



Viet Nam

Biodiversity Finance Initiative (BIOFIN)

Mobilizing Resources for Biodiversity and Sustainable Development

BIODIVERSITY FINANCE POLICY AND INSTITUTIONAL REVIEW

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	ISPONRE	Institute of Strategy and Policy on Natural Resource and Environment/MONRE
AP	Action Plan	IUCN	International Union for the Conservation of Nature
ASEAN	Association of South-East Asian Nations	JICA	Japan International Cooperation Agency
BAP	Biodiversity Action Plan	LPA	Landscape Protected Area
BC	Business Community	MARD	Ministry of Agriculture and Rural Development
BCA	BD Conservation Agency / MONRE	MBR	Man and Biosphere
BCIS	Biodiversity Conservation Information System	MOD	Ministry of Defense of Viet Nam
BD	Biodiversity	MOET	Ministry of Education and Training of VN
BER	BD Expenditure Review	MOF	Ministry of Finance of Viet Nam
BFP	BD Finance Plan	MOH	Ministry of Health of Viet Nam
BIOFIN	BD Finance Initiative	MOIT	Ministry of Industry and Trade of VN
BMP	National BD Master Plan	MONRE	Ministry of Natural Resource and Environment of VN
CBD	Convention on Biological Diversity	MOST	Ministry of Science and Technology of VN
CBO	Community-Based Organization	MOT	Ministry of Transport
CDF	Community Development Fund	MPA	Marine Protected Area
CDM	Clean Development Mechanism	MPI	Ministry of Planning and Investment of VN
CER	Certified Emission Reduction	MPS	Ministry of Public Security of VN
CF	Community Fund	MRPDF	Marine Resources Protection and Development Fund
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	MSA	Market Surveillance Agency
CPD	Cartagena Protocol on Biosafety	N-BAP	National Biodiversity Action Plan
CPV	Communist Party of VN	N-BMP	National Biodiversity Master Plan
CP	Government of VN	NA	National Assembly of Viet Nam
CRES	Center for Natural Resource and Environmental Studies	NBS	National Biodiversity Strategy
DAC	Development Assistance Committee	NBSAP	National Biodiversity Strategy and Action Plan
DARD	Department of Agriculture and Rural Development / MARD	NC	Natural Capital
DFISH	Directorate of Fishery / MARD	NGO	Non-Governmental Organization
DPI	Department of Planning and Investment	NP	National Park
DOF	Department of Finance	NR	Nature Reserve
DONRE	Department of Natural Resource and Environment / MONRE	NRT	Natural Resources Tax
DNS	Debt-for-nature swaps	NSC	National Steering Committee
DPC	District People Committee	NSEP	National strategy on environment protection
DWRM	Department of Water Resource Management / MONRE	NSGG	National strategy on Green Growth
EIA	Environmental Impact Assessment	NTFP	Non-Timber Forest Product
EMIS	Environment Monitoring Indicator System	NTP	National Target Program
EPT	Environment Protection Tax	ODA	Official Development Assistance
ES	Ecosystem Services	OECD	Organization for Economic Cooperation and Development
FAO	Food and Agriculture Organization of the UN	OOF	Other Official Flows
FDI	Foreign Direct Investment	P-BAP	Provincial Biodiversity Action Plan
FFPD	Fund for Forest Protected and Development	P-BMP	Province Biodiversity Master Plan
FNA	Financial Needs Assessment	P-BS	Provincial Biodiversity Strategy
FPD	Forest Protection Department	P-EPF	Provincial Environment Protection Fund
FSC	Forest Stewardship Council	PA	Protected Area
GDP	Gross Domestic Product	PES	Payment for Environmental Services
GEF	Global Environment Facility	PIR	Policy and Institutional Review
GHG	Greenhouse Gas	PFES	Payment for Forest Service
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit / German Society for International Cooperation	PMU	Project Management Unit
GSO	General Statistic Office of VN	PPC	Province People's Committee
IFAD	International Fund for Agricultural Development	PPP	Public-Private Partnership
		QD	Decree of the authority in VN
		REDD	Reducing Emissions from Deforestation and Forest Degradation
		SBV	State Bank of Viet Nam

SCA	Species Conservation Area
SDGs	Sustainable Development Goals
SEAA	System of Economic Environment Accounts
SNA	System of National Accounts
SP-RCC	Support Program for Resilience in Climate Change
SUF	Special Use Forest
TEV	Total economic value
TF	Trust Fund
TFF	Trust Fund for Forests
TTg	Prime Minister of VN
UN	United Nations
UNDP	UN Development Program
USAID	United States Agency for International Development
US\$	Dollar currency of America
WB	World Bank
VACNE	Viet Nam Association for Conservation of Nature and Environment
VASI	VN Administration for Seas and Islands
VAST	VN Academy of Science and Technology
VAT	Value Added Tax
VCCI	VN Chamber of Commerce and Industry
VCG	VN Coast Guard
VCF	Viet Nam Conservation Fund
VEA	VN Environment Administration / MONRE
VEPF	Viet Nam Environment Protection Fund
VFDS	Viet Nam Forest Development Strategy
VMS	Viet Nam Marine Strategy
VN	Viet Nam
VND	Dong currency of VN
VNFARPD	Viet Nam Fund for Aquatic Resources Protection and Development
VNFF	VN Forest Protection and Development Fund
VNFOREST	VN Administration of Forestry / MARD
VPA	Viet Nam Pharmaceutical Association
VWU	Viet Nam Women's Union
WB	World Bank
WJC	Wildlife Justice Commission
WWF	World Wide Fund for Nature

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EXECUTIVE SUMMARY

The Biodiversity Finance Policy and Institutional Review (PIR) in Viet Nam (VN) has been conducted by independent consultant from May 2017 to February 2018. The PIR report focuses on analyzing the status and progress of the National Biodiversity Strategy (NBS) of Viet Nam, presented in 6 chapters including introduction and recommendations as well as references and annexes.

In recent decades, the status of biodiversity (BD) in Viet Nam is worsening against a high annual economic growth (6-8% on average), which has strong impact on dependency sectors like agriculture, fishery and forestry in which most people with low incomes earn their living. Recent studies on BD valuation show that investment in BD conservation is significantly less than its contribution to economic development in provinces and the country, in general. A supplementary study on the Biodiversity Expenditure Review provides more information in this regard.

To improve biodiversity conservation, in recent years the legal framework has been strengthened, including the National Constitution (2013), the Law on Biodiversity (2008), the Law on Environment Protection (2005), the Law on Forestry (2004, revised in 2017), the Law on Fishery (2003, revised in 2017), all supported by a variety of government policies and regulations providing guidance to the implementation of legislation on BD conservation. The VN NBS is the most important policy to accelerate BD conservation in VN.

The VN NBS was approved as a comprehensive national policy. Its overall target to 2020 *“That naturally important ecosystems, endangered, rare, and precious species, and genetic resources are preserved and used sustainably, contribute to the development of the green economy, and actively respond to climate change”* and vision to 2030 *“By 2030, 25% of degraded ecosystems of national and international significance will be restored; biodiversity shall be conserved and used sustainably, bringing major benefits to the citizenry and contributing significantly to the country’s socio-economic development”* are well aligned with all Aichi Targets. The strategy has defined specific targets:

- To improve the quality and increase the area of protected ecosystems, ensuring that the area of terrestrial protected areas (PAs) accounts for 9% of the total territorial area; marine protected areas account for 0.24% of the sea area, forest coverage reaches 45%, primary forest remains at 0.57 million hectares coupled with effective protection plans; mangrove forests, seagrass beds, and coral reefs are maintained at the current levels; 15% of degraded critical ecosystems are restored; the number of internationally recognized protected areas are increased to 10 Ramsar wetlands, 10 Biosphere Reserves, and 10 ASEAN Heritage Parks.
- To improve the quality and populations of endangered, rare and precious species, ensuring that no new case of species extinction is reported, and significantly improve the status of endangered, rare and threatened species.
- To compile an inventory, store and conserve native, endangered, rare and precious genetic resources (including animals, plants and microorganisms) to ensure that they are not impaired or eroded.

The vision, overall target and specific targets of the NBS are envisioned to be realized through the implementation of 5 major tasks and 7 priority programs. The institutional arrangement for implementation of the VN NBS focuses on the participation of all relevant government organizations, civil society organizations and the private sector. Sectoral institutions are requested by the government to integrate biodiversity in their sector development strategies. The preparation and implementation of the 7 priority programs of the VN NBS is assigned to 12 central government agencies, government authorities of

63 provinces as well as the PA management authorities. However, coordination between stakeholders for implementation of the VN NBS is weak, progress is slow due to the lack of (a) comprehensive Action Plan(s).

Following adoption of the VN NBS, the Master Plan on BD was approved in 2014, in which it was defined that by 2020 there are 219 PAs, including National Parks (NPs), Nature Reserves (NRs), etc., 38 biodiversity conservation facilities (wildlife rescue centers, botanic gardens), and 18 biodiversity corridors, to overall covering more than 2.94 million hectares in Viet Nam.

In recent decades, 53 BD financing solutions have been applied in Viet Nam, as classified following the BIOFIN Catalogue. They include solutions in government budget management and spending, Payment for Forest Environment Services (PFES), different Trust Funds (TFs) on environment protection, forest protection and fishery development, and others. This demonstrates the efforts of government to deal with BD conservation as part of the national development process. However, the efficiency of BD financing solutions is still a problem, as some solutions could not be replicated beyond the pilot phase, such as the Trust Fund for Forests (TFF) and the Community Fund, or have been poorly developed, like Biodiversity Offset and Lottery for Biodiversity. Also finance mechanisms are managed by different institutions, and effective implementation is hampered by the lack of a leading agency. As a result, the financing of BD conservation has a low efficiency.

The Government has committed to mobilize finance for BD conservation from different financial sources as determined in Law on Biodiversity, VN NBS and other sector development strategies. Financing for biodiversity is also guided by policies like the Law on State Budget and the Law on Public Investment, and overall depends on the availability of the Government's budget. The review shows that investment for BD as well as environment protection is not a priority in Government budget planning. While there is a budget line for financing biodiversity activities, there is no budget line for PAs in the government expenditure code system. As a result, government budget allocation to biodiversity is incorporated ("hidden") into the budget line for environment protection. It is good practice that government spending for environment protection is about 1 percent of its annual expenditure budget, although criteria to allocate budget for BD and the environment is not formally part of the budget distribution criteria. Also, there is no BD conservation investment project incorporated in the government investment program for 2016-2020. The actual government budget allocation to biodiversity depends on budget balance of the Ministry of Finance (MOF) and the Ministry of Planning and Investment (MPI) as the key institutions supporting the government in making budget allocation decisions. The Province People's Committees (PPCs) of 63 provinces also play a leading role in allocating government budget to BD in their provinces.

Trust Funds, including the Environment Protection Fund and the Forest Protection and Development Fund are public service entities. They have limited finance means to support BD conservation, as they have to reserve charter fund values and lack finance resources in general. They focus more on lending to investment projects and spending part of the profits to BD. The Community Development Fund for nature protection is small and has financial/institutional weaknesses. The PFES mechanism is potentially an important financing source for forest development including BD conservation, but lacks a comprehensive monitoring system. BD offset mechanisms proposed in Law on BD have not been set up.

Key recommendations include: (i) To improve institutional arrangement for BD conservation by revising government policies related to the Laws on BD, Forest, Fishery, Environment and others; (ii) to develop detailed data on government budget spending by sectors, including BD expenditure; (iii) to better integrate BD conservation in sector strategies and to encourage private/ NGO participation.

1 INTRODUCTION TO THE PIR

1.1 Background

The Biodiversity Finance Initiative (BIOFIN) is a UNDP-managed global partnership that supports 30 countries, including Viet Nam, to enhance their financial management for BD conservation in line with National Biodiversity Strategy and Action Plan (NBSAP) adopted.

The Policy and Institutional Review (PIR) is the first technical report of any country's BIOFIN project, followed by two other technical reports, including the BD Expenditure Review (BER) and the BD Financial Needs Assessment (FNA). A finance PIR is a widely used approach to assess the strengths and weaknesses of policies and institutions within a given sector.

The PIR establishes an understanding of the finance policy and institutional context of Viet Nam as the enabling framework in which the national BIOFIN process is working to improve BD finance in Viet Nam. The PIR helps strengthening the understanding of the current situation in the country on the economic and financial drivers of BD loss, as well as existing enabling targeted policies and plans. The PIR formulates recommendations and identifies entry points for mainstreaming BD in national development plans and budgets and for private sector engagement.

Viet Nam's National Biodiversity Strategy (VN NBS), adopted by the VN government in 2013, is the starting point for the PIR review under the BIOFIN approach. The VN NBS presents a vision, an overall target, specific targets, major tasks and seven priority programs/projects for implementation. However, no consolidated Action Plan (AP) was part of the VN NBS.

In Viet Nam, there are other government policies and sector development strategies that support meeting the objectives of the VN NBS, the linkages of which with the VN NBS will be discussed in this PIR report.

1.2 Objectives and Approach

The aim of the BD Finance PIR in VN is to analyze the country's fiscal, economic, legal, policy, and institutional framework as the baseline for initiating, improving, and scaling effective BD finance solutions. The PIR establishes a baseline context and orientation for the entire BIOFIN process.

To achieve this aim, the PIR has specific objectives:

- Describe how the management of BD and ecosystem services (ES) supports the national sustainable development goals (SDGs) and visions of VN.
- Assess economic and financial drivers of BD change in VN in the past (focusing on 2012-2017) and to 2020, vision to 2030.
- Catalogue existing BD finance mechanisms, incentives, subsidies and other instruments, including an assessment of sources of BD revenues in VN.
- Identify barriers to improved or expanded BD finance solutions including legal, policy, institutional, and operational aspects.
- Identify BD finance capacity development needs and opportunities.
- Develop specific policy recommendations to initiate, improve, and scale effective BD finance solutions in VN.

The Biodiversity Finance PIR is conducted following the guidance provided in the current BIOFIN Workbook (2016) in collaboration from different stakeholders including:

The UNDP Country Office in VN, having provided technical and financial assistance during preparation of the PIR, including providing documents on BD finance in VN and other countries, and organizing meetings with partners.

International BIOFIN Team Members, including BIOFIN teams from Thailand and Philippines, having provided guidance on the PIR review methodology and shared experience on PIR preparation from their countries, conducted training on PIR approach and process.

Leadership and staff from the Biodiversity Conservation Agency (BCA) of the Ministry for Natural Resources and Environment (MONRE), having supported organizing consultation meetings, provided documents on VN NBS progress as well as advised on data collection and PIR analysis.

Local experts and consultants from the Ministry for Agriculture and Rural Development (MARD), the Ministry of Science and Technology (MOST), the Ministry of Finance (MOF), the Ministry of Planning and Investment (MPI), the NPs in Xuan Thuy, Vinh Cuu, and Cat Ba, as well as other national experts (please see Annex 1 – the List of PIR Consultation Participants).

Frequent stakeholder consultations were conducted from the beginning of the PIR development process, for defining and agreeing on selected drivers and sectors that affect BD loss and gains in VN, against the formulated vision and targets of the VN NBS.

The data and information on BD financing used for the PIR were collected from different sources, including:

- Documents provided by the BIOFIN International Team. The BIOFIN Workbook (UNDP, 2016) provides a description of the PIR preparation steps and PIR report outline. A technical training for the VN BIOFIN Team was provided by the Regional Senior Technical Advisor, on report structure and global experience, while regular online meetings were held with the global team and other country teams to exchange progress and learning methodology.
- Information on relevant policies were collected from the portals of the VN government and line ministries like MONRE, MOF, MPI, MARD, General Statistics Office (GSO). The policy approval bodies and data sources have been noted accordingly. For example, www.chinhphu.vn; www.monre.gov.vn; www.mard.gov.vn;
- Data and information collected from stakeholders during consultation meetings and workshops organized by the VN BIOFIN project (Annex 1: The List of PIR Consultation Participants) have been considered during the formulation and revision of the PIR.

The structure of PIR report follows guidance provided in the BIOFIN Workbook (2016).

2 BIODIVERSITY VISION, STRATEGIES, AND TRENDS

At the highest level, the need for BD conservation in VN has been defined in the National Constitution (approved by the National Assembly on 21 November 2013). The National Constitution of VN determines that the government has a policy for, and encourages, environment protection and BD conservation, and BD off-set approaches are imposed on all parties that cause negative impact on BD (article 63). Finance policy and institutions of VN's economy as well as BD conservation operate under three conditional frameworks noted in the VN National Constitution, including:

- Natural resources, including land, water, and minerals, are public assets managed by the government (article 53). Private land ownership is not recognized.
- The government budget and other public finances are open and transparent to the public (article 55).
- The national policy making process is based on the decisions of the National Assembly, including Laws and specific Decrees, e.g. the national budget plan, guidance on national annual budget allocation, etc. The government issues Decrees to elaborate the implementation of laws, including the approval of sectoral development strategies, national target programs, establishment of National Parks, etc. Different ministries issue Decrees or circulars in support of government policy implementation. People's Councils (local elected bodies) of 63 provinces approve provincial budget plans, and Province People's Committees (PPCs) issue provincial Decrees to elaborate government policy implementation in the provinces. In terms of financing, the National Assembly, MPI and MOF are in charge of adopting policies on fees, charges and tax collection, national budget planning and budget allocation to ministries and provinces.
- All BD conservation entities including PAs (NPs, NRs, etc.), BD conservation facilities (botanic gardens, wildlife rescue centers) and other facilities are public service institutions, established by government and receive government budget allocation.

2.1 Visions and strategies from the VN NBS

The VN NBS to 2020 and vision to 2030 has been approved by the VN government in July 2013 as Decree 1250/QD-TTg. This official document is the comprehensive national policy on BD conservation, including a vision, an overall target, detailed targets, major tasks and priority programs, in support of the ongoing government policies in implementing the Law on BD approved by National Assembly in 2008.

The VN NBS comprises 4 parts covering issues on (i) viewpoints; (ii) vision; (iii) overall target; (iv) specific targets; (v) major tasks; (vi) priority programs; and (vii) institutional implementation arrangement.

The viewpoints of the VN NBS describe the overall insights of government commitment on BD conservation and linkages with the country's socio-economic development, specifically:

- Biodiversity is a fundamental element of the green economy; BD conservation is one of the key measures to adapt to and mitigate the impacts of climate change.
- Conservation and sustainable use of BD contributes to poverty reduction and improved living conditions of the citizenry.
- BD conservation shall be the responsibility of the whole society, of state authorities, agencies, and every organization and individual.
- Socialization and international cooperation is enhanced to promote conservation and sustainable development of BD.

- BD conservation must be integrated into national, sector and provincial development strategies, plans and policies.

The **Vision** of VN NBS highlights that “by 2030, 25% of degraded ecosystems of national and international significance will be restored; BD shall be conserved and used sustainably, bringing major benefits to the citizenry and contributing significantly to the country’s socio-economic development”.

The **overall target** of the VN NBS to 2020 states that “by 2020, the naturally important ecosystems, endangered, rare, and precious species, and genetic resources are preserved and used sustainably, contribute to the development of the green economy, and actively respond to climate change”.

Three **specific targets** have been formulated with quantified targets, as follows:

- To improve the quality and increase the area of protected ecosystems, ensuring that:
 - the area of terrestrial PAs accounts for 9% of the total territorial area; marine PAs account for 0.24% of the sea area, forest coverage reaches 45%, primary forest remains at 0.57 million hectares coupled with effective protection plans.
 - mangrove forests, sea grass beds, and coral reefs are maintained at the current levels.
 - 15% of degraded critical ecosystems are restored.
 - the numbers of internationally recognized PAs are increased to 10 Ramsar wetlands, 10 biosphere reserves, and 10 ASEAN heritage parks.
- To improve the quality and populations of endangered, rare and precious species, ensuring that no new case of species extinction is reported, and significantly improve the status of endangered, rare and threatened species.
- To compile an inventory, store and conserve native, endangered, rare and precious genetic resources (including animals, plants and microorganisms) to ensure that they are not impaired or eroded.

The VN NBS also lists a number of **major tasks**, each providing a descriptive content of activities needed for implementation towards reaching the specific targets and overall target in fulfillment of the long-term vision to 2030. The five major tasks focus on:

- (i) conservation of natural ecosystems, including (a) the consolidation and completion of natural PAs and (b) the conservation of ecosystems of national and international importance.
- (ii) conservation of wildlife and endangered, rare and precious species, specifically (a) preventing the decline of threatened wildlife species, particularly endangered, rare and precious species prioritized for protection, (b) conservation of native plant varieties, livestock and wild relatives of precious and rare species, and (c) develop and enhance the effectiveness of BD conservation units.
- (iii) sustainable use, fair, equitable access and share of benefits derived from ecosystems and BD, specifically (a) the sustainable use of ecosystems, (b) the sustainable use of species and genetic resources, and (c) establishing a mechanism for managing access to genetic resources, sharing benefits, protection and traditional knowledge of genetic resources.
- (iv) control activities that have negative impacts on BD, specifically (a) control activities considered unsustainable or causing environmental pollution such as conversion of land and water surface area use and agricultural practices, (b) control illegal hunting, trade and consumption of wild fauna and flora, and (c) control, halt and prevent damage of invasive alien species, enhance biosafety management of genetically modified organisms.
- (v) BD conservation in the context of climate change, specifically (a) identification of climate change impacts on BD and promote BD conservation as means to actively respond to climate change, (b)

the development of biological corridors to increase connectivity among forest ecosystems and critical BD areas to adapt with climate change, and (c) the implementation of forest regeneration program using methods and approaches such as BD conservation, carbon stock, adapt and mitigate to climate change.

The VN NBS also includes the list of **7 priority programs**, plans and projects to be conducted by 4 focal agencies including MONRE, MARD, the Ministry of Public Security (MPS) and MOST, in collaboration with different national agencies and provincial authorities. Progress towards implementing these 7 priority programs, plans and projects is presented in Table 1.

