good practice from provincial to national levels	2012 - 2016	5,459,091	GEF, UNDP, IUCN, JICA, Viet Nam Government	MONRE
9	Wildlife consumption in Viet Nam: Reforming policies and practices to strengthen biodiversity conservation	To strengthen biodiversity conservation through significant reduction of illegal wildlife consumption in Viet Nam	A more effective policy and legal framework Improved monitoring systems and enforcement of consumption controls Health sector and government and private sectors reduce illegal wildlife consumption	2012-2015	2,916,200	GEF	MONRE
10	Coastal Resources for Sustainable Development Project	To improve the management of coastal resources in support of sustainable fisheries in selected coastal provinces of Viet Nam.	Institutional capacity strengthening for sustainable fisheries management Good practices for sustainable aquaculture Sustainable management of near-shore capture fisheries	2012-2018	117,900,000	IDA-WB	MARD
11	Integrating biodiversity conservation, climate resilience and sustainable forest management in TTS Landscapes	To strengthen the management and ecological integrity of the protected area network in the Trung Truong Son region of Viet Nam	Strengthened planning and management of the biodiversity and forests in the Protected Areas and their buffer zones in the Trung Truong Son landscapes Landscapes conservation measures at the community level in PAs and their surroundings, providing financial sustainability and reduced GHG emissions	2013 - 2014	34,694,954	GEF	MONRE

12	Conservation of critical wetland PAs and Linked Landscapes	To establish new wetland protected areas and to create capacities for their effective management	Overcoming the existing gap in Viet Nam's otherwise impressive national PA system Addresses the lack of capacity among key stakeholders from government to local communities to effectively identify and manage threats to wetlands	2014 - 2017	18,071,887	GEF, UNDP	MONRE
13	Support for the REDD+ Readiness Preparation in Viet Nam	To assist Viet Nam to have an effective system for the future REDD+ implementation, that contributes to sustainable forest management, green economic growth and poverty reduction, and helping to mitigate climate change at regional and global levels	To support for strengthening institutional and technical capacity of National REDD+ Steering Committee, VNFOREST and relevant central organizations and three pilot provinces (Quang Binh, Quang Tri and Dak Nong) to be REDD+ ready to contribute to successful implementation of the National REDD+ Action Plan (NRAP)	2013 - 2015	4,432,000	WB	MARD
14	Improving Payment for Forest Ecosystem Service	Integrating ecosystem services in socioeconomic planning, increasing the efficiency of PFES mechanisms, and improving the livelihoods of local communities through the sustainable management of environmental resources	Economic evaluation of environmental services will be standardized at the provincial level Mechanisms for PFES valuation, management, and distribution will be piloted and institutionalized National and provincial policymakers will have the capacity to value ecosystem services and integrate them into economic development planning	2013-2016	1,600,000	ADB	MARD
15	Enhancing Capacity for Implementing Rio Conventions	Enhance capacity for implementing the Rio Conventions by applying tools leading to global environmental benefits	Viet Nam has environmental management tools that fully address global environment concerns Viet Nam is integrating global environment concerns into its national strategic planning and development processes	2015– 2017	2,579,646	GEF, UNDP, WWF, CRES	MONRE
Bilateral Financing Source							
1	Forest rehabilitation and sustainable forest management in Quang	Contribute to the improvement of the living standards of the forest-dependent rural population, to the protection of natural resources, to equal water resource at forest rehabilitated area and adjacent	To rehabilitate and sustainably manage about 21.400 ha of degraded forest land and sustainably manage about 3.500 ha of secondary forest to contribute to protect natural resource. To create job for about 15.000 farm households with stable income through diversifying forest products	2005 - 2013	18,450,000	BMZ	MARD, PPC of 4 provinces