Table 1 Progress in conducting 7 priority programs, plans and projects listed in the VN NBS¹

	Name of priority project	Focal agency	Planned submission	Progress to 2017
1	Plan on strengthening the institutional systems for BD management	MONRE	2015	Not yet approved by government
2	Plan on investigation, inventory and development of a national BD database	MONRE	2016	Not yet approved by government
3	Program on control of illegal exploitation, trade and consumption of endangered wildlife	MARD	2014	Not yet approved by government
4	Plan on strengthening management capacity for system of natural protected areas	MARD	2014	In 10 May 2017, the government, approved Decree 626/QĐ-TTg, the Plan on strengthening management capacity for system of natural PAs to 2025 and Vision 2030. The Plan defines 3 tasks/solutions: (i) develop policy on PA management capacity improvement; (ii) capacity building & training; and (iii) IT applications. There is no Action Plan and Budget estimation attached.
5	Program on the conservation and sustainable use of genetic resources	MOST	2015	On 28 September 2015, the government approved Decree 1671/QĐ-TTg, the Program on the conservation and sustainable use of genetic resources to 2025 and vision 2030. The program determines 3 main actions: (i) collect/preserve genetic resources; (ii) investment in preservation facilities; and (iii) develop national genetic database; while also 10 priority tasks to realize this program were formulated.
6	Plan to strengthen biodiversity crime prevention	MPS	2014	Not yet approved by government
7	Plan on restoration of degraded critical ecosystems	MARD	2015	Not yet approved by government

Source: VN Environment Agency (VEA) Report No. 93/BC-TCMT dated 30 December 2016, and author compilation.

¹ As attached to the Decision 1250/QĐ-TTg dated 31 July 2013 of the Prime Minister of the Government, being the Decision on approval of the National Biodiversity Strategy to 2020, vision to 2030.

For the successful implementation of the major tasks of the VN NBS, a number of **solutions** for strengthening the enabling environment have been formulated, specifically

- (i) Change in behavior and awareness of state management organizations and communities towards BD conservation and sustainable use.
- (ii) Improve the legislative and institutional system and strengthen the capacity of law enforcement for the implementation of legal acts on BD.
- (iii) Strengthen integration of BD conservation in policy development.
- (iv) Promote scientific research, development and the application of modern technology in conservation and sustainable use of BD.
- (v) Increase of financial resources for BD conservation
- (vi) Promote integration and international cooperation in conservation and sustainable use of BD.

The detailed comparison between the VN NBS and the 20 Aichi targets is presented in Annex 2 - Matrix of Aichi Targets and VN NBS alignment. Annex 2 shows that the VN NBS is aligned well with the Aichi targets, although national priorities differ slightly. For example, Aichi Target 11 states that “By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes”. Meanwhile, article 2.4 of the VN NBS articulates a similar intent, as follows “To improve the quality and increase the area of protected ecosystems, ensuring that the area of terrestrial PA accounts for 9% of the total territorial area; marine PAs account for 0.24% of the sea area, forest coverage reaches 45%, primary forest remains at 0.57 million hectares coupled with effective protection plans; mangrove forests, sea grass beds, and coral reefs are maintained at the current levels”.

The VN NBS also includes a description of the institutional arrangements for its implementation. There is no exclusion; all government institutions, business community and mass organizations, including NGOs and CBOs are encouraged to participate in the VN NBS implementation process. MONRE is responsible for assisting the Prime Minister to chair, coordinate and implement the NBS, and MONRE also plays the leading role in the BIOFIN process in Viet Nam. These institutional arrangements secure the integration of the VN NBS into the international BIOFIN process.

Milestones in the implementation of VN NBS from 2013 - 2017 are as follows:

- Establishment of the National Steering Committee (NSC) on VN NBS, by MONRE Decree 1302/ QD-BTNMT, dated 02/07/2014.
- Establishment of the Task Force to support VN NBS NSC, with BCA being appointed to coordinate VN NBS activities.
- In 2015, a manual on VN NBS Implementation at the province level was prepared by BCA/MONRE. This Manual provides guidelines for provinces in developing/updating/revising their Provincial Biodiversity Action Plans (P-BAPs). To 2017, 43 of 63 provinces in VN have developed a P-BAP, and 13 of 63 provinces have approved a Province Biodiversity Master Plan (P-BMP); however, P-BAPs have not defined financial budget for their implementation in provinces.
- The Program on Improving Awareness on Prevention and Control Invasive Alien Species in VN in 2015-2020 has been approved for implementation as MONRE Decision 200/QD-BTNMT, dated 29 January 2015, to support implementation of the VN NBS in fighting with invasive alien species.

- MONRE and MOF have issued the Guideline on using government current expenditure for VN NBS, as Decision 160/2014 dated 29 October 2014 between MONRE-MOF; this policy has provided in detail the procedures and cost norms for BD conservation activities. Accordingly, BD current expenditure is included in the annual budget plan of related ministries and provinces.
- Implementation of the VN NBS is guided by 7 priority programs for which the lead and collaborating institutions have been identified (Annex 3: Priority Program/plans/projects in VN NBS). Progress towards implementing these 7 priority programs has shown that only two have been approved by the government, of which one has met the established submission date. The formulation of the 5 other priority programs lags years behind the deadline.

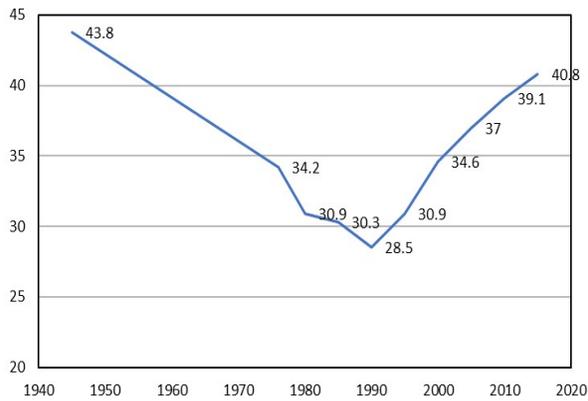
2.2 Biodiversity Trends in Viet Nam

As described in National BD Reports (2005, 2011, and 2014) as well as in the National report on the status of the environment (2015), between 1975 and 2016 *“BD in our country is severely degraded. Ecological systems are affected and over-exploited; the area of forests, especially natural forests, is narrowed in an alarming way. The extinction rate of some species is increasing day by day”*. The BD trends refer to 3 main habitats: forests, inland water bodies and wetlands, as well as coastal and marine areas. Main proximate causes for the loss of BD – flora and fauna species as well as ecosystems and habitat - include (i) deforestation, fragmentation and land use change, from the expansion of commercial agriculture, urbanization and infrastructure development, extensive forest logging, aquaculture pond farming, etc.; (ii) ecosystem degradation from overexploitation, from subsistence non-timber forest product collection, poaching and wildlife trade, overfishing; and (iii) pollution. The root causes of BD degradation and loss include economic development without considerations for BD and related ES; population growth; ineffective and insufficient institutional and legal framework, including lack of coordination, governance, and enforcement; lack of knowledge, understanding and appreciation, for BD and beneficial ES provided, among development sectors and communities.

Forests: Between 1945 and 1990, from 43.8% to 28.5%, and then increased again to 40.8% (14,061,900 ha) in 2015, due to forest planting and natural regeneration (Figure 1). Currently, VN’s forest cover is 10,175,500 ha (72%) of naturally generated forests and 3,886,300 ha of planted forests (28%) (Viet Nam Statistics Handbook, 2016). Primary forests are estimated to cover only 83,000 ha (1%), down from 384,000 ha in 1990 (FAO, 2015. Global forest resources assessment – Viet Nam Country Report). The Government is currently aiming to increase VN’s forest cover to 44% of the country’s total land area by 2020 (NA, Decision .142/2016/QH13, 12/04/2016).

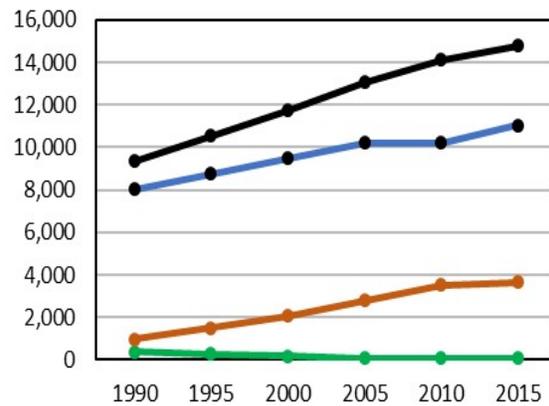
Meanwhile, within the category of naturally regenerating forests, the area of rich natural forests - with high biomass and BD - reduced from 12 million hectares in 1945 to 2.8 million hectares in 2015 (GSO, Forest Strategy 2006-2020, 5th National Report on BD). Currently, rich natural forests comprise about 20% of the area under forest, while 80% is poor, natural regenerated forests and plantation forests. The decreasing quality of forests leads to diminution of habitat quality for wildlife, BD loss, and loss of ES of importance to economic development, including for agricultural production, eco-tourism and industries.

Figure 1 Change of forest cover as percentage of land area between 1945 and 2015



Source: GSO

Figure 2 Development of area forests between 1975-2015, projections to 2030 (x 1,000 ha)



Legend: Green line – primary forests (part of “rich forest”); blue line – other naturally generating forests; - brown line – planted forest; Black line – total forest area. Source: FAO, 2016.

Inland water ecosystems: Especially in the downstream sections of major rivers, inland water ecosystems are increasingly polluted, in load, concentrations and toxicity, by wastes from industrial production, households, as well as by chemical fertilizer and pesticides resulting from overuse in agriculture and aquaculture. Increasingly, also extensive sand mining from rivers leads to river streambed degradation and landslides along the river banks, causing land erosion that imperils hundreds of hectares of agricultural land and human settlements. Water pollution causes higher cost for developing aquaculture, for clean water supply, for health protection. Water pollution also impacts on populations of many high-economic value aquatic species, with typical species such as Anh Vu fish (*Semilabeo notabilis*), Lang fish (*Hemibagrus*), Chien fish (*Bagarius bagarius*), lobster, abalone, and scallop all in serious decline.

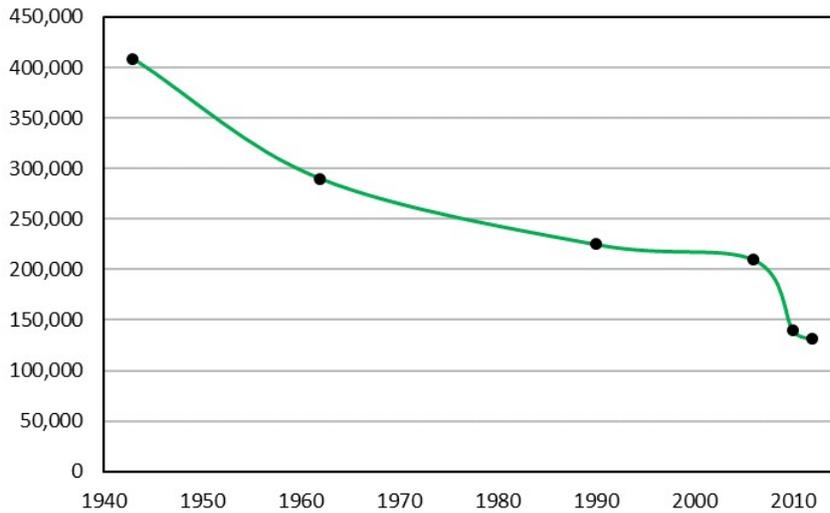
Marine and coastal ecosystems: In recent decades, marine and coastal ecosystems also increasingly face overexploitation of its natural resources, affected by overfishing, urbanization, tourism, and fast-paced growth and intensification of aquaculture production. In recent decades, extensive areas of natural ecosystems and habitats, including inter-tidal coastal lands, coral reefs, sea grass beds etc., declined both in areal extent as well as quality, pointing towards “coastal desertification” and the loss of marine biodiversity, notably the reduction of the number of species observed, some species reported to have become locally extinct. Rapid economic development has led to the widespread transformation of lowland freshwater wetlands into paddy rice field.

Seagrass: The area of seagrass habitat is reported to be declining due to natural disasters, reclamation for aquaculture ponds and coastal infrastructure development. Statistics indicate that the coverage of seagrass across VN has decreased between 40-70% (MONRE, 2014). For example, by 2009, the area of seagrass at Cua Dai beach (Quang Nam province) decreased by nearly 70%; in the south of Da Chong (Dong Nai province) seagrass cover decreased from 45-60% to below 19% (2009) and in Ham Ninh (Quang Binh province) seagrass decreased from 30% (2004) to 15% (2009). In general, by 2010 on average seagrass across VN is estimated to cover only half of the area it covered only 5 years ago (MONRE, 2014).

Mangroves: Mangrove forests have almost vanished in many provinces. Use of the coastal environment for the development of industry, agriculture and urbanization, and related pollution, caused an extensive loss of coastal and marine natural resources, with strong negative impact on fishermen, tourism and seafood production. According to the 2012 statistics, 56% of the total area of mangroves in Viet Nam is considered

as “planted mangroves” with a very low diversity of species, and areas of natural mangrove forests have almost completely disappeared. Mangrove degradation is clearly shown through the rapid decline in both the area and quality of forests. In 1943, the country had more than 408,500 ha of mangroves. By 1990, the area of mangroves was reduced to about 255,000 ha, further declining to 209,741² ha in 2006, and to 140,000 ha in 2010. By the end of 2012 only 131,520 ha of forests remained³. Figure 3 presents the change in area of mangroves in Viet Nam 1943-2012.

Figure 3 Change in the cover of natural mangrove forests in Viet Nam between 1943 and 2012



Species trends: The area of natural habitats available for wildlife has continued to decline due to change in land-use. In terrestrial areas the natural forests ecosystems house a great number of wildlife species, and these forests make a vital contribution to Viet Nam’s high biodiversity. If the current rate of deforestation continues to meet the current needs and practices through changing land-use patterns, the area of suitable habitat for wildlife will continue to shrink. Incidents of wild elephants destroying houses, crops and the serious reports of killing local residents in South-eastern Viet Nam and the Central Highlands are viewed as a response to the growing conflicts due to the loss of elephant habitat. Most other large wildlife species, such as tigers, are today only found in and around NPs and NRs. It is estimated that Viet Nam currently may have only 30 tigers left in the wild.

The 2007 Viet Nam Red List identifies 882 species (418 animals; 464 plants) as threatened and endangered. This represented an increase of 161 species considered as threatened compared to the first assessment between 1992-1996 - the first edition of the Viet Nam Red List. The increase pressures on endangered, rare and precious species is also demonstrated with the 10 species having been reclassified from the status of “Endangered – EN” to “Extinct in the wild-EW” between the first and second assessment (MONRE, 2014). The status of aquatic species, particularly those species with an economic value, is also rapidly declining. In particular the population numbers of rare and precious freshwater fish with high economic value, and migratory species have decreased.

² MONRE, Viet Nam Environment Protection Agency (2006). Overview report on Viet Nam’s mangroves.

³ Statistics are collected from annual reports on forest status and change of FPD.

Table 2 The number of threatened species in biological taxa according the 2007 Red List of Viet Nam

Taxon	EX	EW	CR	EN	VU	LR	DD
Flora	1		37	178	210	4	
Magnoliophyta							
- Dicots			29	96	147		
- Monocots	1		4	69	34	3	
Pinophyta			4	4	18	1	
Pteridophyta				1	1		
Lycophyta					1		
Rhodophyta				5	2		
Phaeophyta					4		
Mycophyta				3	3		
Fauna	4	5	48	113	189	17	30
Mammalia	4	1	12	30	30	5	8
Bird			11	17	25	11	9
Reptile-Amphibian		1	11	22	19		
Fish		3	4	28	51		3
Invertebrate			10	16	64	1	10

Note: EX: Extinct; EW: Extinct in the wild; CR: Critically endangered; EN: Endangered; VU: Vulnerable; LR: Lower risk; DD: Data Deficient. Source: Viet Nam's fifth national report to the UN Convention on BD, MONRE, 2014

Into next decade, 2020-2030, this trend of reducing biodiversity in Viet Nam cannot be reversed without stronger efforts from government and society, especially in enforcement of BD policies as well as financing.

2.3 Biodiversity Valuation

BD is recognized to be an important factor in economic and social development in VN. However, there is no national-wide study on BD and ES valuation, although there are many studies that focused on aspect of BD and ES valuation (forest, water provision), in specific regions or provinces in VN, like the provinces Bac Giang, Phu Tho, Yen Bai, Thanh Hoa, Quang Binh, Thua Thien Hue. Binh Dinh, Gia Lai, Dong Nai, or specific sites, like the NPs Cat Ba, Bidoup-Nui Ba, Xuan Thuy. A non-exhaustive list of studies includes:

- In VN's National report to the Convention on BD (CBD) on the status of the environment between 2011-2015 (MONRE, 2015), BD valuation estimated that about 80% of marine fishing occurs in near-shore areas, providing 40% of protein resources for the population. High-BD sites receive an increasing number of tourism visitors and bring economic benefit, while 70% of tourism incremental targets high-BD beaches.
- The economy of VN relies considerably upon natural resources, and BD plays an important economic role (MONRE, 2014). Despite having no specific and significant recognition, BD makes a valuable contribution to the national economy, especially in agriculture, forestry, fisheries and human health.
- In a study on ES Valuation for Cat Tien NP (GIZ, 2013), it is estimated that economic value of BD and ES in Cat Tien NP is US\$ 51.57 million, including US\$ 2.36 million of non-timber products, US\$ 0.42 million of timber and firewood, US\$ 25.34 million of water resources, US\$ 8.30 million of carbon storage, US\$ 14.38 million of seed dissemination, US\$ 0.77 million of recreation/education. The value-added and incremental costs for protection of the NP is assessed as high as US\$ 107 million for the next 25 years. The study is valuable reference for the policy making process on balancing between NP financing and its ES provision.

- Natural resource valuation in Xuan Thuy NP (VCF/MARD, 2012) provides evidence to MARD and local authorities for piloting a new financing mechanism for BD conservation with participation of the local community. The valuation is based on field surveys and focused on selected resources, including medicine herbs, sea products (fish, shell), consumed by the local community. Natural resource valuation is estimated as high as US\$ 20 million per year. The study provided information to MARD, local authorities and the NP authorities on how to mobilize local participation and share benefit from sustainable use natural resources in Xuan Thuy NP.
- Four studies on ES valuation and payment mechanisms in NPs of Bai Tu Long, Cat Ba, Bidoup-Nui Ba and Xuan Thuy (MONRE, 2013) have outlined ES that the local society benefited from and estimated their economic values. Results show that fishing in Bai Tu Long NP, eco-tourism in Cat Ba NP, water provision in Bidoup-Nui Ba NP and shell-fish in Xuan Thuy NP are significant sources of income for the local societies, but these and other sources of income from forests and BD face high risks from construction and industry development.
- The UNEP-ProEcoserv project finished in 2015. The project conducted an intensive evaluation of mangrove values in Ca Mau province of VN, home to most of VN's mangrove forests, playing a vital role in maintaining the health of ecosystems, and providing ES to 1.53 million people. It estimated that in the Ca Mau province, 45,523 hectares of mangroves generate ES worth up to US\$ 1,560 - 2,985 per hectare, per year; of this, up to US\$ 1,720 comes from carbon sequestration.
- Valuation of the marine ES of Bach Long Vi island, Con Co island and Tho Chu island, three of the most ecologically important islands of VN, characterized by typical and unique marine and coastal ecosystems including mangroves, coral reefs, seagrasses, etc. estimated their Total Economic Value (TEV) to vary between VND 94 million and VND 307 million (US\$ 4,200 and US\$ 13,6505) per hectare per year, of which the direct use value accounts for 62.1 to 65.8 per cent, the in-direct use value for 34.5 to 37.1 per cent; and the non-use value for 0.08 to 1 per cent (Tran Dinh Lan et al., 2015)

Both the VN NBS and 5th National Report to the CBD emphasize the direct benefits of biodiversity to humans, contributing substantially to VN's national economy, especially in sectors such as agriculture, forestry and fisheries; ensuring the food security for the country; maintaining genetic resources for farming animals and crops; providing construction materials, pharmaceutical materials and food. In addition, ecosystems play an important role in climate regulation and environmental protection.

In recent years, agriculture (including forestry and fishery) contributed significantly to the Gross Domestic Product (GDP), percent-wise reducing from 20% in 2010 to 17% in 2015, but in export value increasing from US\$ 19 billion in 2010 to US\$ 32 billion in 2016. Some 20 million people in VN depend on fisheries for most or part of their income, exploiting over 300 marine species and over 50 freshwater aquatic species of economic value. About 80% of fishery products are harvested from coastal seas and meet nearly 40% of the protein demand of VN's people. Fisheries provide the main source of income for about 8 million people and contribute partly to the income for another 12 million people. Approximately 25 million people live in or near forests, and derive 20-50% of their income from non-timber forest products, including hundreds of species of medicinal plants and latex plants.

In addition to direct economic benefits, BD supports a wide range of critically important ES, including the climate regulation through carbon storage, the filtering of air and water, the decomposition of waste, and the mitigation of harmful effects of natural disasters such as landslides, floods and typhoons. Mangrove forests along the coast act as "green shields", reducing sea wave strength by 20 to 70% and helping to ensure the safety of sea dikes; in doing so, it has been estimated that mangroves save billions of VND annually on dike maintenance and repair, while supporting the formation of new land areas in the estuaries

of the deltas of the Red River and Mekong River. Research indicates that the value of carbon sequestration and storage in natural forests is on average VND 35-90 million per ha per year (BCA/VEA/MONRE, 2013).

Biodiversity and beautiful terrestrial, coastal and island landscapes also underpin much of VN's rapidly expanding tourism industry. Eco-tourism is becoming popular in PAs, which promotes discovery and education on protection of nature, and brings benefits to local people providing the service. About 70% of VN's rapid tourism growth is occurring in the coastal areas and these areas contain natural ecosystems with high BD. Between 2010 and 2016, domestic tourists increased from 28 million persons to 62 million persons, and foreign tourists increase from 5 to 10 million persons. Tourists spending increased from VND 96,000 billion to VND 400,000 billion (US\$ 3, 849 – 16,000 million). It is estimated that BD-rich sites including NPs, PAs and landscape received 40% - 60% tourists and have collected 20% of their spending.

The findings of valuation studies were used as reference in policy making processes at the national and provincial levels, including documents of the Communist Party of VN (CPV), National Assembly (NA) Laws, government decrees and ministerial decisions.

2.4 Biodiversity in Sustainable Development.

This section will describe considerations given to BD in the broader sustainable development agenda of VN.

2.4.1 Biodiversity in National Development Policy

During the last decade, the issue of BD conservation is being addressed with increasing frequency and in greater detail in various national development policies of VN.

In the “**Assessment of social-economic development in 2011-2015 and development orientation for 2016-2020**” (2016), the CPV mentioned the critical diminution of area and reduction in quality of many natural ecological systems, especially forests, wetlands and oceans. The CPV called for promoting a green economy, integrating economic development with environment protection and BD conservation, and increasing forest coverage to 42% of the land area by 2020. The CPV has requested the government to stop logging in natural forests, to mobilize Official Development Assistance (ODA) for forest protection and development (Document 13-CT/TW, dated 12 January 2017) as well as to apply the “polluter pays” and “user pays” principles in environment protection and natural resource conservation (Solution 02-KL/TW dated 26 April 2016, on Review of 10 years implementing Document 41-NQ/TW on environment protection in national industrialization stage).

The evaluation of the **5-year Social-Economic Development Plan 2016-2020** (NA Document No.142/2016/QH13, dated 12 April 2016), the NA defined that before 2015 there were limitations in climate change resilience, natural resource management and environment protection. For the period 2016-2020, the NA proposes to improve climate change resilience, natural resource management and environment protection. By 2020, the policies and institutions on forest protection, natural and BD conservation should be strengthened, and forests are targeted to cover 44% of the land area.

In the **2017 annual development plan**, the NA rejected all investment projects that do not meet environmental safety standards and potentially can result in environment pollution (NA document No.23/2016/QH14, dated 7 November 2016); and the government requests line ministries - especially MONRE, MARD, MOIT, MOF, MPI and provincial authorities - to take measures for environment protection and BD conservation, including the close monitoring of Environment Impact Assessment (EIA) procedures for investment projects, and halting logging in natural forests (Decree 01/NQ-CP, dated 1 January 2017).

In the **Sustainable Development Strategy of Viet Nam** (Agenda 21) issued by the government as Decree 153/2004/QĐ-TTg, dated 17 August 2004, for the first time the Payment for Environmental Services (PES) approach was highlighted based on the “Environment Polluters/Natural Resource Users Pay” principle.

The **National Strategy on Green Growth** for 2011-2020 and vision 2050 (NSGG) (Decree 1393/QĐ-TTg, dated 25 September 2012) promotes environment-friendly investment projects, proposes to issue economic and financial policies on developing “natural capital”, and encourages the participatory investment in environmental services in PA to recover degraded ecosystems. Implementation of this strategy is assigned to MPI for following its progress, MPI and MOF to estimate and arrange financing for its implementation, e.g. from regulating taxes on environment protection, natural resource uses and company income. But the cost estimate for implementation of the Strategy is not available.

The **Law on Fee and Charges** (NA Decree 97/2015/QH13, dated 25 November 2015) includes the list of fees and charges applied for all public service entities. There are some fees relating to BD conservation including fees on marine resource protection, entry fees on natural beauty landscape PAs and DB conservation facilities, environment protection fees on wastewater, air and mining, fees on approval of EIA, fees for approval of environment restoration scheme. MOF is assigned to determine the fee rates for central agencies, while PPCs are in charge to approve fee rates for local agencies. The Law also allows to move 11 fees to service prices, including an environmental protection fee on solid waste to a service price on solid waste treatment. While fee and charge rates are fixed administratively by the NA, MOF and PPCs, service prices are determined by service agencies based on market principles. This makes service entities more flexible in generating revenues. All PAs have to apply an entry fee, but some are allowed to charge prices for providing tourism services (guiding, camping for example).

The **2015 State Budget Law**, approved by NA (Decree 83/2015/QH13) is in force since 1 January 2017, replacing the 2002 State Budget Law. The 2015 State budget law clarifies the government budget expenditure lines in more detail, and allows public service entities, including PAs and BD conservation facilities to use their generated service revenue, along with government budget allocation, to cover operational costs, including bonus payments to staff (Article 32.5). But environment protection, natural resource and BD conservation are not priority items for government budget spending (Article 8.5. Principle on Government Budget Expenditure).

The State budget comprises the central budget (Ministries and other central agencies such as the NA) and the local budget (63 provinces and their districts and communes). Among the 6 government budget expenditure lines, the “development investment” and “recurrent expenditure” are the most important lines for BD conservation agencies receiving government budget allocations. Other government expenditure lines include “national reserve”, “debt payment”, “ODA” and others. Government spending for environment protection is specified within the expenditure lines “development investment” and “recurrent expenditure” both in the central and local budgets along with other expenditure lines. However, the 2015 state budget law has requested all institutions to specify in their budget plan only spending data for two items of “Education” and “Science” (Article 19.4.b and 30.1.c); Therefore, as government budget spending for environment protection is not specified in the budget plan at different levels (central, ministerial, provincial), it could be adjusted by Ministries and local authority (PPCs) during actual budget allocation process, when reasons of budget deficit demand so. Monitoring missions conducted by an elected body (NA, People’s Council) on budget allocation to implement the law and policy on BD should ensure that any executive body (Ministries and PCs) will arrange sufficient budget for BD.

Government budget allocation to BD is elaborated in other government policies that support the implementation of the 2015 State budget law.

The **State Budget Code System** has been modified in 2016 by the MOF (Decision 324/2016/TT-BTC), coding state budget expenditure by institutions and by fields/activities. In total 989 agencies at the central and local levels have received a government budget code, but there is designated code for most BD conservation related agencies, despite there being 219 PAs (NPs, NRs, etc.) and 38 BD conservation facilities (wildlife rescue centers, botanic gardens) occupying about 2.3 million hectares of land and forest and formally listed in the National Biodiversity Master Plan (BMP) to 2020, with vision to 2030 (Decree 45/QĐ-TTĐ of Prime Minister, dated 8 January 2014). By fields and activities, natural resources and BD conservation activities has been specified with code 271, placed within state budget code 250 on spending for environment protection. BD conservation also can be masked in other budget codes, like agriculture (281), forestry (282), fishery (284), and National Target Programs (NTPs) on environment protection and sustainable natural resource use study (0218), sustainable development of fishery (0610), or forestry (0620). Designating a budget line for natural resources and BD conservation in the state budget code system will help government institutions to consider targeted budget allocation as part of their budgeting process from 2018 onward.

The **Policy on Financial Management of Public Service Entities**, including all PAs and BD conservation facilities (Decree 141/2016/ND-CP, dated 10 October 2016) indicates that along with government budget allocated, the government allows entities to manage expenditure of revenues generated from providing services, according to the following regulations of operational costing (article 15):

- Of collected revenues, 15% enters the development fund in support of capacity building in the entity.
- Collected revenues will be used to provide additional income to staff, conditioned that the additional income shall not exceed twice the government salary that staff members receive.
- Collected revenues shall be used to set up a Bonus and Welfare Fund for staff; this Fund shall not exceed in volume the Staff Salary Fund allocation for 2 months to the entity by the government.

This Policy provides PAs and BD conservation facilities with the opportunity to mobilize more financial sources in support of increasing the income of its staff members.

The 2015 State Budget Law, the State Budget Code System, and the Policy on Financial Management of Public Service Entities are newly approved policies, which was further elaborated during 2017, to become available for operational implementation only in 2018.

2.4.2 Biodiversity Considerations in Sector Development

Most development sectors have their own sector-specific National Development Strategies to 2020 or 2030, formally approved by the government, and in many Strategies there is mentioning of the integration of BD conservation into their tasks. Strategies typically include a formal statement on the allocation of a budget to ensure their implementation, however, they do not specific a monetized value of the financial resources needed that could inform budget planning.

2.4.2.1 Environment protection sector

- The **Law on Environment Protection** was issued by the NA as Decree 55/2015/QĐ13, dated 23 June 2014, indicating that BD conservation is part of the environment protection policy, and that there is one government budget line for environment protection purpose (Article 5). In the Law, the government commits to (i) allocate finance resources for covering investment and recurrent expenditures in environment protection including BD conservation (Article 147); (ii) use all generated

environment protection fees for environment protection purpose (Article 148); and (iii) supporting to set up the VN Environment Protection Fund (VEPF).

- The **National Strategy on Environment Protection (NSEP)** to 2020 and vision 2030 (Decree 1216/QĐ-TTg, dated 5 September 2012) focuses on controlling and reducing environment pollution and BD loss, and promoting the Green Economy. The NSEP outlines the Environment Monitoring Indicator System (EMIS) including 18 indicators on Natural Resources and Biodiversity Loss for the period 2010-2020, forest cover increase from 40% to 45% of the land area, the area of PAs increasing from 2.5 million hectares to 3 million hectares, the number of precious and rare species threatened with extinction (currently 47) not increasing. The NSEP has likewise quantified BD conservation targets that were subsequently integrated into the VN NBS, i.e., approved one year later in 2013. However, the NSEP does not include a cost estimate for its implementation.
- The **Plan for Implementation of National Strategy on Environmental Protection** by 2020, with a vision to 2030 (Decree 166/QĐ-TTg, dated 21 January 2014) requests MONRE to follow, and MPI and MOF to arrange, financial sources for implementation of the NSEP.
- The **VN Environment Protection Fund** was established in 2014 by government Decree 78/2014/QĐ-TTg. It is the government's financial institution and managed by MONRE. The VEPF receives its capital from the state budget, sponsor contributions, commissions from domestic and international organizations and individuals to support the financing of environment protection activities in VN. Between 2015 and 2017, the government allocated VND 1,000 billion (US\$ 42 million) to VEPF as the charter capital. The government also committed to additionally provide an annual budget to VEPF. Other financial income sources include environment protection fees, environment compensation payments, Certified Emission Reduction (CERs) selling fee and others. The VEPF provides supports to three themes, including (i) environment pollution; (ii) environment education and (iii) waste management. Support to BD has not been specified in VEPF's mandate.
- The **Policy on Administrative Fines on Environment Protection Violations** (Decree 155/2016/NĐ-CP, dated 18 November 2017) is in force from February 2017. The policy covers also BD conservation violations (Article 1), and includes a list of environment protection violations to be fined, with fine rates attached. The maximum administrative fine for each violation case is VND 1 billion (US\$ 40,000) for individuals and VND 2 billion (US\$ 80,000) for organizations (article 4).

2.4.2.2. Biodiversity Sector.

The government of VN adopted a number of policies on BD conservation that support implementation of the VN NBS., including:

- The **Law on Biodiversity**, approved by the NA in 2008 (Decree 20/2008/QH12, dated 13 November 2008) and in force since July 2009, is the most important legal document for BD conservation financing in VN, as:
 - All PAs and BD conservation facilities are public service entities (Article 28), as such they receive government budget for their operations.
 - Financing for BD conservation includes government budget allocation, PES and private sources; the government commits to provide financing for investment and recurrent expenditures for BD (Article 5, Article 73).

Box 1 Government Committed Spending to Biodiversity

<p>Government allocates development investment funds from the state budget for BD conservation and sustainable development, to be used for the following purposes:</p> <ul style="list-style-type: none"> • Basic BD survey. • Natural ecosystem restoration. • Conservation of species on the list of endangered precious and rare species prioritized for protection Critically Endangered List. • Infrastructure for BD conservation. • Programs for invasive alien species management. • Other BD-related investment. 	<p>The government allocates recurrent financing from the state budget for BD conservation and sustainable development, to be used for the following purposes:</p> <ul style="list-style-type: none"> • BD monitoring. • Reports on the status of BD, PAs; Appraisal Master Planning on BD conservation areas • Preparation and appraisal of the List of Critically Endangered Species. • Management of PAs and BD conservation facilities. • Development and piloting of BD conservation models. • BD education. • Capacity building on BD conservation. • International cooperation on BD.
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Source: Law on Biodiversity (2008), Article 73.2

- The **National Biodiversity Action Plan** to 2010 and vision to 2020 (**N-BAP**) to implement the CBD and the Cartagena Protocol on Biosafety (CPB) (Decree 79/2007/QĐ-TTg, dated 31 May 2007). The N-BAP provides overall guidance for BD conservation and development integration. Following the N-BAP, provinces develop their provincial BD Action Plan (P-BAP). Any P-BAP is updated or revised after adoption of the VN NBS (2013) and BMP (2014), such as is the case for the P-BAP of Hai Phong province (Decree 3069/QĐ-UBND, dated 31 December 2014). Implementation of the N-BAP is assigned to MONRE while P-BAPs are assigned for implementation to MONRE's provincial representative, Department of Natural Resources and Environment (DONRE). Financing for any BAP is proposed to be provided by MPI/MOF at the central level and by their provincial representative agencies DPI/DOF at the provincial level. However, typically a BAP does not contain any financial needs estimation.
- **Approval Program on the Conservation and Sustainable Use of Genetic Resources** to 2025 and vision 2030 (Decree 1671/QĐ-TTg, dated 28 September 2015). The government confirms that genetic resource conservation will support BD conservation, allocates investment financing to develop the infrastructure of genetic conservation facilities, and ensures budget allocations for recurrent costs to implement priority tasks formulated in this program.
- **Emergency Action Plan on Primates Conservation** in VN to 2025 and Vision 2030 (Decree 628/QĐ-TTg, dated 10 May 2017) outlines measures and tasks to rescue and conserve primates in VN. Institutionally, MARD is assigned responsibility for monitoring progress, while MONRE will integrate this strategy into the VN NBS plan, while the role of MPI/MOF is to allocate financial resources.
- The **Strategy for Management of Systems of Special-Use Forests, Marine Reserves and Inland Water Protected Areas through 2020, with a Vision towards 2030** (Decision No. 218/2014/QĐ-TTg, dated 2 July 2014). This Strategy was developed based on the VN NBS, however, it has includes more detailed objectives for terrestrial and marine ecosystems. A comparison of the objectives of this Strategy and the VN NBS is presented in the following Table:

Table 3 Comparison of objectives of 2 main BD-related strategies to 2020

National BD strategy to 2020, orientation to 2030	Strategy on management of SUFs, MPAs and Inland Water Protected Areas to 2020, vision to 2030
To improve the quality and increase the area of protected ecosystems, ensuring that the area of terrestrial PAs accounts for 9% of the total territorial area; MPAs account for 0.24% of the sea area, forest coverage reaches 45%, primary forest remains at 0.57 million hectares coupled with effective protection plans; mangrove forests, seagrass beds, and coral reefs are maintained at the current levels; 15% of degraded critical ecosystems are restored; the number of internationally recognized PAs are increased to 10 Ramsar wetlands, 10 Biosphere Reserves, and 10 ASEAN heritage parks.	The area of terrestrial PAs accounts for 9% of the total territorial area; MPAs account for 0.24% of the sea area
To improve the quality and populations of endangered, rare and precious species, ensuring that no new case of species extinction is reported, and significantly improve the status of endangered, rare and threatened species;	Control of populations of endangered, rare and precious species, ensuring that no new case of species extinction is reported, and significantly improve the status of endangered, rare and threatened species;
To compile an inventory, store and conserve native, endangered, rare and precious genetic resources (including animals, plants and microorganisms) to ensure that they are not impaired or eroded.	Effectively implement international commitments on nature and BD conservation via implementation of projects, activities in this field.

2.4.2.3. Biodiversity in the Agricultural Sector.

- **Strategy on Agriculture and Rural Development for 2011-2020** (document 3310/BNN-KH, dated 20 December 2009, MARD) emphasizes production growth and food security, whilst recognizing increasing environment pollution, biodiversity loss, extensive use of chemical fertilizers and pesticides as attendant issues. The document suggests different solutions on promoting agricultural/forestry/fishery development. It also proposes activities which have positive impacts on BD conservation such as reducing near-shore fishing, increasing forest plantation and protection, and pesticide controlling. MARD is responsible for implementation of the Strategy and works with MPI/MOF to increase budget allocations for this strategy 2-5 times every 5 years.
- **Master Plan on Agricultural Production Development to 2020 and vision to 2030** (Decree 124/QĐ-TTg, dated 2 February 2012) targets sustainable development of agricultural production in conjunction with ecological and environmental protection. The government has requested MARD, MPI and MOF to allocate financial resources for implementation of the Master Plan.
- **Promoting Organic Agriculture** (draft government policy, 2017) envisions helping to improve agricultural product quality to meet market demand on healthy food, reduce chemical application in agriculture and increase environmental protection effectiveness.

2.4.2.3. Biodiversity in the Forestry Sector

- The **Forest Development Strategy in 2006-2020** (Decree 18/2007/QĐ-TTg, dated 5 February 2007) aims for the sustainable development of 16.2 million hectares of forests, including 8.4 million

hectares of production forests, 5.7 million hectares of protection forests and 2.2 million hectares of PAs; the national forest coverage is envisioned to increase to 42-43% in 2010 and to 47% by 2020. It is the only strategy that includes a costed budget, estimated for 2006-2010 at VND 33,885 billion (US\$ 1,355 million), 11% of which is allocated for forest protection and BD. It is envisioned that the government budget will cover 23.9% of the costs, while 15.6% will be allocated from government credit, 13% from ODA, 11% from private investment, and 24% from Foreign Direct Investment (FDI). However, the budget for the period 2011-2020 was not costed and financial data on actual expenditures is not available. To support the implementation of the Strategy, the government has issued other policies on forest development, as below.

- The **National Target Program on Sustainable Forest Development in 2016-2020** (Decree 886/QĐ-TTg, dated 16 June 2017) targets achieving a forest coverage up to 42% of national land area by 2020. This NTP could be the modification of the Forest Development Strategy in 2006-2020 for 2016-2020. In alignment with the VN NBS, the NTP targets to restore 15% of degraded critical ecosystems and to significantly improve the status of endangered, rare and threatened species. The estimated costs for implementation of the NTP are projected as VND 39,600 billion (US\$ 2,483 million), 24.5% of which is covered by the government budget, the remaining to be provided from other financial sources, including ODA and private investment. The government encourages financial resource diversification for this NTP and agrees to apply Public-Private Partnership (PPP) mechanisms to mobilize more private investment.
- **Investment policy on Special Use Forest (SUF) development for the period 2011-2020** (Decree 24/2012/QĐ-TTg, dated 01 June 2012). Most SUFs include natural forest areas with high BD value, for which the management is assigned to a public PA authority (NP, NR) to manage. In this Decree, the government commits to allocate a secure budget to SUFs to cover investment and recurrent expenditures, to allocate an additional VND 100,000 (US\$ 4) per hectare per year for the SUF authority to sign forest protection contracts with local communities, and to provide VND 40 million (US\$ 1,600) per year to each SUF buffer zone village to participate in protecting SUF landscapes. The SUF authority also is allowed to generate revenue from leasing SUF environmental services to different public and private entities. The detailed implementation of the Policy is guided by the **Inter-Ministerial Circular** between MARD and MOF (No.100/2013/TTLT-BTC-BNNPTNT, dated 26 July 2013) guiding the implementation of Decree 24/2012/QĐ-TTg.
- The **Approval Plan on Strengthening Management Capacity for the System of natural Protected Areas** to 2025 and Vision 2030 (Decree 626/QĐ-TTg, 10 May 2017) is one of the 7 Target Programs supporting the implementation of the VN NBS. The government has agreed to provide financial resources to improve the management capacity of staff, to provide equipment/software programs for natural resources and BD monitoring in all PAs in the country. The total estimated budget for this plan is VND 123 billion (US\$ 4.92 million), of which VND 53 billion is allocated from the State funding source and VND 70 billion is mobilized from projects and international organizations. MARD shall take lead, MPI and MOF shall arrange financial resources for the implementation of the plan.
- On 15 November 2017, the National Assembly approved the new **Law on Forest Protection and Development** (document 16/2017/QH14) to replace the 2014 Law. The new Law will become in force on 1 January 2019. The Law targets improving forest quality and its environment services, contributing to social-economic development and BD conservation, in line with international commitments. The government has committed to allocate financial resources for investment in SUFs and protection forest (article 94). The Fund for Forest Protection and Development (FFPD) will

continue to operate as public non-profit financial organization under MARD. While the government will not allocate budget for FFPD, it encourages financial source mobilization, PFES. It is expected that all forest policies issued before this Law approval remain in force with modification.

2.4.2.4. Biodiversity in the Marine and Fishery sector

- The **Law on Fishery**, approved by the NA in late 2017 (NA, 18/2017/QH14, dated 21 November 2017) will be in force from 1 January 2019, replacing the 2003 Law on Fishery. The new Law focuses more on sustainable marine resource exploitation in relation with BD conservation and the implementation of international commitments on fishery, promoting community participation in marine resource management, developing marine conservation areas, marine resource protection areas. Financing for fishery protection and development comprises 4 sources: government budget, Marine Resources Protection and Development Fund (MRPDF), Community Fund (CF) and others. Related government policies issued before this Law will remain in force and will be modified after the new Law comes into in force.
- The **Viet Nam Marine Strategy to 2020** (Decree 09-NQ/TW, dated 9 February 2007, CPV) outlines the main orientation on VN's sustainable marine environment protection and resources exploitation to 2020. Approved by the CPV, this marine strategy does not include a costed budget, but provides guidelines for other government policies on marine environment and BD conservation.
- **National strategy for Sustainable Exploitation and Utilization of Marine Natural Resources and Environment Protection** until 2020 and vision 2030 (Decree 1570/QD-TTg, dated 6 September 2013). The main objectives are to reduce rapid deterioration of marine resource and marine pollution, to improve the productivity of the marine natural ecological system for BD conservation. The government has committed to increase its current budget expenditure as well as to encourage ODA and private investment for marine environmental protection. MONRE has been assigned to guide implementation of this strategy, and MPI with MOF are requested to meet financial needs. A consolidated costed budget is not available.
- The **Action Plan on Integrated Coastal Zone Management to 2020 and Vision 2030** (Decree 914/QD-TTg, dated 27 May 2016) focuses on promoting sustainable natural resource management, BD conservation and livelihood improvement. MONRE is assigned as the focal agency to coordinate and guide implementation progress. Costs for coordination are included in MONRE's annual budget. MPI and MOF are responsibility to allocate financial resources for this strategy.
- The **Fishery Development Strategy to 2020** (Decree 1690/QD-TTg, dated 16 September 2010) determines that fishery development in VN shall focus on improving the livelihood of fishermen, in close coordination with environmental protection, the development of marine and wetland PAs. MPI and MOF have been requested to allocate financial resources for its implementation, however a costed budget was not prepared.