	Nam, Quang Ngai, Binh Dinh and Phu Yen – KfW6 project	region, to equal climate and to enrich the biodiversification					
2	Plantation for Environmental Protection Project (JIFPRO)	Establish pilot model of native species and non-timber forest projects to increase income and improve living conditions of local people in Lao Cai province	Planting forests for environmental protection, raising awareness of people in the field of environmental protection, supporting people planting afforestation. Contribute to protecting natural resources, biodiversity conservation, reducing greenhouse gas emissions, improving the livelihoods of local people and contributing to the development of relationship between Viet Nam and Japan	2006 - 2017	266,832,000	JIFPRO	MARD
3	Forest Development in Hoa Binh and Son La Provinces (KfW7)	Contributing to restore forest ecosystems watershed, irrigation system protection, sustainable use of forest resources and biodiversity conservation.	Forest establishment from native species, management and protection for 16.756 ha of natural regeneration forest Community-based forest management for 8.000 ha natural forest Biodiversity Conservation in 04 nature reserves, including planting of 215 ha, and contracting forest protection of 3.600 ha in the core area	2006 - 2016	21,756,000	BMZ	MARD
4	Quick Win Afforestation Measures in Bac Giang, Lang Son and Quang Ninh provinces (KfW3 Phase III)	N/A	Increase of the forest cover in the region, sustainable management of forest natural resources, contribution to the improvement of environmental conditions and gene conservation of rare and valuable forest flora both in quantity and quality; generation of steady incomes and creation of jobs for local people in the project areas; promotion of the development of the local socio-economy by establishment of forestry cooperatives; create new appearance for the social forestry in mountainous areas and areas of ethnic minorities through CFM models	2007 - 2013	5,026,560	BMZ	MARD
5	Afforestation on The Coastal Sandy Area in Quang Ngai province - PACSA 2	Creation of coastal protection forests in coastal areas in Viet Nam using the Project as a model	Improve the agricultural productivity of the lands behind the protected forests Create jobs and income for local people through planting, tending and protecting forests.	2009 - 2014	4,962,264	JICA	MARD

			<p>Providing fuel and organic products to communities living in the surrounding area through management and utilization of coastal protection forests.</p> <p>Contribute to improving biodiversity and protecting the environment on the South-Central Coast</p>				
6	Programme on Conservation and sustainable use of forest biodiversity and ecosystems services in Viet Nam	Strengthening institutional, financial and technical capacity as well as staff capacity for the conservation of biodiversity in Viet Nam's forest ecosystems, especially at the national and protected areas.	<p>Clarify the functions and tasks, and promote better cooperation and coordination among relevant government agencies in the field of biodiversity conservation, thereby improving the development and implementation of law</p> <p>Research and pilot the financing mechanism for protected areas, and support the development of a benefit sharing mechanism to ensure sustainable financing for conservation and livelihood activities of local people</p>	2010 - 2013	4,500,000	BMZ	MARD
7	Development of the National Biodiversity Database System (NBDS)	Contribute to State management, the conduction and issue of legal documents on biodiversity	To develop the NBDS to meet the requirements of management, use and sharing of databases on biodiversity and conservation of Viet Nam's biodiversity, linking with international and contributing to the implementation of international agreements related to biodiversity	2011 - 2014	12,116,137	JICA	MONRE
8	Forest Preservation Program	To contribute to the preservation of natural forest resources for project provinces including Lai Chau, Lam Dong and Ca Mau	<p>Improve the control of forest fire prevention and fighting in Lai Chau, Lam Dong and Ca Mau</p> <p>Support Lai Chau, Lam Dong and Ca Mau in the comprehensive, effective and sustainable management of collected forestry information</p> <p>Establish forest plantations with the use of the embankment method in Ca Mau province which contributes to the preservation of natural forest resources and biodiversity</p>	2012 - 2014	408,289	JICA	MARD
9	Viet Nam Forests and Deltas Program	To help accelerate Viet Nam's transition to climate-resilient, low-emission sustainable development	<p>Support land-use practices that protect forest resources and enhance environmental services</p> <p>Increase resilience of people, places, and livelihoods</p>	2012 - 2017	27,321,631	USAID	MARD