2.4.2.5. Biodiversity in other Sectors

- **Tourism**. In 2017, the NA has issued the **Law on Tourism** (NA, 09/2017/QH14, dated 19 June 2017) to promote tourism, including eco-tourism, in the country. This law is in force since 1 January 2018, replacing the 2005 Law on Tourism. This law aims to protect natural landscapes and promote environmental protection in tourism development (article 20, Principles in Tourism planning). The government will provide priority investment for tourism planning, tourism promotion and tourism infrastructure development, and will support eco-tourism development (article 5). However, this law

does not address issues of developing tourism in PAs, nor PES as mentioned in other policies. The development of tourism in conjunction with NPs and NRs has been addressing in **Master Planning on Tourism Development to 2020 and vision 2030** (Decree 201/QĐ-TTg, dated 22 January 2013). In Decree 104/2007/QĐ-BNN (MARD, dated 27 December 2007) on the **Management of Eco-tourism Activities in NPs, NRs** it is indicated that NPs, NRs can raise revenues from organizing eco-tourism services (service price), from entry fees, and from forest environmental license to different investors. Government Decree 99/2010/ND-CP, dated 24 September 2010 and Decree 147/2016/ND-CP, dated 2 November 2016 on **Payment for Forest Environmental Service** indicate that tourism agencies shall pay between 1% and 2% of their annual revenue as forest environmental service fee.

- The **National Industry Development Strategy to 2025 and vision 2035** (Decree 879/QĐ-TTg, dated 9 June 2014) emphasizes the development of industries that are reliant on natural resources, i.e. water. There is a poor linkage to environment protection, and BD conservation has not been addressed. The policy target is to sustain the annual growth rate of 11% - 13% in industry sectors focusing on metal, chemicals, food processing and leather/shoes. The policy defines that “industry development is based on green growth, sustainable development and environmental protection” and “the growth of Greenhouse Gas (GHG) Emissions is 4-4.5% per year”. However, the determined measures have not been outlined in detail.
- The **Strategy on Transportation Development to 2020 and vision 2030** (Decree 355/QĐ-TTg, dated 25 February 2013) aims to expand the transportation network in VN. It is expected that the construction of roads and bridges will involve large areas of land and forest, the habitat of wildlife, but there is no mentioning of initiatives to address BD conservation in this Strategy.
- Development strategies in the **construction sector** relating to urban development, construction material production, etc. have not incorporated BD considerations into construction planning.
- The **National Target Program (NTP) on Sustainable Poverty Reduction** in 2016-2020 (Decree 1722/QĐ-TTg, dated 2 September 2016) focuses on providing more assistance to poor households and poor communities. There is no mentioning of linkages between poverty reduction, environmental protection and BD conservation.
- The **National Strategy on Health** to 2020 and vision 2030 (Decree 122/QĐ-TTg, dated 10 January 2013) sets several targets on health service improvement, including the development of herbal medicines. The **Master Plan on Herbal Medicine Development** to 2020 and vision 2030 approved in 2013 (Decree 1976/QĐ-TTg, dated 30 October 2013) outlines in detail the objectives, activities, as well as 12 priority investment projects for implementation. The master program has well-established linkages with the Priority Program on the Conservation and Sustainable Use of Genetic Resources mentioned in the VN NBS.
- The **National Strategy on Education** for 2011-2020 (Decree 711/QĐ-TTg, dated 13 June 2012) does not address improving the knowledge on environmental protection and BD conservation. However, education on natural resources and BD conservation is included in education programs at different education levels, from primary to university, including Hanoi National University, Ho Chi Minh city National University, Thai Nguyen University, Vinh University, Hue University, Tay Nguyen University, Agriculture and Forestry University in Ho Chi Minh City, Forestry University.

2.4.3 Biodiversity in Protected Area System

The land, marine and wetland regions with high biodiversity value in VN have been designed for PA establishment by the government. The government has approved 4 PA systems, in which 3 systems are sector-approach systems that focus more on forest protection and fishery protection, and one is the nation-wide BD conservation approach system that targets BD conservation and covers 3 sector-approach systems.

2.4.3.1. Protected areas in forest protection

To implement the Law on Forest Protection and Development (2004), the government has approved **the Master plan on the National Special-Use Forest system to 2020 and vision to 2030** (Decree 1976/QĐ-TTg, dated 30 October 2014). In VN, forests are classified into three groups:

- (i) SUF is the natural forest area with high BD value from forest plant protection aspect. The SUF is designed for natural forest ecology conservation purpose. PAs including NPs, NRs, species conservation areas, landscape protection areas and science research forest have been established as SUFs to meet forest conservation purposes.
- (ii) Protection forest is forest land designed for natural disaster mitigation purposes. It includes watershed protection forest, mangrove forest and erosion/wind protection forest. This forest land is under the management of the Forest Protection Management Board and local authorities.
- (iii) Production forest is for commercial plantation purposes, and given to private farmers and forest companies to make business.

The Master Plan on the National Special-Use Forest system to 2020 and vision to 2030 has determined a PA system in the forest sector that focuses more on the forest protection approach. The target of the policy is to increase the SUF area from 2.2 million hectares in 2014 to 2.4 million hectares in 2020, to include 34 NPs, 58 NRs, 14 species conservation areas, 61 natural landscape PAs and 9 science research forests. The government committed to conservation and assigned MPI/MOF to arrange financial sources for the implementation of the Master Plan, while MARD is responsible to implement the Master Plan with respect to the national SUF system to 2020 and vision to 2030, and MONRE is responsible to integrate this SUF system into the Master Plan for Biodiversity Conservation.

2.4.3.2. Protected areas in fishery protection

To implement the Law on Fishery, the government has approved two PA systems that focus on fishery protection, including:

- **Master Plan on Marine Protected Areas** to 2020 (Decree 742/QĐ-TTg, dated 26 May 2010) targets to establish 16 MPAs that cover at least 0.24 percent of VN's marine area. Total investment needs are estimated as high as VND 460 billion (US\$ 18.4 million) from different sources, including 65% from the central government budget and 19% from local authorities. MARD is responsible to implement this Master Plan.
- **Master Plan on Inland Water Protected Area System** to 2020 (Decree 1479/QĐ-TTg, dated 13 October 2008) targets to protect 40 species of fish, shrimp and shellfish in 61 inland water PAs including 16 national inland water PAs and 45 provincial inland water PAs. The estimated total investment for establishing these inland water PAs between 2008 and 2020 is VND 85 billion (3.4 million US\$), mobilized from different sources. The government has committed to invest in 45 inland water PAs at national and inter-provincial levels. MARD is in charge to implement this policy.

2.4.3.3. Integration of sectoral Protected Areas into the VN NBS

To improve nature protection in the country, the government has proposed MONRE to integrate sector PAs into VN NBS. In its decision on the **Strategy for Management of Special-Use Forest, Marine Protected areas and Inland Water Protected Areas in Viet Nam until 2020 and vision to 2030** (Decree 218/QĐ-TTg, dated 7 February 2014), the government has requested MONRE to coordinate with MARD and other ministries to secure the implementation of the Master Plans on SUFs, MPAs and Inland water PAs is synchronized with the VN NBS.

To realize the Law on BD and create a comprehensive nation-wide PA system that focuses on BD conservation, the **National Master Plan on Biodiversity Conservation (BMP) to 2020 and vision to 2030** has been approved by government in 2014 (Decree 45/QĐ-TTg, dated 08 January 2014). The BMP targets not only the completion of the planning of the system of sector-PAs but also the upgrading of the system of BD conservation facilities and establishing BD corridors. The specific objectives of BMP are:

- Completing the planning of a system of PAs in the forestry and fishery sectors.
- Developing and upgrading the system of conservation facilities, including botanical gardens, national medicinal plant gardens, animal rescue centers.
- Establishing BD corridors to connect habitats and enhance the capacity to respond to climate change of the ecosystems and species.

Based on biodiversity conservation approach, MONRE (Decision 1107/2015/QĐ-BTNMT, dated 12 May 2015) has approved the list of current PA system. Until 2017, 166 of 176 NPs and PAs have been established, covering 2.1 million hectares or 6.36% of the national land area; 10 of 16 marine PAs have been set up, covering 111,211 hectares or 0.11% of the national marine water area (<http://vea.gov.vn/>). However, there are some aspects to be noted when comparing Decision 1107 with Decree 45 as:

- Decree 45 addresses the whole PA system, Animal Rescue Centers, Medicinal Plant Gardens, Gene banks and BD corridors, while Decision 1107 addresses only the PA system.
- There is no different between Decree 45 and Decision 1107 in term of number of PAs, their name and location.
- The PA system in Decree 45 classifies the country in 8 regions, while in Decision 1107 the country is considered as a whole, classifying only 4 PA types as NP, NR, SCA and LPA.
- Decree 45 views development of the PA system to 2020 with vision to 2030, including adjustment of the land cover in some PAs up to 2020 and 2030, while Decision 1107 is based on the current land cover of the PA system. Therefore there are little differences in area coverage for some PAs.
- Decree 45 targets completing the PA system to 2020 and 2030, while Decision 1107 provides the list of current PAs as recipient sites for focused BD conservation.

Comparing the PA system defined following the BD conservation approach to the ones established according to the forest and fishery protection approach shows that:

- In term of PA classification, the PA system defined by the biodiversity approach (Decree 45/QĐ-TTg, dated 08 January 2014) covers the PAs determined by the forest protection approach (Decree 1976/QĐ-TTg, dated 30 October 2014) and by the fishery protection approach (Decree 742/QĐ-TTg, dated 26 May 2010, Decree 1479/QĐ-TTg, dated 13 October 2008), but also extended to more BD facilities including Animal Rescue Centers, Medicinal plant gardens, Gene banks and BD corridors.
- In terms of the name and location of PAs, there is no difference in the name and location of PAs between these 4 PA systems.

- The number of PAs in the BD conservation approach in each category is a little different comparing to that by the forest and fishery protection approach. The number of NPs listed by the BD conservation approach is less than in the forest protection approach, as some small NPs are moved to the category of NRs. This difference is illustrated in table 4.
- The Law on Forest Protection and Development and the Law on Fishery have been revised and approved by the NA in 2017 and will be in force from 2019. It is expected that from 2019, the implementation of these two laws will ensure that the PA systems for forest protection and fishery protection will be fully integrated into the nation-wide BD conservation PA system.
- The PA system is a public service institution, established by the government and receiving government budget allocation, including for investment and recurrent expenditure as part of the annual budget planning.
- To reduce the burden on the government budget, the government has classified entities in the public service sector (including PAs, education, health, environment protection) into three groups (Decree 16/2015/NĐ-CP, dated 14 February 2015) according to the following guidance: (i) a public service entity that can generate revenue in balance of its budget will not receive government recurrent and investment budget support; (ii) a public service entity that can balance its recurrent budget but still receives government investment budget support; and (iii) a public service entity that has no or little generated revenue sources and government covers all recurrent spending and investment costs. There is no national report or study on this classification among the PA system. It is estimated that most PAs are entities in group (iii) for which the government covers all their recurrent spending.

Table 4 Number of PAs by designated under different PA Systemic Approaches.

Protected Area Classification	Forest Protection Approach	Fishery Protection Approach	BD Conservation Approach	
	# of PAs	# of PAs	# of PAs	Note
National Park (NP)	34		31	3 small NPs are reclassified as NRs
Nature Reserve (NR)	58		67	3 NPs and 6 LPAs are reclassified to NRs
Species Conservation Areas (SCA)	14		19	Increase 5 SCAs
Landscape PAs (LPAs)	61		45	5 LPA reclassified to NRs 11 small LPAs removed
Marine PAs (MPAs)		16	13	3 MPAs (Cat Ba, Nui Chua, Hon Cau) are integrated with NPs and NRs
Inland water PAs		61	44	17 small provincial inland water PAs were removed
Science research forest/ Botanic Garden	9		11	2 additional botanic gardens are envisioned
Animal rescue center			18	
Medicinal plant garden, Gene bank			9	
BD corridor			21	

- Sources: Decree 1976/QĐ-TTg, dated 30 October 2014, Decree 742/QĐ-TTg, dated 26 May 2010, Decree 1479/QĐ-TTg, dated 13 October 2008, Decree 45/QĐ-TTg, dated 08 January 2014.

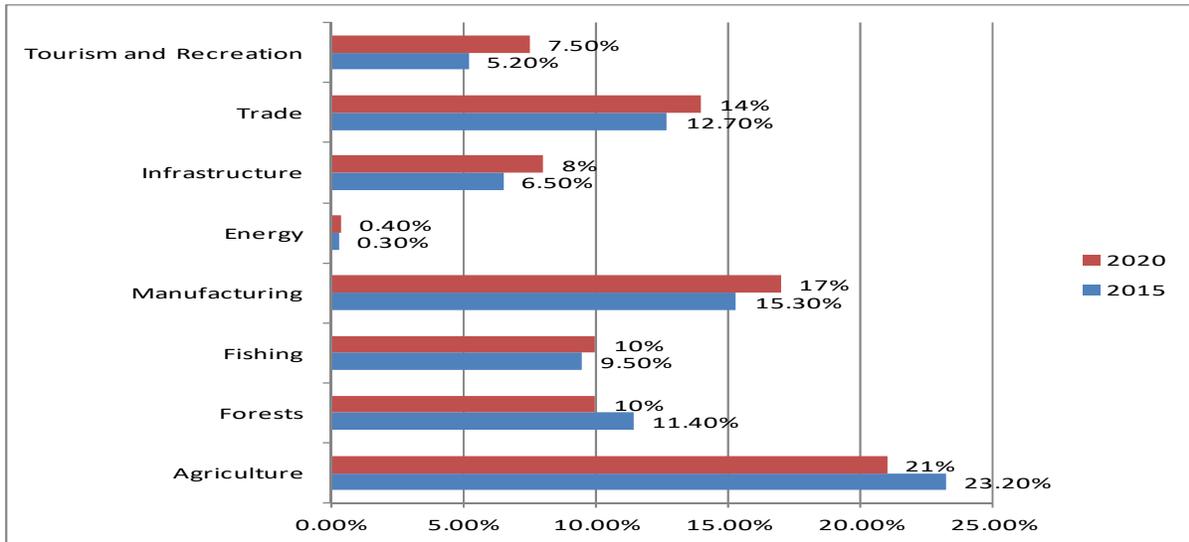
Table 5 Summary of Sectoral Biodiversity - related Objectives

Sector	Biodiversity - related objectives
National Development Policy	<ul style="list-style-type: none"> • Integrating economic development with environment protection and BD conservation, and increasing forest coverage to 42% of land area by 2020. • Outlines the payment for environment service based on the “Environment Polluters/Natural Resource Users Pay” principle. • Develop “natural capital”, encourage the participatory investment in environment services, in Pas to recover degraded ecological systems.
Environment protection sector	<ul style="list-style-type: none"> • BD conservation is the one of environment protection policy and there is one government budget line for environment protection purposes. • Forest cover increasing from 40% to 45% of land, natural Pas increasing from 2.5 million hectares to 3 million hectares, number of 47 precious and rare species threatened with extinction not increased.
Agriculture sector	<ul style="list-style-type: none"> • Control pesticide use in agricultural production. • Sustainable development of agricultural production in conjunction with ecological environment protection. • Promoting organic agriculture to improve agricultural product quality, reduce chemical application in agriculture and increase protect environment effectiveness.
Forestry sector	<ul style="list-style-type: none"> • Sustaining forest coverage up to 42% of national land area by 2020. • Government provides financial source to improve management capacity to staff and equipment/ soft program for natural and biodiversity monitoring of all protected areas in the country. • To rescue and conserve primates in Viet Nam. • To improve forest quality and its environment services that contributes to social economic development and BD conservation
Fishery sector	<ul style="list-style-type: none"> • Promote sustainable marine resource exploitation in relation with BD conservation and international commitments on fishery, promoting community participation in marine resource management, developing marine conservation areas, marine PAs. • To reduce rapid exhaustion of marine resource and marine pollution, improve productivity of marine natural ecological system for BD conservation. • Promoting sustainable natural resource management, BD conservation with livelihood improvement.
Tourism sector	<ul style="list-style-type: none"> • To protect natural landscape and environment protection in tourism development • Support eco-tourism development
Industry sector	<ul style="list-style-type: none"> • Industry development is based on green growth, sustainable development and environment protection.
Health Care sector	<ul style="list-style-type: none"> • Conservation and sustainable use of genetic resources. • Development of herbal medicines.
Protected Area system	<ul style="list-style-type: none"> • The area of terrestrial PAs accounts for 9% of the total territorial area. • Control of populations of endangered, rare and precious species, ensuring that no new case of species extinction is reported, and significantly improve the status of endangered, rare and threatened species; • Effectively implment international commitments on nature and BD conservation via implementation of projects, activities in this field. • To increase SUF area from 2.2 million hectares in 2014 to 2.4 million hectares in 2020 with 34 national parks, 58 nature reserves, 14 species conservation areas, 61 nature landscape protected areas and 9 science research forests. • To establish 16 marine Pas covering at least 0.24 percent of Viet Nam’s marine area. • To protect 40 species of fish, shrimp and shells in 61 inland water protected areas including 16 national inland water PAs and 45 provincial inland water PAs.

3 ECONOMIC AND POLICY DRIVERS OF BIODIVERSITY CHANGE

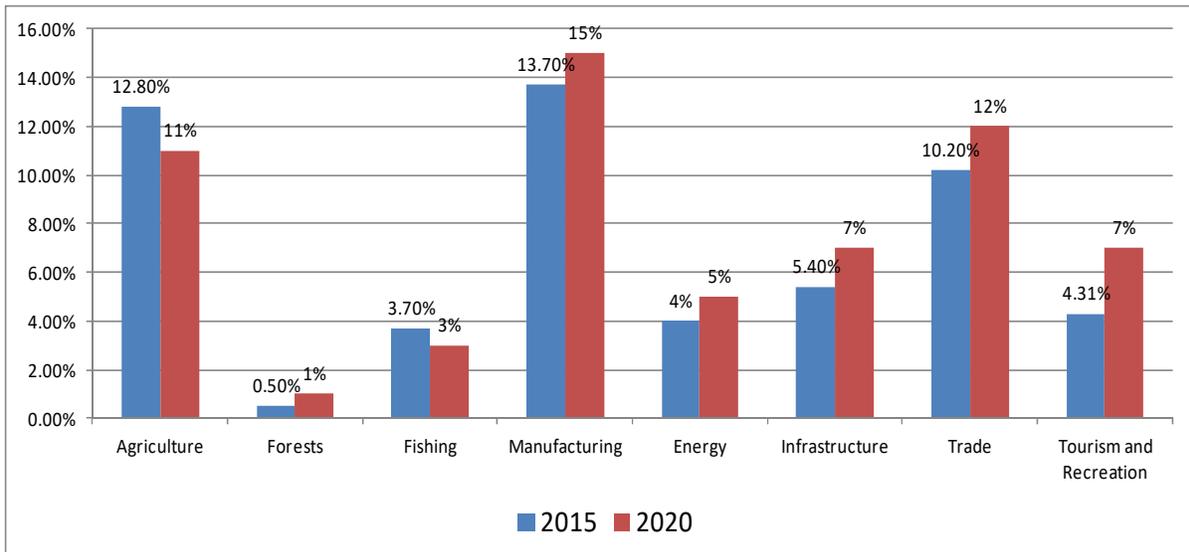
This section focuses on the current economic and policy drivers of BD changes in VN, both positive and negative. Overall, there are 7 sectors with high dependence on BD, including agriculture, forestry, fishing, aquaculture, hydropower, water supply, tourism and recreation. Another 3 sectors that cause high threats to BD are manufacturing, construction and trading. The current and potential employment and GDP shares of these economic sectors are illustrated in Figure 4 and Figure 5 below.

Figure 4 Labor force percentage employment per sector in 2015, with projections for 2020



Source: GSO and Sector Development Strategies.

Figure 5 Share of economic sectors as percentage of GDP in 2015, with projections for 2020.



Source: GSO and Sector Development Strategies

3.1 Sector Biodiversity Dependencies

In 2017, GDP growth of VN was 6.81%, in which the production in **agriculture** (crops and livestock), **forests** (commercial plantation and non-timber products) and **fishery** (fishing, aquaculture) has grown with 2.9% and contributed little to national GDP growth (0.44%). At the same time the growth of the **industry** sector was 8%, contributing 2.77% to GDP, and the growth of the **services** sector was 7.44%, contributing 2.87% to GDP. However, with 23,259,000 workers, a significant 44% of the labor force in the country is working in agriculture (12 million), forestry (6 million) and fishery (5 million).

Tourism and recreation is a fast-growing industry in VN, contributing significantly to the growth of the service sector. Overall, 2.7 million workers are employed in this sector - 0.3 million in recreation and 2.4 million in hotels/restaurants.

Hydropower and **water supply** (irrigation, water provision for domestic and industrial purposes) represent only small shares to the GDP and the labor force, but they have large impacts on society. Hydropower provides more than 40% of the annual electricity production in the country, while 80% of the agricultural crop area depends on irrigation, more than 80% of population has access to clean water, and all the processing industry (food, textile, chemical ext.) have a high demand for water.

Each of these 7 sectors depends on BD differently. The table in Annex 4 illustrates the mutual co-dependencies between the sectors and BD. It shows the BD trends that are most important to the sectors, how the sectors depend on BD and ES, and how the sectors impact on BD and ES.

BD conservation has different impacts to the development of sector dependencies in VN. There are risks and opportunities of BD changes that challenge sector development. The summary analysis of these impacts, risks and opportunities is presented in Annex 4.

3.2 Sector Biodiversity Threats

Due to the rapid growth of the economy in the last two decades in VN, as well as the high-growth target (exceeding 6-7% per year) foreseen for the period 2017-2020, especially 5 sectors - manufacturing, infrastructure, construction, trade and mining – show strong and lasting threats to BD resources.

Manufacturing, infrastructure, construction and trading also have a high contribution to the GDP and create the most jobs in society. It is projected that by 2020, this increasing trend will continue.

Table 6 GDP and labor share of sectors with significant impacts on biodiversity

Sector	Manufacturing	Infrastructure	Trade
Share to GDP			
- 2015	13.7%	5.4%	10.2%
- 2020	15.0%	7.0%	12.0%
Sector Worker (# of persons)	8,082,000	3,431,000	6,709,000
Share to total labor force			
- 2015 (%)	15.3%	6.5%	12.7%
- 2020 (%)	17.0%	8.0%	14.0%

Source of statistical figures: General Statistic Office of Viet Nam (VN GSO), and estimation.