			Supports coordination and policy development				
10	Protection forests restoration and sustainable management project - JICA2	Sustainable protection and management of protection forests; Restoration and preservation of biodiversity; Poverty reduction in the mountainous regions	Restoration and development of watershed protection forests in 11 provinces from Thanh Hoa province to Binh Thuan province Strengthening capacity of local governments and owners of protection forests Livelihood improvement of communities that will bear protection forest management responsibilities	2012 - 2021	123,497,000	JICA	MARD
11	UN-REDD Viet Nam Phase II Program	To enhance Viet Nam's ability to benefit from future results-based payments for REDD+ and undertake transformational changes in the forestry sector	Capacities for an operational National REDD+ Action Program (NRAP) are in place National Forest Monitoring System (NFMS) for are operational; Stakeholders at different levels are able to receive positive incentives Mechanisms to address the social and environmental safeguards under the Cancun Agreement, established Regional cooperation enhances progress on REDD+ implementation in the Lower Mekong Sub-Region	2013 - 2015	30,229,808	Government of Norway	MARD
12	Coastal Resources for Sustainable Development	To improve the sustainable management of coastal fisheries in the Project Provinces	Institutional capacity strengthening for sustainable fisheries management Good practices for sustainable aquaculture Sustainable management of near-shore capture fisheries	2013 - 2018	117,900,000	GEF, WB	MARD
13	Conservation and sustainable use of forest biodiversity and ecosystem services in Viet Nam (Bio-Forest Programme)	To create important prerequisites for the conservation and the sustainable use of biodiversity and ecosystem services of forests at the national level, contributing to the implementation of Viet Nam's GG plan	Provide advisory support for the drafting of legal documents, including for conservation-oriented financing mechanisms, protected area management, and sustainable forest management Assists the partner ministry in implementing the National capacity development plan for protected area management Advising the partner within the context of FLEGT negotiations, including the design of timber legality assurance systems	2015 - 2018	5,600,000	BMZ	MARD

14	Protection and Inclusive Management of Forest Ecosystems in Quang Nam, Kon Tum and Gia Lai provinces (KfW10)	To contribute to the maintenance of ecological integrity and biodiversity of natural forest ecosystems in the south-central region and Central Highlands	Protection and sustainable management of about 20.000 ha natural production forests in 03 provinces of Quang Nam, Kon Tum and Gia Lai contributing to the natural resources protection, biodiversity, stable and regular income assurances for 35 communes, 105 village communities through diversified forest products	2014 - 2020	15,053,338	BMZ	MARD
15	Project for Sustainable Natural Resource Management (SNRM)	To enhance the national capacity for sustainable natural resource management by focusing on forests, biodiversity, and the people who depend on these natural resources for their livelihoods	Development and implementation of key policies on natural resource management is promoted Sustainable forest management is promoted through the development and implementation of the Provincial REDD+ Action Plans in four provinces An integrated and collaborative ecosystem management system is established for sustainable conservation and management of the Lang Biang Biosphere Reserve	2015 - 2020	3,000,000	JICA	MARD, MONRE

Annex 10 Domestic and foreign grants for biodiversity in Viet Nam during 2011-2015

No.	Project title	Overall objective	Specific Objectives / Outcomes	Duration	Funding (USD)	Donor	Responsible agencies
1	Marine turtle conservation program: Support for community marine turtle nesting beach conservation and bycatch reduction in Viet Nam	Promote community-based conservation of marine turtles and their habitats,	Enhance awareness in communities about the value and importance of sea turtles by creating an opportunity for them to be involved in marine turtle research and conservation Provide training for volunteers to assist staff in marine turtle conservation areas Build capacity for marine turtle conservation programs at important sites	2006 – 2016	18,071,887	United States Fish and Wildlife Services, IUCN	DECAP, DOF, TRAFFIC Southeast Asia-Indochina, ENV, IMER, and DARDs
2	Integrated nature conservation and sustainable management of natural resources in Phong Nha-Ke Bang NP	The pressures on the natural resources of the Phong Nha-Ke Bang National Park have been reduced	Biodiversity monitoring Biodiversity-friendly livelihood models Transboundary cooperation Policy advices	2007 - 2016	23,655,000	BMZ	Quang Binh PPC, Phong Nha-Ke Bang NP
3	Indo-Burma Biodiversity Hotspot	Engage civil society, such as community groups, NGOs, academic institutions and private enterprises, in biodiversity conservation in the hotspots	Safeguard priority globally threatened species by mitigating major threats Develop innovative, locally led approaches to site-based conservation at 28 key biodiversity areas Engage key actors in reconciling biodiversity conservation and development objectives Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team	2008 - 2013	8,850,000	CEPF	Birdlife International
4	Conservation of biodiversity and sustainable use of natural resources on the islands and continental shelf of Bai Tu Long National Park		Sustainable management and use of natural resources within the boundaries of the park Develop a benefit sharing mechanism to reduce the impact of local communities on the park	2009 - 2011	49,151	VCF	Bai Tu Long National Park Management Board

5	Implementation of the Biodiversity Management System (BMS) for the Holcim Viet Nam Ltd Hon Chong cement plant	To develop and implement a Biodiversity Action Plan, which aims to address biodiversity risks and identify opportunities for biodiversity enhancement on Holcim's sensitive sites	Strengthen biodiversity conservation management within Holcim's sites and surrounding areas Explore, identify and develop joint local initiatives of mutual interest and benefits, particularly those supporting sustainable livelihoods and biodiversity conservation Promote good practice by sharing lessons learned with the wider industry and local conservation communities	2009 - 2015	1,000,000	Holcim Viet Nam Ltd (HVL)	Kien Giang PPC; Kien (DONRE); Kien Giang DOST; and Southern Institute of Ecology (SIE)
6	Project for Strengthening Community-based Management Capacity of Bidoup-Nui Ba National Park	Bidoup-Nui Ba National Park Management Board can manage natural resources of the national park with the target community groups in a collaborative manner	Implementation structure for the two components to be introduced by the project is established Basic principles/ rules in management of natural resources in the national park are agreed on by the target community groups and BNBPNMB. A trial run of CBET is carried out at the selected sites The EFLOs that can be accepted by the target community groups are developed and ready for dissemination among the communities	2010 - 2014	3,000,000	JICA	Lam Dong Provincial Peoples' Committee, Bidoup-Nui Ba National Park Management Board
7	Enhancing the resistance and resilience to climate change and environmental disaster of marine and biodiversity reserves in Viet Nam through environmental resources management and sustainable livelihood development for community	To improve the resistance and resilience to climate change and the environmental disaster of the Cat Ba Ecological Reserve, contributing to the strengthening of marine resources management and sustainable development	Assessment of vulnerability and impacts of climate change on ecosystems and livelihoods of coastal communities, ERA tool testing Effective coastal resource management Sustainable livelihoods development (model of mangrove co-management, ecological farming, community ecotourism) Communication and advocacy	2011 - 2013	195,099	Center for Marine Conservation and Community Development (MCD), Ecology System Department of Stockholm University	Cat Ba National Park Management Board
8	Cat Ba National Park Conversation Project	N/A	N/A	2011-2012	140,000	Allwetterzoo Munster Zoo, ZGAP	Cat Ba National Park

							Management Board
9	Developing community carbon pools for Reduced Emissions from Deforestation and Degradation (REDD) projects in selected ASEAN	To reduce deforestation and forest degradation through improved forest governance and the development of finance mechanisms	To strengthen active participation of local governments and local communities in REDD+ projects in Cambodia, Indonesia, the Philippines and Viet Nam	2011 - 2014	2,748,959	EC	NGO (various)
10	Building Capacity for Regionally Harmonized National Processes for Implementing CBD Provisions on Access to Genetic Resources and Sharing of Benefits	To assist South East Asian countries to implement ABS and to build capacity to negotiate the international ABS regime	Strengthen the capacity of South East Asian countries to implement the CBD provisions on ABS Increase understanding of ABS issues among stakeholders and the general public Improve public understanding of the contribution ABS can make to biodiversity conservation and sustainable livelihoods	2011 - 2014	1,926,653	UNEP, GEF	ASEAN Secretariat, ASEAN Centre for Biodiversity, United Nations University Institute of Advanced Studies
11	The Annamites Carbon sinks and Biodiversity project (CarBi)	Avoidance of deforestation and forest degradation in the border area of southern Laos and central Viet Nam for the long-term preservation of carbon sinks and biodiversity	Improving Protected Area (PA) management Natural forest restoration in the degraded forest corridors in Quang Nam and Thua Thien Hue provinces Reducing illegal logging and control of trans-boundary timber trade Trans-boundary REDD pilot	2011 - 2014	2,695,385	WWF Germany, International Climate Initiative, ICI, BMU	WWF Viet Nam
12	EU REDD Facility: Supporting developing countries to slow, halt and reverse deforestation	To reduce emissions from forest loss is improving land use governance and tackling the drivers of deforestation	Develop innovative ways to address the drivers of deforestation and degradation by improving weak land-use governance, inadequate law enforcement and lack of transparency Improve clarity over tenure, access rights and the legal frameworks Provide lessons on how to ensure agricultural commodities with little deforestation whilst	2011 - 2017	11,264,698	DCI-EC	European Forest Institute