In turn, the developments of these sectors have had strong impacts on BD in VN in last years, expected to continue in the coming years.

Urbanization and road construction for development receive high attention in society and the government. Rapid urbanization and industrialization have negatively affected water quality. Untreated wastewater from both domestic and industrial sources is frequently discharged into rivers and lakes, having negative impacts on BD in these natural ecosystems. Quarrying of limestone for the manufacturing of cement is a particular threat to highly BD limestone karsts, such as those in Kien Giang, which also happen to be among the richest in terms of invertebrate endemism.

Infrastructure development for new urban sites, the increasing road network and expanding industrial village/cluster/parks have often had severe direct and indirect impacts on natural habitats. The extension of the road network has bisected several NPs and PAs, causing fragmentation of the habitats and creating barriers to the movements of many wild species. New roads also strengthen economic links between remote rural areas and urban centers, facilitating the expansion of wildlife trade networks and placing increased pressure on BD.

The demand for wildlife products – e.g. rhino horn, tiger bone, and bear bile - as panacea is deeply-rooted in society, and it appears that consumers are willing to pay almost any price for such products. Many targeted species have been reduced to such low levels that traders now acquire wildlife and wildlife products from neighboring countries. For example, most pangolins found in trade in VN recently have been in shipments from Malaysia, Myanmar and Indonesia, and rhino horn from South Africa. Information from CITES shows that VN is the biggest consumer of rhino horn in the region, while images of butchered langurs published in online newspapers upset the public.

The illegal exploitation for subsistence, recreation or commercial purpose has driven many animal species in VN to the verge of extinction in the wild, and is putting severe pressure on other populations. The trade in wild animals and their products is on the rise, being the main extinction threat to many species. The consumption of wild animals has become popular in restaurants and they are offered for sale openly at the market, violating laws and regulations. Consumption is a possible cause of the extinction of many animal species. It is estimated that VN now has less than 50 tigers in the wild, on the verge of extinction because they are living in severely fragmented and degraded forests with depleted food sources, low adaptability, and small populations leading to inbreeding problems. The Wildlife Justice Commission – WJC has announced in The Hague, The Netherlands, in November 2016 that the VN government has been insufficiently determined in addressing illegal wildlife trading.

From 2015 to mid-2017, the Forest Protection Department confiscated 17,000 kg ivory, 300 kg Rhinoceros horn and 5,000 kg Pangolins and their skin. Between 16 December 2015 and 15 December 2016, only the custom offices captured illegal cross-border trade of 4,852 kg ivory, 2.7 kg Rhinoceros horn, 647 kg Pangolin and 28 kg Pangolin skin, 50 kg turtles, 58 kg bear hands, 88 kg bear and panther bones (<http://www.haiquan.hochiminhcity.gov.vn/>).

The import of chemical fertilizers and pesticides is increasing, regardless of warnings on overuse in agricultural production which can lead to increased environmental (soil, water) pollution, threatening both human health and BD.

The opportunity for strengthening BD conservation in sectoral development relates to the fact that sectors have to strictly follow government environmental protection regulations and have to respect social health. This may increase their investment in relatively costlier environment-friendly technologies but it is expected to improve productivity long term and lead to sustainable economic and social growth.

Box 2 Production and import of chemical fertilizers and pesticides

The volume of imported chemical fertilizers increased from 2.9 million tons in 2008 to 3.6 million tons in 2010 and 4.15 million tons (with a value of US\$ 1.1 billion) in 2016. Overall, 90% of pesticide demand of Viet Nam is imported. During the last five years, VN spent US\$ 0.5 billion per year for the import of chemicals for plant protection, of which 50% on weedicides, 25% pesticides, 20% plant disease treatments, and 5% plant growth stimulators. It is estimated that each hectare of agricultural land, in 2015 equal to 11.5 million hectares, receives about 1 tons of chemical fertilizers per year, while also US\$ 45 USD per hectare is spent on plant protected chemicals.

Sources: <http://www.vinachem.com.vn/tin-tuc/van-de-hom-nay-vnc/>; <http://www.baomoi.com/>

4 Financing policy mechanisms for biodiversity conservation

In VN a variety of BD financing mechanisms is used in the government, corporate and civil society sectors, with each sector imposing different solutions to mobilize or allocate finance for BD conservation purposes. Following an analysis of the about 150 solutions presented in the BIOFIN catalogue, it is estimated that about 54 of them have been tested or realizing in Viet Nam. They are brief discussed in Annex 6, while the most important BD conservation finance solutions are reviewed below.

4.1 Solutions on taxes, fees and charges

Taxes, fees and charges are sources for replenishment of the government budget as determined by the Law on State Budget (NA, 83/2015/QH13). To collect revenues, the government applies different forms of taxes, fees and charges, for example VAT (0-10%), Special Tax, Import-Export tariffs, Corporate Tax (about 20% of annual revenue), Personal Income Tax (0-35%), Natural Resource Tax, Environmental Protection Tax, Business Registration Tax, Land Use Tax. Among these solutions on taxes, fees and charges, some will impact on the government budget revenues on the one hand, and on BD conservation on the other hand. The most important solutions include:

4.1.1 Environment protection tax

The Law on Environment Protection Tax (EPT) was approved by the NA on 15 November 2010 and is in force from 1 January 2012. The target of the Law is to increase government budget revenues as well as limit the use of products harmful for the environment.

Table 7 Environment Protection Tax Rates

Commodity	Tax Rate
Petroleum	1,000 - 4,000 VND / liter
Coal	10.000 - 50.000 VND / ton
Plastic Bag	30,000 - 50,000 VND / kg
Limited-use Herbicides	500 - 2,000 VND / kg
Limited-use Pesticides	1,000 - 3,000 VND / kg
Limited-use Forest Product Conservatives	1,000 - 3,000 VND / kg

Source: Law on Environment Protection Tax, No.57/2010/QH12, National Assembly.

Between 2012-2016, the total amount of EPT collected was VND 105,985 billion (US\$ 4,239 million). For individual years the EPT amounted to VND 11,160 billion (2012); VND 27,020 billion (2015); VND 44,323 billion (2016), annually contributing between 1.48% and 4.27% to the government budget (Report of MOF to NA, 13 September 2017). MOF and MONRE estimated that government spending for environment protection between 2012-2016 was VND 131,857 billion (US\$ 5,274 million), exceeding collected EPT (www.sggp.org.vn/tong-chi-ngan-sach-cho-bao-ve-moi-truong-cao-hon-so-thu-thue-bao-ve-moi-truong).

In 2016, the government proposed revising the Law on EPT with the aim to increase the EPT on petroleum to 3,000 – 8,000 VND/liter (from 1,000 - 4,000 VND/liter), and plastic bags to 40,000-200,000 VND/Kg (from 30,000 - 50,000 VND/Kg). The draft Law was submitted to the NA for discussion and endorsement. The increase in EPT will not only increase government budget revenues, but also contribute to environment protection and BD conservation efforts.

4.1.2 Natural resources tax

Natural resources extraction has strong impacts on the environment and BD. The Natural Resources Tax (NRT) imposed on natural resources extraction was approved by the NA in 2009 (Decree 45/2009/QH12) and revised in late 2015 (Decree 1084/2015/UBTVQH13, dated 10 December 2015), with the revised NRT in force from 1 July 2016. The NRT is calculated by multiplying the tax rate with the production volume extracted by companies during the year.

Table 8 Natural resource tax rates

Tax subject	Old Tax Rate	New Tax Rate (from July 2016)
Mining of metal materials	5 - 25%	10 - 20%
Mining of non-metal materials	3 - 30%	6 - 27%
Natural Timber	10 - 35%	10 - 35%
Firewood	1 - 5%	5%
Bamboo	10 - 15%	10%
Other non-timber products from natural forests	5 - 15%	5 - 10%
Natural Marine products	1 - 5%	2 - 10%
Natural Water	1 - 10%	1 - 10%
Natural oil	6 - 40%	7 - 29%
Natural gas	1 - 30%	1 - 10%
Others	1 - 20%	10%

Source: Decree 1084/2015/UBTVQH13, 10/12/2015, National Assembly.

In 2014, NRT collected was valued at VND 38,048 billion (US\$ 1,585 million), or 4.4% of the government revenues. MOF estimates that with the revised rates, the NRT will generate an additional VND 3,178 billion (US\$ 149 million) to the government budget. It is expected that the increase in NRT also will contribute to improved BD conservation, by preventing the use of more renewable and non-renewable natural resources, which in turn will contribute to reducing the degradation of wildlife habitat.

4.1.3 Fees and charges

There are several fees and charges that the government collects for its budget revenues. Fees and charges are determined in the Law on Fee and Charges. Among the fees and charges listed in the government budget code system (Decision 324/2016/TT-BTC of MOF, dated 21 December 2016, Appendix III), there are 19 items that could offer a solution to reduce impacts on BD conservation. This implies that an increase in these fees or charges will lead to a reduction in natural resources use and to improvements in maintaining wildlife habitat and environment conditions.

Table 9 Fees and charges with impact on biodiversity conservation

Budget Code	Revenue Source	Budget Code	Revenue Source
1251	License on mining by central agency	2452	Entry fee
1252	License on mining by PPC	2600	Fees on environment and natural resources
1253	License on water resource extraction by central agency	3073	Charge on licensing import-export seeds, genetic for agricultural plantation
1254	License on water resource extraction by PPC	3074	Charge on licensing fishing
1257	Payment for forest rent	3604	Payment for land rent in industrial parks
1258	Payment for Marine rent licensed by PPC	4261	Administrative fine on environment protection violence
1299	License for other natural resources	4265	Administrative fine on illegal trading conducted by custom office
1401	Payment for land use right given by government	4913	Funds of lottery companies
1408	Payment for land use right for commercial housing construction	0123	Received ODA
1603	Tax on non-agricultural land for business purpose		

Source: Decision 324/2016/TT-BTC of MOF on 21 December 2016, Appendix III.

4.2 Government budget allocation

Government budget spending is an important financing source for BD conservation in VN, and there are different financing solutions for BD conservation.

4.2.1 Government budget planning process

Allocations from the government budget are an important financing source for BD in VN. The government budget planning approach is defined in the Law on State Budget (2015) and includes 5-year budget plans, 3-year budget plans and annual budget plans. The 5-year and 3-year budget plans provide general projections on budget revenues and expenditures for meeting the targets of the 5-year national social-economic development plan approved by the NA.

The estimation of the annual government budget revenues and expenditures is calculated based on 8 principles (Law on State Budget 2015, Article 41), including:

- Government focal tasks on socio-economic development, defense, security and gender balance.
- Assigned tasks of different ministries and provinces, including tasks on environment protection and BD conservation of MARD, MONRE.
- Legal basis of government budget revenue collection and budget allocation.
- Decentralization in government budget revenue collection and allocation between central and local government.
- Guidelines on annual budget planning, issued by authorized institutions such as the NA, government, MOF.
- National 5- year financing plan, government 3-year financial-budget plan, government mid-term investment plan.
- Progress of government budget management in previous year.
- Estimation of government budget revenue collection and budget spending of different institutions.

Annual budget planning conforms to the fiscal year as stipulated in the Law on State Budget (2015). The fiscal year is from 01 January to 31 December. However, the annual budget preparation starts earlier, in May of the preceding year, and clearance of the annual budget plan is finalized one or two years later. This annual budget cycle involves several steps involving elected bodies (NA, local People's Councils) and executive bodies (government and local People's Committee), and can be described as follows:

- By 15 May, the government issues the guidelines on annual budget preparation for next year. This guideline is sent to ministries and provinces to draft their next year budget plans, based on estimated revenues, expenditures and balance. In this step, a budget for BD conservation is proposed by different government entities with designated responsibilities for BD, e.g. NPs, PAs, BCA. Subsequently, budget estimates of different entities are consolidated at ministerial and provincial levels, and submitted MOF. From this stage onwards, the budget for BD is mixed with other items and not specified as separate budget line.
- By 20 September, the government submits the draft annual budget plan to the Executive Committee of the NA for feedback.
- During October, the government revises the draft budget to obtain a final draft annual budget plan for next year, as well as a report on estimated budget implementation in the current year.
- The draft annual budget plan is sent to the members of the NA 20 days before opening of the NA year-end meeting, commonly in November.
- By 15 November, the NA approves next year's annual budget plan. The approved budget plan then is given to the Government for implementation.
- By 20 November, the government assigns the estimated annual budget plan to different ministries and provinces.
- By 10 December, Province People's Councils approve the estimated annual budget plan at the provincial level, and allocates it to People's Councils at district and commune levels. Within 10 days of receiving the estimated budget plan from the province, People's Council of districts and communes have to approve their estimated annual budget plans. Approved estimated local budget plans of provinces, districts and communes are sent to People's Committee level at respective levels.
- Within 5 days of People's Council approving estimated annual budget plan, People's Committee at the same level has to assign estimated budget plans to respective agencies, and submit a budget allocation progress report to MOF. At this moment, the budget for agencies serving to conserve BD have been clarified.
- By 31 December, the process for allocating the estimated annual budget for next year is completed.
- From 01 January, the implementation of the estimated annual budget plan is started.
- The report on implementation of the approved estimated annual budget plan will be consolidated by the government and submitted to the NA in one or two years' time for clearance.

The annual government budget planning process is illustrated in Figure 6.

In practice, the process of annual budget planning is conducted through consultations between different ministries and province People's Committees, with a leading role for MOF and MPI. MOF focuses more on

allocating recurrent expenditure while MPI's duty is arranging investment expenditure to different ministries and provinces.

Government budget expenditure is divided into different items, in which data on recurrent expenditure for education and science sectors are compulsory to be specified in central and local budget plans. The data on recurrent expenditures for environment protection including BD are not been specified in any budget plan.

Figure 6 Government annual budget planning cycle in Viet Nam

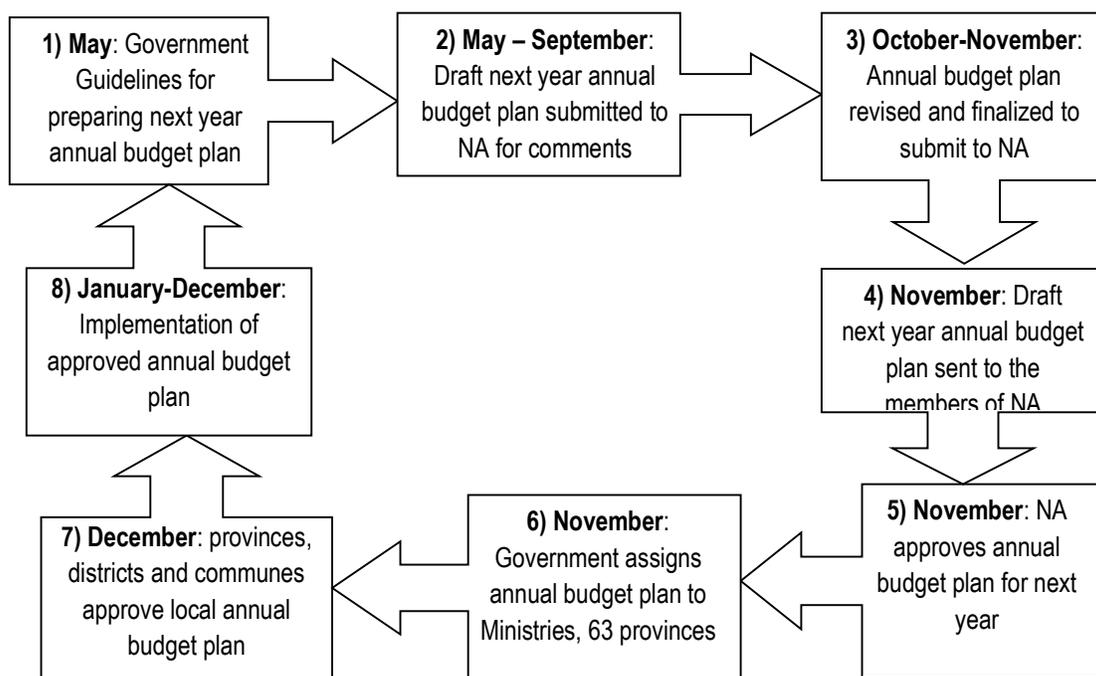


Table 10 Itemized government budget plan in 2018

No.	Item	Total (million US\$)	Of which	
			Central	Local
	Total government expenditure estimation	60,928	29,988.2	30,939.8
I	Development investment	15,988.0	7,480.0	8,508.0
II	National reserve	38.8	38.8	0.0
III	Debt payment	4,500.7	4,400.0	100.7
IV	Provide ODA	52.0	52.0	0.0
V	Recurrent expenditure, in which	37,629.9	17,009.4	20,620.5
	<i>Education and Training</i>	9,163.0	995.3	8167.6
	<i>Science and Technology</i>	487.6	377.6	110.0
VI	Wage reform	1,430.7	376.0	1,054.7
VII	Financial reserve	4.0	0.0	4.0
VIII	Contingency budget	1,283.9	632.0	651.9

Note: Exchange rate may change by time. The USD 1 = VND 25,000 is applied in this table. Source: National Assembly, Decision 49/2017/QH14, 13 November 2017.

4.2.2 Government budget allocation for development investment

Government budget allocation for development investment follows the Law on Public Investment (NA, 49/2014/QH13, dated 18 June 2014). The Law on Public Investment has evolved from a project-based approach to applying a programmatic approach in public investment decision making, such that approval of an investment project shall be based on in alignment with the national investment program, including, for example, the 7 priority target programs formulated as part of the VN NBS.

The government decision-making approach on allocating investment financing for projects related to BD conservation is clarified in the articles 7, 8, 9 and 10 of the Law on Public Investment:

- The NA approves nationally important projects, those that require more than 50 hectares of NPs, NRs, watershed protection forests and more than 500 hectares of mangroves, environment protection forest, regardless of the project cost.
- The Prime Ministry approves class A projects, those that invest in a project in a NP, NR, of which investment costs exceed VND 1,000 billion (US\$ 40 million).
- The Minister and the PPC Chair approve projects in NPs, NRs with investment costs between VND 60 billion to VND 1,000 billion (US\$ 24 million – 40 million) classified as project class B, and projects below VND 60 billion (US\$ 24 million) classified project class C.

The VN NBS indicates that all government institutions at the central level and 63 provinces at the local level have the responsibility to develop and implement BD conservation projects/programs/plans consistent with their assigned responsibilities and tasks. However, unlike e.g. the education and science technology sectors, investment in environment protection and BD conservation is not specified in the government budget plan at different levels (Law on state budget 2015).

As a result, investment costs for BD conservation, including for PAs (NPs, NRs) are not significant compared to other thematic topics in public investment plans. For example, there is no budget for investment in implementation of the VN NBS in the mid-term public investment plan for 2016-2020 (NA, Decree 26/2016/QH14, dated 10 November 2016).

Planning for development investments is arranged by MPI at central level, and by their subordinate Departments of Planning and Investment (DPIs) at the provincial level. Investment is approved only when a proposed investment project is designed in accordance with National and local Development Plans/Master Plans. For example, relevant entities may develop an investment plan consistent with the BMP to 2020 and vision to 2030 (Decree 45/QD-TTg) and submit it to MPI for endorsement and government approval.

Meanwhile, there is a gap between approved investment projects and actual disbursement. There are for example some public investments projects approved for NPs and PAs, but most of them, especially those belonging to provincial authorities, have not received the full amount of approved investments, due to local budget deficits, or did not receive investment on time. Therefore, the efficiency and effectiveness of public investment projects for BD are not as high as expected. In some cases, public investment to NPs was allocated for the construction of facilities (hotels, swimming pools) that do not support BD conservation.

4.2.3 Government budget allocation for recurrent expenditures

The NA approves annual recurrent expenditures to ministries and 63 provinces. In turn, ministries and provinces allocate budget to agencies under their jurisdiction. In principle, ministers and chairs of PPCs are responsible for decision making on allocations of financing for recurrent expenditures to organizations.

As part of the recurrent budget planning process, MOF is responsible for providing guidelines on annual budget planning (e.g. Guideline for 2018 budget estimation – Decree 71/2017/TT-BTC, dated 13 July 2017), the subsequent consolidation of budget proposals from ministries and provinces, and the drafting of the national budget plan.

Actual recurrent budget spending is based on different principles, annually determined by the government (Decree 46/2016/QĐ-TTg, dated 19 October 2016 on recurrent expenditure cost norms for 2017) separately for central institutions, provinces and public service entities (including PAs).

The government recurrent budget allocation comprises various items, such as:

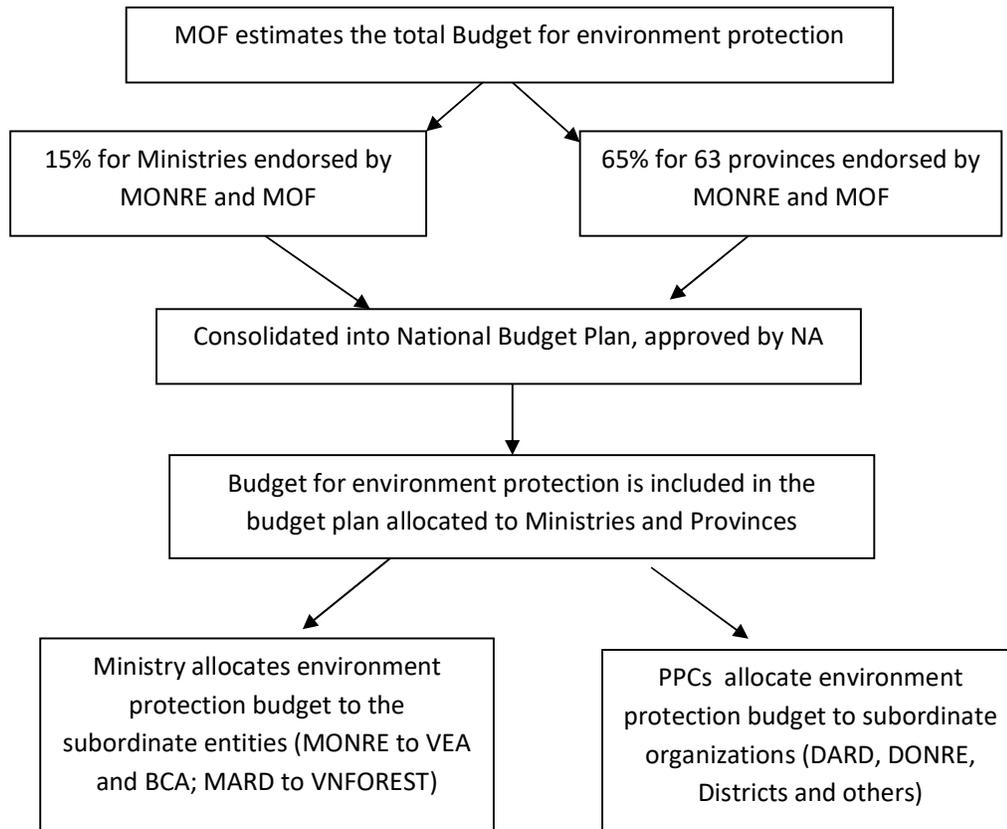
A) *Government recurrent expenditure budget for environment protection*: This recurrent expenditure is allocated based on (MOF Decision 2664/QĐ-BTC, dated 15 December 2016):

- Government estimated spending for environment protection during the year, which is expected not to be lower than 1% of the government expenditure plan.
- Central institutions are allocated 15% of the recurrent expenditure budget. Different ministries will receive this budget depending on their designated tasks on environment protection. The budget amount allocated to each ministry is mostly based on previous year performance. MONRE is responsible to check the budget allocations before MOF consolidates the budget into overall government budget plan.
- Provinces (63) are allocated 85% of the recurrent expenditure budget. The recurrent budget for environment protection to 63 provinces follows government guidelines (Decree 46/2016/QĐ-TTg, dated 19 October 2016 on recurrent expenditures cost norms for 2017) as follows:
 - Of the total budget, 48% is divided in accordance with the 15 ranking of population density (a province with density exceeding 2,000 persons/km² ranks highest 15th; a province with density below 500 persons/km² ranks lowest 1st ranking).
 - Of the total budget, 40% is divided based on the ratio of provincial industrial production over national industrial production; provinces with a higher industrial production will receive a higher budget.
 - Of the total budget, 5% is allocated using the ratio of provincial PAs over national PAs in line with Prime Minister Decree 1976/QĐ-TTg, dated 30 October 2014 on Approval of the Master Plan of SUF to 2020 and vision 2030; provinces with a larger area under formal protection will receive more budget.
 - Of the total budget, 7% is divided according to the ratio of the area of natural forests in the province over the national natural forest area, using the 2014 forest data of MARD; provinces with more natural forest will receive more budget.

B) *Government recurrent expenditure budget for staff wages*: The government system of wages is very complicated, using a combination of education level, working age, working position, career and promotion in different sectors to calculate the basic salary. Government staff also enjoys bonus schemes. The government annual budget plan includes one item for basic wage reform, to increase

government staff salary. The government recurrent expenditure budget for staff wages depends on the wage fund in the previous year and expected changes in annual salary increase. Organizations with more staff will receive more wage funds. The PA system is part of the public service sector, accordingly salary for staff are determined under the government basic salary policy. It is impossible to increase basic salary for PA staff, but bonus from generated revenues could improve staff income.

Figure 7 Annual government budget allocation approach for environment protection



C) *Government recurrent expenditure budget for operational cost for administrative management:* This item included maintenance, communications, meetings, staff trainings, field visits, and contracted workers, allocated differently between central and province levels:

- At the central level, operational costs for administrative management in ministries is based on cost norms from VND 45 million (US\$ 1,800) to VND 54 million (US\$ 2,160) per staff member; the higher cost norm of VND 54 million per staff member being applied for institutions with less than 100 staff members, and the cost norm of VND 45 million per staff member applied for institutions with more than 1000 staff members.
- At the province level, operational costs for administrative management are allocated according to the following cost norms: (i) provincial-level agencies - from VND 52,700 (US\$ 2.1) per person in urban area to VND 87,100 (US\$ 3.5) per person in islands/mountainous areas; (ii) for district and commune levels agencies - from VND 530 (US\$ 0.02) per person in urban area to VND 940 (US\$ 0.04) per person in islands/mountainous areas.

Ministries and provincial authorities will allocate received budget for operational cost of administrative management to their subordinate entities in accordance with cost norms that may lower than those used by the central government, but no report or study is available that has analyzed this internal budget allocation within ministries and provinces.

D) *Received ODA allocations*: In government budget planning, ODA allocation includes ODA funds provided by international donors and counterpart funding by the government. ODA funds are considered as government budget revenue by the Law on State Budget, and is used only for development investment, not for recurrent spending. Therefore, the government is responsible to arrange ODA allocations to different sectors, including BD. ODA projects can be managed by the government or by international organizations, but the final beneficiaries of ODA funds are being determined by the government consistent with national development policies. The government allocates ODA projects to different central agencies and PPCs. On behalf of the government, it is the responsibility of MOF and MPI to mobilize, arrange and distribute received ODA funds.

ODA funds are integrated into the annual budget of ministries and provinces. However, ODA projects have to be managed according to separated mechanisms as agreed between the government and donors. The allocated ODA project is managed by a Project Management Unit (PMU) created by a ministry or PPC. A ministry or province which are recipients of allocated ODA funds will also receive government counterpart funds as agreed between the government and donors.

VN has committed to several international conventions on BD, and seeking more internationally funded projects for BD conservation is one of the priority tasks of the government. The main donors in the BD field include WB, ADB, GEF, GIZ, JICA, IUCN, WWF and others. Over the past decade, VN has been among the top five recipients of bilateral and multilateral development finance. In 2014-2015, overall ODA commitments by members of the OECD Development Assistance Committee (DAC) reached US\$ 2.7 billion on average per year, a slight increase from US\$ 2.3 billion in 2006-2007. Similarly, bilateral ODA in support of environmental objectives saw a modest increase, from US\$ 0.93 billion (40% of total bilateral ODA to VN) in 2006-2007, to US\$ 1.14 billion (42% of total bilateral ODA) in 2014-2015⁴. This financing source has a high potential, as VN is one of the most BD rich countries in the world, while being seriously affected by climate change.

Currently there are few ongoing ODA projects related to BD, although their direct linkage with the VN NBS is not confirmed. Mobilizing ODA in support of the VN NBS for the period 2020-2030 will depend on the strong willingness of the government and donors, negotiation capacity, and efficiency and effectiveness in project implementation.

4.2.4 Government spending for development programs

Development programs have been designed to accompany development strategies adopted by different sectors and approved by the government. There are three types of programs:

- National Target Programs (NTPs) are programs that focus on cross-sectoral issues with high impact on national development issues. Examples include the New Rural Development NTP, and Sustainable Poverty Reduction NTP.
- National programs are programs that focus more on sectoral interests.

⁴ <http://www.oecd.org/environment/resources/mainstream-biodiversity/events/VietNam-Biodiversity-related-Official-Development-Assistance.pdf>

- Priority programs (or priority plans, projects) are programs that serve to support the implementation of sector development strategies, for example the 7 priority programs/plans in the VN NBS.

Government spending for development programs often includes recurrent expenditures and development investment, typically integrated into the annual budget of ministries and provinces. For example, the program on strengthening the management capacity for the system of natural PAs to 2025 and Vision 2030 – one of the 7 programs in the VN NBS (Decision 626/QĐ-TTg, dated 10 May 2017) is assigned to MARD for implementation. The budget for implementation of this plan is included in MARD's annual budget plan.

When approving development strategies and programs, the government always commits to mobilizing funds to implement these approved development strategies and priority programs, and requests MOF to allocate a budget for recurrent expenditures and MPI to allocate the budget for investment. However, due to lack of an estimation of costs, financing arrangement for most programs is not secured, but depends on government budget availability.

The government has committed to allocate budget for implementation of the VN NBS and its 7 priority programs, of which currently 2 programs have been approved: (i) the plan on strengthening management capacity for the system of natural PAs to 2025 and Vision 2030 (Decision 626/QĐ-TTg, dated 10 May 2017); and (ii) the program on the conservation and sustainable use of genetic resources to 2025 and vision 2030 (Decision 1671/QĐ-TTg, dated 28 September 2015). The tentative estimated budget for the plan on strengthening management capacity for system of natural PAs to 2025 and Vision 2030 is VND 123 billion (US\$ 5,125 million), but actual financing arrangements will depend on MOF and MPI.

The priority of allocating financing for programs related to development sector strategies such as the VN NBS is lower than for NTPs. For the 2016-2020 period, the NA (Decision 26/2016/QH14 dated 10 November 2016) has approved spending for two NTPs: (i) NTP for New Rural Development with VND 43,199 billion (US\$ 1,800 million); and (ii) NTP for Sustainable Poverty Reduction with VND 29,698 billion (US\$ 1,237 million). The government investment for BD conservation is hidden in other programs included in the government investment plan for 2016-2020 (Decree 40/2015/QĐ-TTg, dated 14 September 2015, and Decree 73/ND-CP, dated 26 August 2016 on approval of investment for 21 national programs in 2016-2020), for example in providing ODA co-financing to a ministry/province that receives an ODA project, investment in wildlife conservation and in NP, NRs along the national border in the Sustainable Forest Development program, investment in mangroves and protected forests in the NTP for climate change resilience and green growth.

4.3 Debt-for-Nature Swaps

Debt-for-Nature Swaps (DNS) is an option for mobilizing ODA for BD conservation. VN has applied the DNS mechanism for forest development projects. However, detailed information on these DNS is not available in most domestic documents, as national debt management is still a sensitive issue in the country.

International information source show that VN has participated in bilateral and multilateral DNS Initiatives from 1996, with in total US\$ 10.4 million worth of debt placed under the DNS scheme (table 8)

Table 11 DNS between Viet Nam and Germany

Creditor	Debtor country	Year	Value of Debt (US\$)	Conservation Funds created (USD)
Germany	Viet Nam	1996	18,200,000	5,400,000
		1999	16,400,000	5,000,000
		2001	7,000,000	n/a
		Total	41,600,000	10,400,000

Source: Pervaze A. Sheikh, Specialist in Natural Resources Policy, psheikh@crs.loc.gov, 7-6070; ["Debt-for-Nature Initiatives and the Tropical Forest Conservation Act: Status and Implementation"](#) (PDF). Congressional Research Service. Recorded DFNS Transactions by Country, Conservation Funds Generated, 1987-2010 (Millions US\$)⁴¹

The Italian-Vietnamese debt-for-development SWAP program has been conducted in the period 2010-2012, intended for directing the use of the debt that the Government of the Socialist Republic of Viet Nam owes to the Government of Italian Republic. The amount of debt, estimated to be approximately € 7,700,000, aims to be used to finance projects in priority sectors, such as mitigating the effects of climate change (for example, eco-regions/BD conservation and forest protection). The projects were planned to take place in Central VN provinces, where the poverty rate is higher. The program is in compliance with programming guidelines and directives of the Italian development cooperation 2010-2012, the Agreement on Development Cooperation between the two governments and the Vietnamese Social Development Plan. Through the implementation of the projects funded by the DNS program, the sustainable management of natural resources and local livelihoods are enhanced in Central VN provinces (Ha Tinh, Quang Binh, Quang Tri, Thua Thien Hue, Quang Nam and Quang Ngai. (<http://openaid.esteri.it/en/projects/initiative/010012/>))

There is a high potential to expand DNS for BD conservation in VN because: (i) the public debt of VN is high and increasing. The government noted that by 2013, public debts matched 54.2% of the GDP, in which government debt was 42.3% of the GDP, and international debt was 37.3% of the GDP. By 2014, public debts increased to 60.3% of the GDP, including government debt (46.9% of GDP) and international debt (39.9% of GDP). In 2017 public debt was 62.6% of GDP, while for 2018, MOF estimates it to become 63.9% of GDP. Reducing public debt is a high priority of government (<http://vpccp.chinhphu.vn/Home/Thong-cao-bao-chi-cua-Phien-hop-Chinh-phu-thuong-ky-thang-102014-ve-no-cong/201410/14700.vgp>) and (ii) VN has experience to conduct DNS and the government has committed to improve environment and BD conservation for sustainable development.

4.4 Funds

There are different types of funds that mobilize finance for specified purposes. In VN, funds relating to biodiversity conservation have been tested and/or are operating.

4.4.1 Trust Fund for Forests

The Trust Fund for Forests (TFF) was established in 2004, to support the implementation of the VN Forest Development Strategy (VFDS). TFF's goals focus on (i) the protection of forests, BD conservation and improving livelihoods of people in forest dependent areas; (ii) an enhanced contribution of the forest sector to the national economy; and (iii) an increased contribution of forests in terms of climate change mitigation and adaptation. One of TFF's components is the Viet Nam Conservation Fund (VCF) which provides financial support to PAs for BD conservation purpose. About 50 NPs and NRs have accessed this fund. The main financial source is ODA, with a total commitment of € 30.9 million, managed by joint steering committees

of international donors and the VN government. Since 2016, the TFF is integrated into the VNFF as both funds aim to the same target of contributing to the implementation of the VFDS 2006-2020 and both comply with the Hanoi Core Statement. The VCF component is currently out of operational finances.

4.4.2 Viet Nam Forest Protection and Development Fund

The VN Forest Protection and Development Fund (VNFF; <http://vnff.vn/>) was established on 28 November 2008 via Decree No.114/2008/QD-BNN as a non-profit state financial institution. The VNFF mobilizes financial resources from the public, private sector, NGOs, and international society to support forest protection and development projects. The government also has assigned VNFF to provide intermediate transaction services to the PFES mechanism (Decree 99/2010/ND-CP, dated 24 September 2010).

VNFF has become a pioneer state financial institution in VN and Southeast Asia. It aims to effectively support the development of the forestry sector through the mobilization of social resources for forest protection and development, sustainable forest management, climate change mitigation and adaption, and livelihoods improvements for local people engaging in forestry activities and BD conservation.

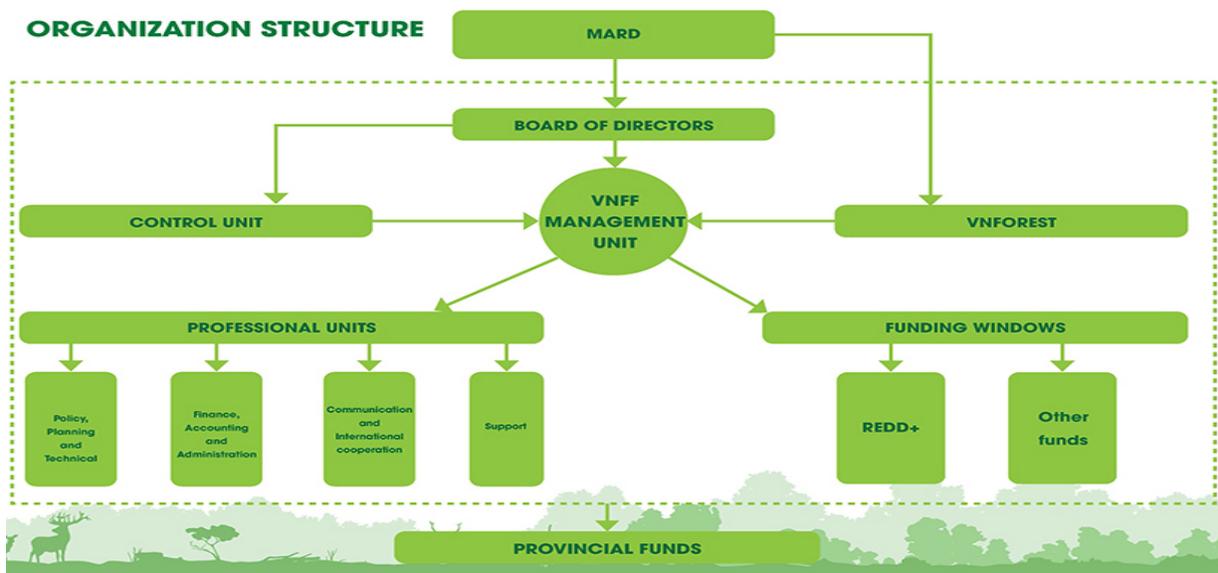
VNFF is set up at the central level and provincial level. At the central level, VNFF is placed under the MARD. The central government has contributed VND 100 billion (US\$ 4.1 million) to VNFF, to support projects like:

- The project “Development of information database on PFES in Viet Nam (DPFES).
- Report on developing the mechanism of PFES for industrial production water from forests in Lao Cai.
- The Project “Improving Payment for Forest Ecosystem Service management in VN” (IPFES).

At provincial level, P-VNFF are established by decision of Province People’s Committee (PPC), and placed under DARD management. The PPC provides initial financial support to P-VNFF; other financial sources include PFES in the province, NGOs and international supports. To date, 37 P-VNFF have been set up.

VNFF has been operating well as it has mobilized sound financial sources. However, its financial balance statement is not available for public.

Figure 8 Organizational structure of the Viet Nam Forest Fund



Source: <http://vnff.vn/about-vnff/organizational-structure>

4.4.3 Viet Nam Fund for Aquatic Resources Protection and Development

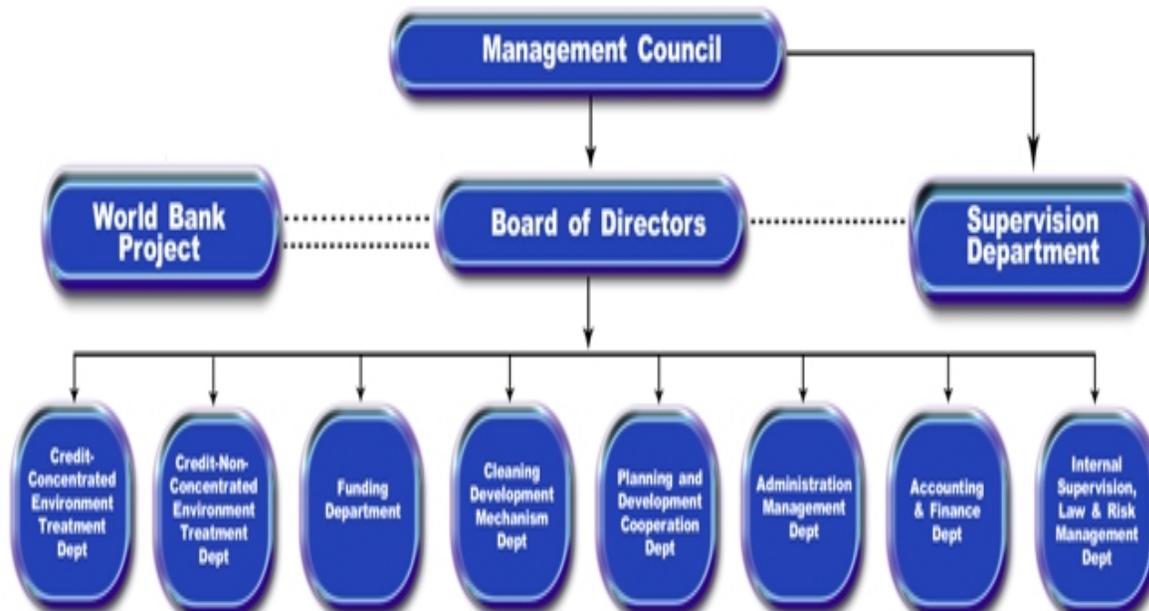
In 2007, the government attempted to set up the VN Fund for Aquatic Resources Reproduction (Decree 29/2007/QĐ-TTĐ, dated 28 February 2007) in support of BD conservation in the fishery sector. However, this fund never operated due to the lack of an agreed management mechanism. To date, there is a proposal to change its name into the VN Fund for Aquatic Resources Protection and Development (VNFARPD), which was determined in the Law on Fishery approved by NA in the beginning 2017 and which will be in force from 01 January 2019. The VNFARPD will be a public out-of-state budget financial and non-profit institution, established at central and provincial levels. The government has not committed to provide financial support to the VNFARPD, but it will mobilize donations from different national and international partners. The fund will support programs/projects/activities on aquatic resources protection and development for which the government does not allocate investment for, or provides insufficient investment. It is expected that when this fund becomes available, there is one more finance mechanism for BD conservation in the marine and coastal zone of VN.

4.4.4 Viet Nam Environment Protection Fund

The VN Environment Protection Fund (VEPF) was established in 2014 by government Decree 78/2014/QĐ-TTĐ as a government financial institution managed by MONRE. VEPF receives capital funding from the state budget; sponsors, contributions, commissions from domestic and international organizations and individuals to support financing for environment protection activities in the country.

For 2015-2017, the government has allocated VND 1,000 billion (USD 42 million) to VEPF as the charter capital. The government also commits to providing an additional annual budget to VEPF. Other financial sources include the Environment Protection Fees, environment compensation, Certified emission reduction (CERs) selling fee, etc. At the central level, VEPF (<http://www.vepf.vn/>) is operating under the Management Council set up by MONRE.

Figure 9 Organizational Structure of the Viet Nam Environment Protection Fund



Source: <http://www.vepf.vn/news/about-us/organizational-structure-268.html>

At the local level, a Provincial Environmental Protection Fund (P-EPF) is established by decision of the PPC, and placed under DONRE management. Besides financial capital provided by the local government, the P-VEPF can mobilize financial sources from private, NGOs and international donors to fund environment protection projects in provinces. By 2016, 63 provinces have set up P-VEPF, with the obligation to finance projects in environment protection, including:

- Programs, projects, activities in nature and BD protection, prevention, preventing and overcoming pollution, deterioration and national, multi-sectoral, multi-regional environmental risks, or resolve comprehensive environmental problems with great impacts.
- Lend financial resources with preferential interest.
- Support borrowing interest, guarantee borrowings for environmental projects when borrowing from credit organizations according to regulations by law.
- Support financing the design and implementation of projects to mobilize capital sources of the Fund to carry out tasks, activities of treating and overcoming environmental pollution, coping with and resolving effects caused by environmental risks and accidents; for programs, projects based on Prime Minister Decree; for celebrating prizes of environment; for rewards to honor top organizations, individuals in environmental protection based on the Decree by Minister of MONRE; for projects, tasks in environmental protection defined in regulations on the organization and activities of VEPF.
- Being corporate sponsor for domestic and international finance, the GEF, foreign environmental Funds, sector and local Funds, to lend environmental projects financial capital in accordance with norms and functions of VEPF to serve environment protection activities based on legislation.
- Investigate and approve the level, timing and forms of financial support for projects and tasks to protect the environment that use investment support capital from VEPF, in accordance with the regulations on the organization and activities of VEPF.
- Use unused capital without state origin, as agreed by capital-providing organizations and individuals, to buy government bonds in line with adopted legislation.
- Register, examine, and manage certified credits for reducing GHG omissions (hereinafter called CERs; one CER is confirmed by a ton of CO₂ equivalent); register receive, divide and sell CERs to CERs owners or original sources of CERs; collect fees for buying CERs to pay for collection expenses; support awareness raising activities on clean development mechanisms (hereinafter called CDM); setup, construct, investigate and approve documents on investment projects according to the CDM (hereinafter called CDM projects); manage and monitor the implementation of CDM projects and other matters related to CDM, in line with legal regulations; support pricing of products from CDM projects according to legal regulations.
- Sign environment coverage fund for exploring minerals with eligible organizations and individuals.
- Allocate and manage finance for important environment protection programs and projects according to instructions by MONRE and Decrees by authorized levels.
- Carry out other tasks as assigned by MONRE.