			increasing food security and respecting the livelihoods of smallholder producers				
13	Addressing the illegal trade and consumption of rhino horn in Viet Nam	Implement public awareness campaigns that reinforce existing wildlife trade policies and contribute to the reduction of consumer demand for 67 globally threatened species and their products	<p>Increase understanding on illegal rhino trade dynamics in Viet Nam</p> <p>Strengthen the media as a tool support prevention and suppression of rhino horn crimes in Viet Nam</p> <p>Build pro-conservation support within the judiciary and procures by increasing engagement and understanding on illegal rhino horn trade, relevant laws and treaties</p> <p>Provide technical assistance and support to the CITES MA and other relevant national agencies on management of their rhino horn and elephant ivory stockpile</p>	2012 - 2013	19,916	CEPF	WCS Viet Nam
14	Biodiversity and Sustainable Livelihoods in developing countries	To enhance the knowledge of people and the related parties about the social values, economics of biodiversity, their interaction with ecological biodiversity	To develop, improve and implement methods to create favorable conditions for communications, to acquire information and the participations of the social groups, related parties and public to sustainable and diversity	2012-2014	412,000	EC	Planning and Design Institute of Agriculture
15	Improving capacity for conservation and sustainable use of biodiversity resources at Bai Tu Long National Park, Quang Ninh province	Improving capacity for conservation and sustainable use of biodiversity resources at Bai Tu Long NP, Quang Ninh province	<p>Enhancing capacity of management board and community in monitoring and protecting biodiversity values</p> <p>Contributing to the sustainable use of natural resources through a pilot program for sustainable use of marine resources and benefit sharing</p>	2013	58,596	VCF	Bai Tu Long National Park Management Board
16	Organized Forest Crime (ORGFORC) Combating Transnational organized forest crime	To establish a broad effort on combating organized crime involved in illegal logging	<p>Improved capacity and competence of ranger training institutes to continuously train rangers by establishing and training country embedded instructors to ensure a longer life span of competence building</p> <p>Countries will receive increased support both financially and through expertise and strengthen their domestic training, education and</p>	2013 - 2015	1,822,068	NORAD, UN Office for Drugs and Crime	GRID Arendal, UNODC and CITES Secretariat

			<p>enforcement programmes to combat natural resource crime</p> <p>Improved capacity of customs and enforcement agencies in country and cross-border to combat environmental crime</p>				
17	Strengthening Partnerships to Protect Globally Significant Endangered Species in Viet Nam	To reduce the threat caused by illegal poaching, trafficking and consumption to globally significant wildlife species	<p>Strengthening the legal and regulatory framework</p> <p>Enhancing national capacity to effectively implement and enforce wildlife laws</p> <p>Improving knowledge and changing behavior to reduce demand for wildlife consumption</p>	2015	3,000,000	GEF	WB Group
18	USAID Ha Long – Cat Ba Alliance	To build a partnership between government, business, and community leaders that catalyzes action to preserve and protect Ha Long Bay and the Cat Ba Archipelago	<p>Advocating for effective environmental management and sustaining the alliance by expanding business membership, diversifying the funding base, and policy dialogue</p> <p>Increasing public awareness of the importance of environmental protection in Ha Long and Cat Ba</p> <p>Improving biodiversity conservation efforts in Ha Long and Cat Ba by supporting the expansion of the World Heritage Site protected area to include the Cat Ba Archipelago</p>	2014 - 2019	618,000	USAID	IUCN