In practice, in order to preserve the charter capital, VEPF focuses to lending credit to environment protection projects that have sufficient re-payment capacity, such as waste management projects. The collected interest from lending credit is used for supporting non-credit projects. It is estimated that 20% of collected interest is invested in BD conservation.

Mobilize donations from different sources is an important issue for VEPF, to further increase investment in BD conservation.

4.4.5 Community Funds

The Community Funds (CFs) are small funds created by different entities, like NPs, NGOs, community development projects or local people to meet specific objectives. CFs may have different name in different locations, for example Community Development Fund (CDF).

CFs commonly are funded by ODA projects of FAO, IFAD, ADB, JICA, or other international donors, or from local sources. Most CFs have established small revolving savings-credit schemes to mobilize local small savings and expand its participants.

CFs have been created for the voluntary participation of local people; they have a small coverage, operating most at the commune level, with small target groups, e.g. of poor households or women, and topic focus, e.g. eco-tourism or homestays. Commonly financial resources are limited, and their institutional sustainability is low. Typically, a CF can stop its operations when financial resources become insufficient.

Each CF has individual targets; some focus on integrating poverty reduction with BD conservation or environment protection. For example, in the NPs of Cat Ba, Xuan Thuy, Ba Be, Na Hang, Bidoup-Nui Ba.

The Law on Fishery (2017) encourages CFs to be established in support of aquatic resources protection and development (article 22). It is expected that when this Law comes into force from 2019, more CFs will be created to support BD conservation in the fishery sector.

4.5 Corporation sector

The business community in VN has implemented different solutions to finance environment protection including BD conservation.

- **Greening space.** Business entities spend a part of their income or profit to develop gardens, parks, and planting more green trees around their business sites, especially in industrial parks, as requested by the government. Primarily these practices are conducted by large companies such as the Vinacomin Coal Mining Companies, cement production companies and others.
- **Donation for environment protection and nature conservation.** A variety of larger and smaller private sector organizations donate financing to relevant projects, for example:
 - Under a collaborative program with WWF, since 2008 Coca Cola has been supporting activities to protect Tram Chim NP and promote sustainable livelihoods among communities living in its buffer zone.
 - Holcim Ltd., an international company specialized in manufacturing and distribution of cement and aggregates, has since 2007 been providing funding to BD conservation in and around Kien Giang Man and Biosphere Reserve (MBR). Currently, the company is initiating a BD offset program, aiming to compensate for the unavoidable impacts of limestone quarrying and clay extraction through supporting the establishment of two new NRs.
 - A BD offset assessment was carried out for the Long Son Petrochemical complex in Ba Ria-Vung Tau province, towards planning offset investments.
 - Between 2003-2011, FDI Honda in VN has invested VND 3.5 billion (US\$ 146,000) in a CDM forest plantation project in Hoa Binh province, for 2013-2020 will invest VND 4.9 billion (US\$ 205,000) in a CDM forest plantation project in Bac Kan province.
 - The Vinacomin Coal Mining Company of VN has allocated one percent of its production cost to its Environment Restoration Fund, valuing about VND 1,000 billion (US\$ 40 million) per year. The company manages this fund to protect green landscapes in coal mining regions, including

the collection of hazard waste from coal mining, building 57 wastewater treatment factories, planting forest on more than 100 hectares

- **Performance bonds** are applied by mineral mining companies from 1999. Based on a proposal formulated in the EIA report conducted before obtaining a mining license, the company must deposit in advance a certain amount of money for environment restoration and protection purposes into the VEPP. These bonds will be returned to the company after completing environment restoration.
- **Lottery for development.** The lottery business is dominated by public companies (Decree 30/2007/ND-CP, dated 1 March 2007, Decree 78/2012/ND-CP, dated 5 October 2012), which have a long traditional experience to organize special lotteries in support of development projects, e.g. building schools, hospitals or irrigation systems. The lottery companies managed by PPCs contribute to the investment budget of provinces. MOF estimates that revenues from lotteries in 2014 was VND 63,000 billion (US\$ 2,520 million), contributing VND 20,100 billion (US\$ 804 million) to the government budget. In 2016, the 10 biggest lottery companies have profits before tax valuing VND 4,953 billion (US\$ 186 million). The government has requested all provinces to allocate between 50% and 60% of revenues from lottery profits for investment in education, vocational training, health care, and 10% for the NTP on New Rural Development (PM Order 4412/VPCP-KTTH dated 7 June 2016; MOF Guidance 8470/BTC-NSNN dated 22 June 2016). However, lottery revenues have not been used for investment in BD conservation or environment protection.

4.6 Civil Society

A number of international and local NGOs are operating in VN, focusing on different objectives and target audiences, including environment protection, BD conservation and poverty reduction. NGOs that mobilize fund for BD conservation include the Biodiversity Conservation Information System (BCIS), International Union for the Conservation of Nature (IUCN), The World Wide Fund for Nature (WWF), ActionAid, Agronomes et Vétérinaires sans frontières, Bread for the World, CARE, Oxfam, VN Association for Conservation of Nature and Environment (VACNE), Plant Protection Association, Viet Nam Pharmaceutical Association (VPA), Viet Nam Gardening Association – VACVINA, Center for Assisting Community Sustainable Development, Center for Environment and Community Development, People and Nature Reconciliation (PanNature). Small Grants exist that international donors such as embassies (Denmark, Netherlands) or organizations (e.g. USAID, WB, UNDP) directly allocate to NPs, PAs or community organizations, including Women's Union, Farmers' Associations at different levels, in support of nature protection and livelihoods improvement.

4.7 Payment for Forest Environmental Services

In 2010 the financial solution approach of Payment for Forest Environmental Services (PFES) was introduced in VN with the purpose to raise financial resources from the business sector for forest protection and other development purposes. To date, it is the one of the most successful innovative finance mechanisms for environment protection and BD conservation in VN.

Forest owners are the receivers of PFES, including corporate entities, households and individuals who have been allocated forest land by the government for forest protection and development. This also includes NPs, PAs, forest enterprises, protection forests, farmers, villages and communes.

The government has defined that 4 sectors - hydropower, eco-tourism, water supply and industry - that benefit from forest services, such as water supply, clean water and natural beauty, have the obligation to pay into PFES funds. The payment rates have been fixed for each sector (Table 9).

Table 12 Obligations of business sectors under Payment for Environmental Services regulations in VN

	Sector	Unit	Rate to December 2016	Rate from January 2017
1	Hydropower generation	VND/ 1 kwh of commercial power	20	36
2	Clean water provision	VND/ 1 m3 of commercial water	40	52
3	Tourism service	% of Annual revenue	1%-2%	1%-2%
4	Manufacturing Industry	MARD is assigned to define payment rates for government approval. To date, no rates have been approved yet		

Sources: Decree 99/2010/ND-CP, 24/9/2010; Decree 147/2016/ND-CP, 2/11/2016

Not all forest owners receive PFES. The collected PFES is paid only to PFES receivers whose forest is identified to provide environment services to PFES payers. For example, forest owners in catchments providing water to hydropower stations. Two channels of PFES collection and disbursement were proposed:

- Direct payment transfer from PFES payers to PFES receivers. This payment mode has not been applied because of the high cost for PFES payers and the poor connection with PFES receivers - most of them are small farmers living far away from PFES payers.
- Indirect payment transfer. PFES payers transfer payment to a service entity, which will convey payments to PFES receivers. VNFF have been assigned by the government to provide PFES transfer services.

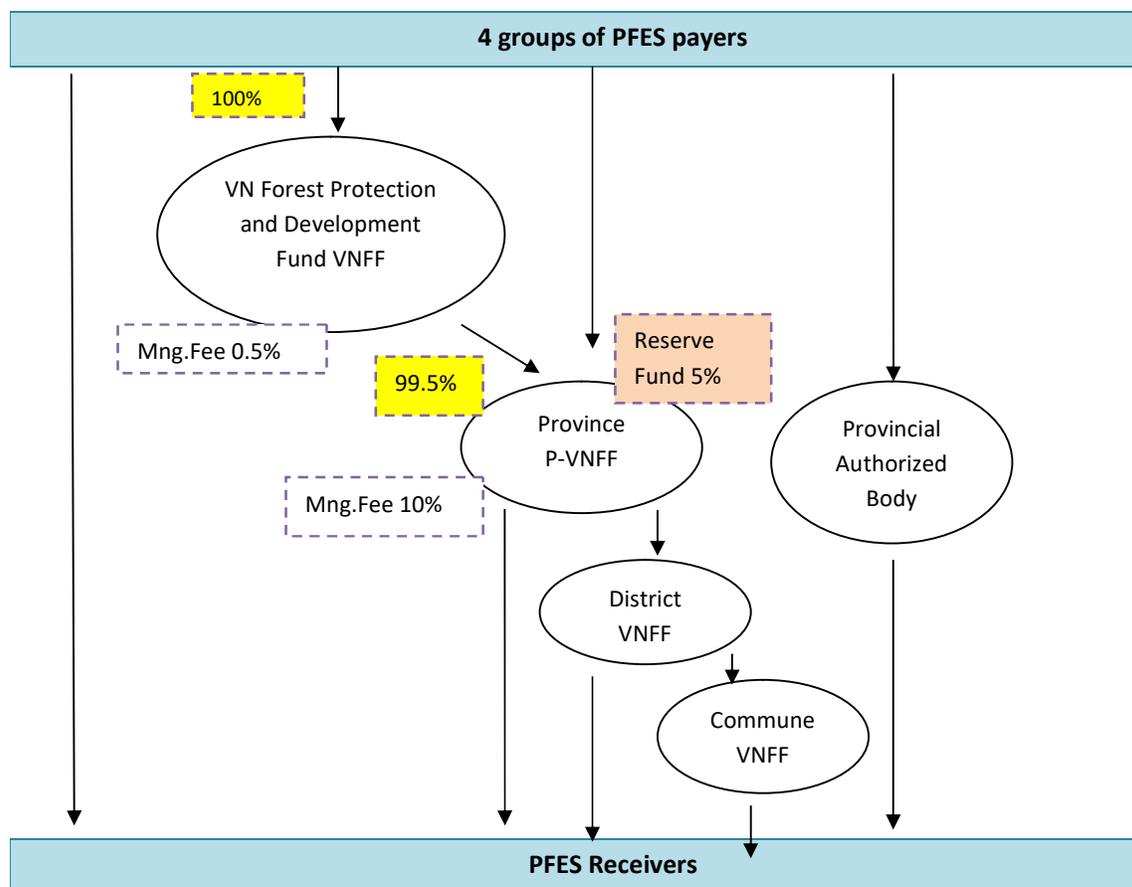
VNFF is established at the central level and province level. The central-level VNFF collects PFES from large payers whose activities object to PFES payment cover more than one province. The central VNFF keeps 0.5% of collected PFES as a service fee, and transfers 99.5% of collected PFES to the province VNFF. By 2016, the central VNFF had signed 64 PFES contracts with different companies, mostly large hydropower companies.

At province level, the province VNFF collects PFES from companies who benefit from forest environment service within the province. To date, 41 of 63 provinces have established a province VNFF to collect PFES, who by 2017 had signed 400 PFES contracts with companies, mostly local water supply companies and tourism service companies. Province VNFFs also receive PFES transfers from the central VNFF. Province VNFFs keep 10% of received PFES as transaction service fee to cover its management costs at the provincial, district and commune levels. Between 5%-10% of collected PFES is retained into the province PFES reserve fund, used for covering costs for PFES promotion (printing, receipts, advertisement, research) and for payments to recipient who are missed in the list of PFES payments.

Between 2011 and 2015, annually on average PFES collected VND 1,200 billion (US\$ 50 million). The total accumulated PFES volume to December 2016 is VND 6,510.7 billion (US\$ 271.3 million). By June 2016, 97.2% of PFES payments (VND 5,586,497 million) were received from the hydropower sector, 2.6% (VND 149,680 million) from the water supply sector and 0.2% (VND 8,615 million) from the tourism sector.

It is estimated that about 90% of collected PFES - VND 5,024 billion (US\$ 209.3 million) - has been transferred to final PFES receivers, including 500,000 farmers to protect 5.87 million hectares of forest, equal to 44% of the total national forest area.

Figure 10 Institutional arrangements for Payment for Environmental Services in Viet Nam



PFES implementation has demonstrated advantage and limitations:

- PFES generated financial resources serve as additional financing for forest protection and BD conservation in VN since 2011. The approved increase in PFES rates from 2017 will further increase available financial resources.
- PFES collected from the water supply and tourism sectors remain insignificant, and are much lower than the benefits these sectors obtain from forest environment services. The increase in the price for water and the expansion of PFES collections to all water supply and tourism companies can be a solution to improve PFES.
- Delays in PFES transfers from companies still occur, especially from small hydropower stations. VNFF needs to pay more attention to remove such delays.
- The current PFES rates, despite having been increased from 2017, are considered much lower than the benefits received by the sectors from forest environment services. For hydropower, it is estimated that the benefit from forest environment services vary between VND 63 to VND 368 per kwh, compared to a PFES rate of VND 36 per kwh. For water supply companies, benefits of forest environment services are about VND 65 per m3 of water, but the PFES rate is VND 52/m3.
- Companies in the manufacturing industry and aquaculture have not yet participated in PFES, due to the lack of legal regulations.
- The revised Law on Forestry, approved by the NA in late 2017 (NA, No.16/2017/QH14, dated 15 November 2017, to become in force from 1 January 2019, describes PFES management in more detail. It is expected that the weakness in the PEFS management, such as the need for a comprehensive monitoring system, and criteria for impact assessment, will be improved.

4.8 Reduced Emissions from Deforestation and Forest Degradation

Since 2008, VN is involved in various programs on Reduced Emissions from Deforestation and Forest Degradation (REDD), having resulted in the following policies:

- NTP on Climate Change Mitigation (Decree 158/QĐ-TTg, dated 9 December 2008).
- National Strategy on Green Growth (Decree 2139/QĐ-TTg, dated 5 December 2011).
- National Plan for Forest Protection and Development in 2011-2020 (Decree 57/QĐ-TTg, 01/2012).
- National Action Plan on REDD in 2011-2020 (Decree 799/QĐ-TTg, dated 27 June 2012).
- Program on Reducing GHG emissions in agriculture to 2020 (Decree 3119/QĐ-BNN-KHCN, dated 16 December 2012).

The structure of REDD management in VN has been set up to conduct activities up to 2020. VN was one of the original UN-REDD Program “pilot” countries. The UN-REDD Program has assisted the government in establishing a national REDD+ Network, in which various stakeholders come together to coordinate REDD+ related issues. The main issues addressed by this program in VN are: (i) clarifying the rights on land use; (ii) forest plantation planning; and (iii) output-based fiscal assistance provision.

4.9 Clean Development Mechanism

The Policy on Financing for CDM was approved by the government in 2007 (Decree 130/2007/QĐ-TTg, dated 2 August 2007) to promote investment towards energy saving and forestry.

VN has 254 CDM projects recognized by CDM International Environment Board, of which 87.6% related to projects in the renewable energy sector, 10.2% to waste treatment projects, only 0.4% to forest sector projects, and 1.8% to projects in other sectors.

The first CDM project in forestry was implemented in 2008 in Hoa Binh province, targeting to reduce 2,665 tones CO₂ within 16 years from 2008 to 2024. By 2015, the project has supported 320 farmers to conduct forest plantation on 309 hectares. Another CDM project relates to forest plantation on 490 hectares in Bac Kan province between 2013 to 2021, which, with an investment of VND 4.9 billion (US\$ 204,000), by 2020 is expected to provide 73,500 m³ of timber with a value of VND 50 billion (US\$ 2,081,000).

Active CDM projects in VN are estimated to save 137.4 million tons CO₂ during their duration. The value of CER provided by the EB to VN is 12 million. The fee rate for CER trading varies from 1.2% (for forest plantation and energy saving projects) to 2% (for natural gas projects) of the CER value (Decree 58/2008/TTLT-BTC-BTN&MT, dated 4 July 2008). The CER fee is transferred to VEPF to finance environment protection projects. By 2016, accumulated CER fees collected value VND 44 billion (US\$ 1.83 million).

5. INSTITUTIONAL ANALYSIS FOR IMPLEMENTATION OF VIET NAM'S NATIONAL BIODIVERSITY STRATEGY

Implementation of BD conservation, the VN NBS in particular, involves different organizations, including government entities, the business community and civil society at the central and local levels.

5.1 Government Institutions

This PIR described current government institutions, which could be modified in coming years following adoption of the government Institutional Reform for 2018-2021 (Decree 18-NQ/TW, dated 25 October 2017), which targets to reduce government staff by 10%, and simplify the government structure.

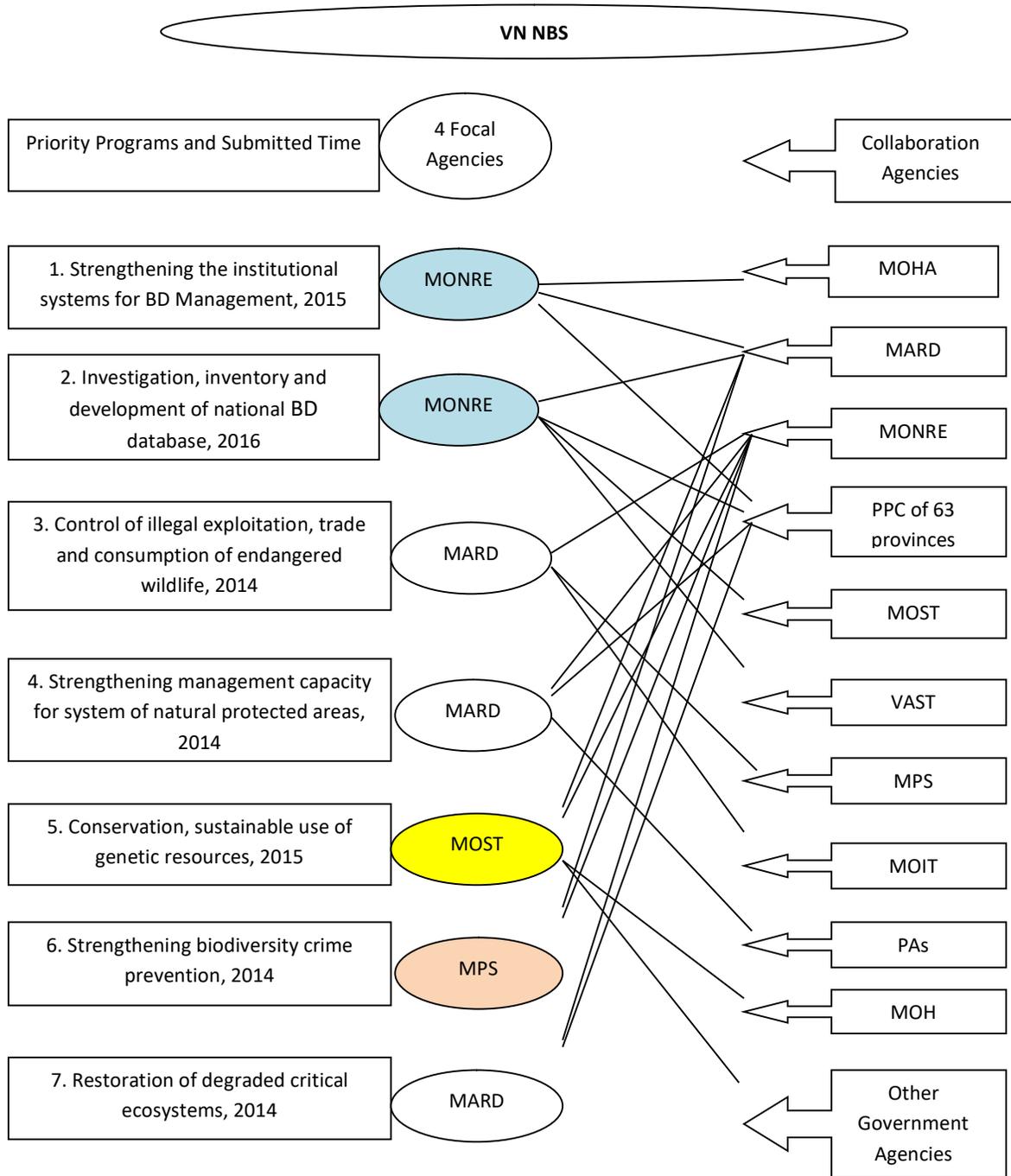
The VN NBS determines the 10 central-level organizations and 2 groups of provincial-level organizations, including PPCs of 63 provinces and PA authorities, responsible for its successful implementation, especially in preparing 7 priority programs. The institutional arrangement for preparing the 7 Priority Programs in VN NBS is illustrated in graph 11, including 4 ministries as focal agencies (MONRE, MARD, MOST and MPS) while others are coordination agencies in conducting the 7 priority programs.