Annex 11 List of cities and provinces providing information on DONRE's biodiversity expenditure

No	Province	Area (km2)	Population (thousand ppl.)	Number of Protected Areas	Total area of Protected Areas (ha)	Forest land (ha)	Number of PAs managed by DONRE
1	An Giang	3,537	2,154	4	1,586	967	0
2	Bac Kan	4,859	313	3	25,582	24,258	0
3	Bac Lieu	2,469	874	2	748	168	0
4	Ben Tre	2,359	1,261	1	2,584	1,914	0
5	Binh Dinh	6,051	1,509	4	27,844	20,021	0
6	Binh Duong	2,694	1,803	1	1	1	0
7	Binh Phuoc	6,872	921	2	30,226	29,532	0
8	Dong Nai	5,907	2,773	3	93,804	82,779	0
9	Dong Thap	3,378	1,678	3	7,653	3,087	1
10	Ha Giang	7,915	775	6	49,524	46,465	0
11	Ha Noi	3,325	6,983	7	9,743	8,173	0
12	Ha Tinh	5,998	1,249	2	74,641	71,351	0
13	Hoa Binh	4,609	811	6	43,006	34,320	0
14	Khanh Hoa	5,218	1,188	0	0	0	0
15	Kon Tum	9,690	474	3	95,203	89,103	0
16	Lang Son	8,321	749	1	8,293	8,129	0
17	Nam Dinh	1,653	1,841	1	7,100	1,650	1
18	Ninh Binh	1,380	927	3	16,309	16,189	0
19	Phu Yen	5,061	882	2	19,160	16,018	0
20	Quang Binh	8,065	863	1	125,362	125,156	0
21	Soc Trang	3,312	1,305	0	0	0	0
22	Son La	14,174	1,150	5	59,246	47,352	0
23	Tay Ninh	4,035	1,097	5	29,191	24,530	0
24	Thai Nguyen	3,534	1,162	3	36,345	33,370	0
25	Vinh Long	1,512	1,038	0	0	0	0

Annex 12 List of cities and provinces providing information on DARD's biodiversity expenditure

No	Province	Area (km2)	Population (thousand ppl.)	Number of Protected Areas	Total area of Protected Areas (ha)	Forest land (ha)	Number of PAs managed by DARD
1	An Giang	3,537	2,154	4	1,586	967	0
2	Bac Giang	3,848	1,610	1	13,023	12,309	1
3	Bac Ninh	822.80	1,109	0	0	0	0
4	Binh Duong	2,694	1,803	1	1	1	0
5	Dak Nong	6,516	554	3	30,342	25,484	1
6	Hai Phong	1,526	1,924	1	15,332	8168.3	1
7	Hau Giang	1,602.40	766	1	791	599	0
8	Hoa Binh	4,609	811	6	43,006	34,320	0
9	Hung Yen	926	1,151	0	0	0	0
10	Lam Dong	9,774	1,246	2	83,498	74843	0
11	Nam Dinh	1,653	1,841	1	7,100	1,650	0
12	Ninh Binh	1,380	927	3	16,309	16,189	2
13	Quang Binh	8,065	863	1	125,362	125,156	0
14	Quang Nam	10,438	1,462	5	104,620	81,980	2
15	Quang Ninh	6,102.40	1,189	6	34,339	21,124	1
16	Quang Tri	4,740	612	5	69,669	58,778	2
17	Thanh Hoa	11,131	3,477	5	80,420	73,424	5
18	Tien Giang	2,509	1,705	0	0	0	1
19	TP HCM	2,096	7,821	2	69	65	0
20	Tra Vinh	2,341	1,024	0	0	0	0
21	Yen Bai	6,886	775	2	36,693	23,485	1

Annex 13 List of PA providing information on biodiversity expenditure

No	Protected Area	Classification	Province	Area (ha)	Forest land (ha)
1	KBT Cu Lao Tram	Marine Protected Area	Quang Nam	1,490	596
2	VQG Bai Tu Long	National Park	Quang Ninh	15,783	6,125
3	VQG Ben En	National Park	Thanh Hoa	12,033	11,402
4	VQG Bu Gia Map	National Park	Binh Phuoc	26,032	21,376
5	VQG Cat Ba	National Park	Hai Phong	15,200	10,932
6	VQG Con Dao	National Park	Ba Ria Vung Tau	15,043	6,043
7	VQG Cuc Phuong	National Park	Ninh Binh, Thanh Hoa, Hoa Binh	22,406	22,276
8	VQG Kon Ka Kinh	National Park	Gia Lai	41,780	28,000
9	VQG Phia Oc – Phia Den	National Park	Cao Bang	10,261	7,732
10	VQG Phong Nha Ke Bang	National Park	Quang Binh	123,326	115,310
11	VQG Pu Hoat	National Park	Nghe An	90,000	85,761
12	VQG Xuan Thuy	National Park	Nam Dinh	7,100	3,100
13	VQG Yen Tu	National Park	Quang Binh	2,783	2,726
14	KBT Bac Huong Hoa	Nature Reserve	Quang Tri	25,200	22,138
15	KBT Bat Dai Son	Nature Reserve	Ha Giang	10,684	10,369
16	KBT Dak Rong	Nature Reserve	Quang Tri	37,640	32,289
17	KBT Dong Son - Ky Thuong	Nature Reserve	Quang Ninh	15,637	15,590
18	KBT Hon Ba	Nature Reserve	Khanh Hoa	19,286	19,177
19	KBT Huu Lien	Nature Reserve	Lang Son	8,293	8,129
21	KBT Ngoc Linh	Nature Reserve	Kon Tum	38,109	37,397
22	KBT Pu Hu	Nature Reserve	Thanh Hoa	23,028	19,983
23	KBT Pu Luong	Nature Reserve	Thanh Hoa	16,902	16,722
24	KBT Song Thanh	Nature Reserve	Quang Nam	79,694	61,752
25	KBT Than Sa - Phuong Hoang	Nature Reserve	Thai Nguyen	18,859	17,834
26	KBT Thuong Tien	Nature Reserve	Hoa Binh	5,873	5,285
27	KBT Xuan Lien	Nature Reserve	Thanh Hoa	23,475	20,459
20	KBT Khau Ca	Species Protected Area	Ha Giang	2,010	1,800
28	KBT Nam Dong	Species Protected Area	Thanh Hoa	649	646
29	KBT Sao La	Species Protected Area	Quang Nam	16	16
30	KBT Vuon chim Bac Lieu	Species Protected Area	Bac Lieu	385	19

Annex 14 HSBC's projections for total GDP of Asia countries

Asian country	2010 - 2020	2020 - 2030	2030-2040	2040 - 2050
Azerbaijan	7.0%	5.7%	5.0%	4.1%
Bangladesh	5.5%	5.5%	5.6%	5.5%
China	6.7%	5.5%	4.4%	4.1%
India	5.7%	5.6%	5.5%	5.2%
Indonesia	4.3%	4.3%	4.3%	4.5%
Kazakhstan	6.1%	5.8%	4.9%	4.0%
South Korea	3.7%	2.3%	1.8%	1.7%
Malaysia	7.1%	5.7%	4.7%	3.8%
Pakistan	4.0%	4.5%	4.9%	5.0%
Philippines	8.4%	7.3%	6.6%	5.8%
Singapore	3.7%	2.1%	2.0%	2.1%
Sri Lanka	5.4%	5.3%	4.9%	4.3%
Thailand	4.0%	3.8%	3.8%	4.0%
Turkmenistan	7.7%	6.4%	5.6%	4.5%
Uzbekistan	8.2%	6.9%	6.1%	5.0%
Viet Nam	5.7%	5.3%	5.1%	4.8%
Asia Average	5.8%	5.1%	4.7%	4.3%