5.1.1 Ministry of Natural Resources and Environment

MONRE plays the leading role in the administrative management of natural resources and environment, including BD conservation in VN. Among its 23 agencies (Decree 36/2017/NĐ-CP, dated 4 April 2017), there are 9 agencies directly involved in BD conservation tasks, with BCA of VEA playing a leading role. MONRE has obligations for the management of Wetland Protected Areas and the central VEPF. MONRE also is assigned to prepare two priority programs of the VN NBS. With respect to BD conservation matters, the most important agencies of MONRE are:

- **Viet Nam Environment Administration (VEA)** has 21 major tasks related to environment protection and BD conservation, including: developing and submitting laws and regulations, policies, strategies, plans, NTPs, programs, projects, inter-provincial and inter-regional and national environmental projects, criteria and procedures of technical economic norms for environment and BD; guiding inspections on registration, accreditation, granting, extending, adjusting and revocation of environmental and BD license, education and dissemination of regulations on environment and BD. Specific regulations are promulgated for pollution control, waste management and environmental awareness, environmental protection of river basins, coastal zones, seas and islands, BD conservation; EIA; development and supervision of the implementation of policies and mechanisms for PES, taxes, fees and charges. VEA has 18 agencies, of which BCA is directly involved in BD conservation matters. In 2007, the organizational structure and functions of VEA have been discussed for modification, and submitted to the government for approval.
- **Department of science and technology** is allocated the government budget for studies, including for BD conservation.
- **Viet Nam Administration for Seas and Islands (VASI)** has budget to conduct surveys and supervisions of natural resources and environment protection in seas and islands.
- **Department of Water Resource Management (DWRM)** has assigned functions to prevent water resources pollution that affect BD.
- **Institute of Strategy and Policy on Natural Resource and Environment (ISPONRE)** has budget to conduct studies relating to environment protection and BD conservation.

Figure 11 Institutional Arrangements for the preparing of 7 Priority Programs in VN NBS



Source: compiled by author from NV NBS

5.1.2 Ministry of Agriculture and Rural Development

MARD has designated functions for the administrative management in agriculture, irrigation, forestry and fishery (Decree 15/2017/NĐ-C, dated 17 February 2017). MARD directly supervises 6 NPs, and provides technical support to all NPs and PAs at provincial level. MARD also manages the VNFF. MARD is responsibility to prepare 3 of 7 Priority Programs listed in the VN NBS. MARD receives and projects government budget for nature protection and BD conservation through several agencies, including:

- **Viet Nam Administration of Forestry (VNFOREST)** has main responsibilities for forest development and forest ecosystem conservation (Decree 28/2017/QĐ-TTg, dated 03 July 2017). It is directly involved in forest and BD conservation through 10 subordinate agencies, including the Forest Ranger Agency, the Viet Nam CITES office, the Department for Special Use Forest and Protection Forest, and 6 NPs (Tam Dao, Ba Vi, Cuc Phuong, Mach Ma, Cat Tien, and Yok Don). VNFOREST drafts and receives government budget for services in forest protection and conservation, including BD conservation.
- **Directorate of Fishery (DFISH)** has responsibilities to manage, protect and develop fishery resources both in marine and inland water bodies, and supervise marine natural resource conservation areas (Decree 27/2017/QĐ-TTg, dated 3 July 2017). The agencies most involved in BD conservation in water bodies include its Department of Fishery Conservation and Development, Department for Science and Technology, and the Fishery Ranger Force.
- **Department for Science, Technology and Environment** allocates government budget for studies, including on nature and BD conservation in forestry and fishery.
- **Plant Protection Department** has is responsible for providing services in plant protection, the control/management and use of pesticide. Many of its activities have BD conservation implication.
- **Department of Livestock Production** has implemented different programs to protect and conserve BS in livestock.

5.1.3 Ministry of Science and Technology

The functions and organizational structure of MOST is defined in the government Decree 95/2017/ND-TTg, dated 16 August 2017. The functions of MOST are related to managing national science and technology studies in VN, including research/studies relating to BD conservation. MOST has 25 departments, among which 5 departments closely relate to BD conservation: Department of Planning and Financing, Department of Sector Science and Technology, Department of Legislation, and Department of Local Science Technology Development. In the framework of VN NBS, MOST is the focal agency to prepare the Program on the conservation and sustainable use of genetic resources. BD facilities such as NPs, PAs can apply to MOST or to the Department of Science and Technology at the province level to receive funds for BD studies.

5.1.4 Ministry of Public Security

MPS has responsibilities for social security in the country, including preventing crime related to BD conservation and environment protection, illegal hunting, trading and consuming wildlife. Two agencies, on Preventing Environment Crime and Preventing Crime in Economy and Corruption of the Police Department have directly involvement in tasks of BD conservation and natural resources protection. MPS has been assigned by the government to prepare the Plan for strengthening BD crime prevention - one of 7 Priority Programs of the VN NBS, the preparation of which should be coordinated with MONRE and MARD.

5.1.5 Ministry of Planning and Investment

The overall role of MPI as determined in the government Decree 86/2017/NĐ-CP, dated 25 July 2017, is to arrange investment budget for different development projects in VN. Among 33 agencies of MPI, there are some departments with concerns for BD conservation and environment protection, including (i) the Department of Agriculture Economy; (ii) The International Economic Relations Department; (iii) the Science, Education, Natural Resource and Environment Department; (iv) Development Strategy Institute; and (v) the Central Institute for Economic Management.

In VN NBS implementation, MPI has the responsibility for (i) allocating investment funds for central ministries and agencies to implement the Strategy, and (ii) raising investment funds and ODA from international donors in support of the conservation and sustainable use of BD.

5.1.6 Ministry of Finance

MOF has the responsibility to collect taxes, as well as for planning and allocating recurrent expenditure in government budget plan. MOF is responsible for allocating the state budget and providing guidance for its use in the implementation of programs, projects and tasks as outlined in the VN NBS. There are four departments of MOF that are involved in BD conservation issues including:

- Department of International Cooperation.
- Department of State Budget, in charge of preparing state budget plans, including for BD.
- Department of Public Expenditure, responsible for preparing state budget expenditure plans.
- Department of Tax Policy, involved in determining tax rates on natural resource exploitation, import tariffs on pesticides and chemical fertilizers, export tax on natural resources.
- General Department of VN Customs, with the duty to prevent illegal trading in wildlife. Its operations contribute to BD conservation not only in VN, but also to prevented illegal wildlife trading between VN and other countries.

5.1.7 Ministry of Industry and Trade

MOIT is responsible for managing industrial development, domestic markets and import-exports, including preventing illegal wildlife trading. Three of its agencies have related to BD conservation, including:

- Market Surveillance Agency (MSA), directly involved in preventing illegal trading, including illegal trading of wildlife.
- Department of Energy Saving and Sustainable Development, responsible for developing renewable energy, and managing traditional non-renewable energy sources (coal, charcoal, wood, oil, etc.).
- Import-Export Administration, with duties to regulate the export and import of items, including those with relations to BD, like chemical fertilizers, pesticides, timbers.

At central level, MSA belong to MOIT, at province level to province authorities. To improve MSA effectiveness in preventing illegal trading including wildlife, in 2017 MOIT has proposed to integrate central and province MSA into one unified agency. MOIT supports the VN NBS implementation by coordinating with MARD the Program on control of illegal hunting, trade and consumption of endangered wildlife.

5.1.8 Ministry of Health

MOH has responsibilities to develop herbal medicine for health care, and has been conducting the National Program on the protection and rehabilitation of traditional herbal medicine that focuses on BD conservation and health treatment. In Decree 1976/QĐ-TTĐ, dated 10 October 2013, the government assigns MOH to implement the Master Plan on Developing Medicinal Herbal Plants to 2020 and Vision to 2030. The Department of Planning and Finance, the Administration for Traditional Herbal Medicine and the Institute for Health Strategy and Policy of MOH are all involved in BD conservation issues. MOH coordinates with MOST the preparation and implementation of the VN NBS Priority Program on Conservation, Sustainable use of Genetic Resources as defined, approved by government in 2015 and currently under implementation (Decree 1671/QĐ-TTĐ, dated 28 September 2015; Approval of the Program on the conservation and sustainable use of genetic resources to 2025 and vision 2030).

51.9. National Steering Committee for Illegal Trade Prevention

To fight illegal trading, including within the country and transponder illegal trading, the government has established the National Steering Committee for Illegal Trading Prevention – called SC398 (Decree 389/QĐ-TTg, dated 19 March 2014 and Decree 09/QĐ-TTg, dated 6 January 2017). The SC389 is chaired by the Vice-Prime Minister, and 4 deputies are the ministers of MOF, MOIT, MPS and MOD. The members of SC389 include the vice ministers of MOF, MARD, MOT, MOH, MOST, as well as the Heads of MSA, Customer Agency, Tax Agency, Border Forces, Marine Policy Agency. The office of SC389 is located within MOF.

At province level, each of the 63 provinces established a province SC398, chaired by the vice chair of the PPC. The budget of SC389 is allocated by the government, included in the annual recurrent budget of ministries and provinces.

Since 2014, SC398 has conducted actions against illegal wildlife trade. Hundred cases of illegal wildlife trade - domestic and cross-border - were prevented. In November 2016, VN hosted the 3rd International Conference on illegal wildlife trade with 40+ countries and international organizations participating. The Preventing Illegal Wildlife Trade project for 2017-2021 was approved by the government (307/QĐ-TTg, dated 9 March 2017), funded by USAID with USD 10 million, and USD 0.46 million VN counterpart funding.

5.1.10 Viet Nam Academy of Science and Technology

VAST is the government agency with main functions to (i) Carry out basic research in natural sciences and technology in the areas of mathematics, physics, chemistry, biology, biotechnology, information technology, electronics, automation, space technology, material science, BD and the bioactive substances, earth science, marine science and technology, environment and energy, forecasts, prevention and mitigation of natural disasters; (ii) Conduct synthetic research on natural resources, natural conditions and environment; and (iii) Implement, apply and transfer scientific and technological research results.

VAST has different agencies that relate to or are involved in BD conservation matters in the country, such as the Institute for Ecology and Biology Resources, the Institute for Marine Environment and Resources, and the Institute for Oceanography. In the VN NBS process, VAST coordinates with MONRE the preparation of the Program on Investigation, inventory and development of national BD database.

There are other central-level government organizations that were not specified in the VN NBS but whose duties have implications for BD conservation, including:

5.1.11 Ministry of Education and Training

MOET is responsible for developing and managing the education system in the country. The environment protection subject has been integrated into education programs, especially following the adoption of the government approved Program on Including Environment Protection Issues into the National Education System 2001 (Decree 1363/QĐ-TTg, dated 17 October 2001).

5.1.12 National Universities

In the education sector, different national universities have programs or Centers for nature protection and biodiversity conservation. National universities receive financing from different sources, including the government budget. Key organizations include (i) Ha Noi National University (and its Center for Natural Resource and Environmental Studies - CRES); (ii) Ho Chi Minh City National University; (iii) Thai Nguyen University; (iv) Hue University; (v) Vinh University; (vi) University for Forestry; (vii) Tay Nguyen University; (viii) HCM City Agro - Forestry University; and (ix) Hanoi University of Natural Resource and Environment.

5.1.13 Viet Nam Coast Guard

The Viet Nam Coast Guard (VCG) is a branch of the VN People's Army, and falls under the management of the Ministry of Defense (MOD). The VCG plays an important role in combating and preventing smuggling, piracy, and trade fraud in VN's water body.

At central level, all mentioned above organizations receive government budget to conduct their duties, including the duty to protect natural resources and conserve BD.

5.1.14 National Assembly

The NA of VN is the highest elected body in the country. Its duties include to approve laws and the government budget, including those for BD conservation. Two agencies of the NA are mostly concerned with BD conservation issues:

- Committee on Financial and Budgetary Affairs, responsible for verifying laws in economic and finance fields (Law on State Budget for example), state budget revenues and expenditures plans, and supervising state budget implementation at central and provincial levels.
- Committee on Science, Technology, and Environment, with duties to examine drafted laws on environment protection, natural resources and BD conservation (for example the Law on BD) before their submission to the NA for approval; and monitoring these laws enforcement.

5.1.15 Province People's Committee

For the implementation of the VN NBS, the PPCs of 63 provinces play a coordinating role in preparing and realizing different priority programs, including (i) coordinating with MONRE the preparation and implementation of 2 Priority Programs – the Program on strengthening the institutional systems for BD Management and the Program on investigation, inventory and development of national BD database; and (ii) coordinating with MARD the preparation and implementation of 2 priority programs - the Program on strengthening management capacity for the system of natural PAs, and the Program on restoration of degraded critical ecosystems.

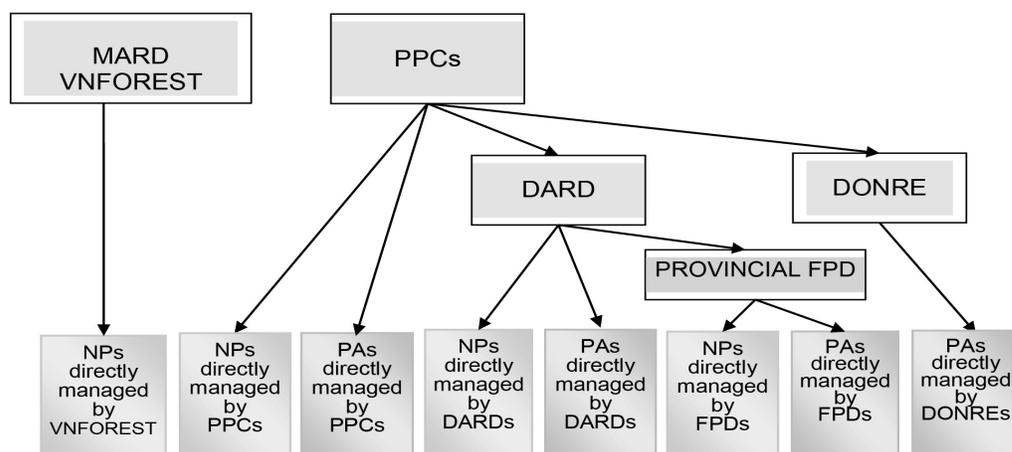
5.1.16 Protected Areas

in the VN NBS, PAs, including NPs, have been assigned to participate in preparing and conducting different BD conservation tasks, including coordinating with MARD to conduct the Priority Program on Strengthening management capacity for system of natural PAs. There are 6 NPs that are managed by MARD at the central level, while all other NPs and PAs are managed by PPCs (See Figure 12).

All NPs and PAs receive government budget including for recurrent expenditures, development investment, and ODA projects. MARD allocates budget for its 6 NPs through VNFOREST. The PPCs of 63 provinces allocate the budget for the NPs and PAs under their jurisdiction.

At the province level, the PPC may directly manage NPs and PAs, or it may assign other local agencies to do so, including the Department of Agriculture and Rural Development (DARD), the Department of Natural Resource and Environment (DONRE). In turn, DARD may assign NP and PA management to its provincial Forest Protection Department (FPD). This decentralization in administrative management of NPs and PAs leads to decentralization in public budget allocations. NPs and PAs received public budget directly from their supervising institutions, which also have role in decision making on the application of innovative finance instruments in NPs and PAs.

Figure 12 Decentralization in NPs and PAs Management



Source: MARD, National Capacity Development Plan for the Protected Area Management System in Viet Nam to 2025, with a vision to 2030 (Decree No. 626/QDD-TTg, dated 10 May 2017).

In terms of allocation of government financing, government financing for BD at the local level is included in the annual budget of the 63 provinces. The PPC subsequently is in charge for allocating budget to provincial agencies. Allocations for BD conservation activities in the provinces are allocated to local agencies that have BD conservation functions, including provincial departments and District Peoples' Committee (DPC). The agencies in the provinces with the largest responsibilities for BD conservation are the Department of Natural Resource and Environment (DONRE) and the Department of Agriculture and Rural Development (DARD), of which:

- DONRE has responsibilities for the implementation of the provincial BD strategy (P-BS), the provincial BD master plan (P-BMP) and BD Action Plan (P-BAP). Not all provinces have adopted all three documents, having either one, two or three these documents, or combined documents. The P-BS, P-BMP and P-BAP shall be consistent with the national BD strategy (VN NBS), the National BD Master Plan (N-BMP) and the national BD Action Plan (N-BAP). At the same time, provinces may include other BD tasks that are of their interest, e.g. setting up provincial PAs. For example, on 7 September 2017 Quang Nam province has established the Elephant Conservation Area with US 24 million financial support from USAID.
- DARD has functions for the management of agriculture, forestry and fishery in a province. The budget for BD-related tasks in provinces is allocated through DARDs to different province agencies, including: (i) Forest Ranger Division; (ii) Forest Development Division; (iii) Protected Forest Authority; (iv) Special-used forest Authority (they are NPs, Natural PAs under provincial management); and (v) Plant Protection Agency.

The state authorities at district and commune levels have assigned functions on BD monitoring and natural resources protection, especially districts and communes in buffer zone of NPs and PAs, financed from allocations received from the province.

5.2 Non-Government Institutions

5.2.1 Community-based organizations

There are different community-based organizations (CBOs) that participate in BD conservation as a part of their duties and objectives. The most important CBOs include:

- Political-based organizations: Viet Nam Women’s Union (VWU), Ho Chi Minh Communist Youth Union. The participation of these organizations in BD conservation is limited to disseminating government policies including BD policy, encouraging livelihood improvement among their members through developing and applying environment-friendly production in handicraft and agriculture, for example. They receive government budget for their operations.
- Community-based organizations including NGOs and profession-based organizations. They are independent institutions, some of which target nature protection and BD conservation (for example the VN Association for Conservation of Nature and Environment – VACNE, People and Nature Reconciliation - PanNature).

As part of the process to implement the VN NBS, the government has called upon CBOs to actively involve in monitoring conservation activities and the sustainable use of BD.

5.2.2 Business Community

The business community (BC) is a profit-making sector, as such their participation in BD conservation is limited.

The Viet Nam Chamber of Commerce and Industry (VCCI) – representative agency of the BC has little engagement with BD conservation, its participation focusing on promoting their members to follow adopted policies, including on natural resources and environment protection.

To implement the VN NBS, the government requests that “the Business community shall be responsible for strictly complying with laws and regulations on BD conservation; participating and actively making proposals, and implementing programs and projects on biodiversity conservation”.

6 CONCLUSIONS AND RECOMMENDATIONS

The analysis and recommendations to improve finance policy and institutions for BD conservation in VN focuses on three issues, addressed as follows:

6.1. Legal and financing policy for biodiversity

- Financing for BD conservation is being addressed in different legislative documents and policies in VN, including the national constitution, CPV's solutions, NA's laws, government decrees and ministerial guidelines. This demonstrates the increasing awareness of society on BD conservation, especially since 2013 when the new national constitution was approved.
- However, financing for BD conservation is not focused. In government budget expenditure policies, spending for BD is hidden in other spending items, it is not priority item in the government's spending policy, the Law on State Budget, nor is it specified in budget allocation plans. The BD spending code is incorporated into the environment protection code being recognized in the government budget code system; there is also no budget code for the PA system, and there is no specific investment plan for BD in the government investment programs for the 2016-2020 period.
- Important laws that relate to BD will come into force, including the Law on State Budget (from 2017), the Law on Forestry and the Law on Fishery (from 2019), while other laws are under revision, including the Law on Biodiversity. To implement the laws, the government will revise old Decrees or issue new Decrees in support of guiding financial management including for BD. It is important that related partners, especially the private sector and communities, will participate in this policy making process to include financial innovations for BD, such as compensation for BD losses as mentioned in the National Constitution and the Law on Biodiversity.
- The BD conservation financing policy is one sectoral development policy the government focuses on. The question is how the government will balance BD conservation targets with many other priority targets, such as the development of industry, rural development, construction and urbanization, export promotion, etc. Without a comprehensive, balanced orientation on sustainable socio-economic development, commitment to finance BD hardly can be fully completed.
- Private land is not recognized in VN. Therefore, all BD conservation facilities including NPs, PAs, and wildlife rescue centers are public service agencies, set up, managed and financed by the government. Innovative finance mechanisms to generate additional funding cannot be applied without government approval and control. Meanwhile, a government policy on promoting self-sufficiency was adopted, and initiatives to strengthen income-generation in NPs, NRs piloted. However, such initiatives may lead to reduced government budget allocations, especially for PAs where PPCs have the authority to declare institutions as totally self-sufficient (not receiving government budget), partly self-sufficient (part of the budget provided by the government) or not self-sufficient (the government covers all budget). Accordingly, the budget for NPs, NRs may not change significantly, with government budget allocations replaced by additional income generated. It is recommended to adopt government policy confirming that provinces shall sustain budget support to all BD conservation facilities, which shall maintain their right to generate and retain all their income.
- The VN NBS is the comprehensive government policy to accelerate BD conservation in VN. The government has committed to arrange different financial sources for VN NBS implementation.
- Each of 63 provinces has their own BD strategy, BAP or BMP. There is no consolidating national database to ensure sharing information and lessons learned. It is recommended to develop a BD policy data base.

6.2 Institutional responsibilities

- Sectoral engagement: the review shows that there are 3 clusters of which the operations and development have different relations to BD: (i) sectors depending on the status of BD - agriculture, fishery, eco-tourism, hydropower; (ii) sectors significantly impacting on BD - mining, production and import of chemical fertilizers, pesticides, industrial manufacturing; and (iii) sectors focusing on protecting BD - PAs, universities, NGOs, research centers. Sectors that threaten biodiversity play an increasing role in job creation, export and tax payment in the economy, but they also are causing increasing BD loss, losses that affect BD-dependent sectors in which the majority of the population with low-income earn their living.
- Legal status: government organizations dominate BD conservation activities over private and civil society organizations in term of their number and availability of resources. This public dominance may lead to bureaucracy and low efficiency in BD conservation. It is recommended that the government should consider delegating more BD conservation responsibilities to the private sector and civil society, including their participation in discussion and policy making processes, monitoring BD conservation enforcement, and leading some BD conservation programs/projects.
- Budget: Established BD conservation entities as mentioned in BMP to 2020 and vision to 2030 are important organizations in the sector. At the same time, they do not have individual codes in the state budget code system. Therefore, government budget allocations for BD activities can go through different government organizations, without focusing on specific BD conservation entities. It is recommended that MOF will consider introducing a targeted state budget code line for BD entities.
- Administration level. Central level organizations (ministries, institutes, research centers) have a strong voice in BD conservation, in term of scientific studies, policy making and budget allocation. Local level organizations are large in number, including People's Committees and state departments in 63 provinces, 713 districts (2016), 11,000 communes (2008), 219 PAs, and hundred thousand business companies, that are all closer to the field, but their perceptions and awareness about the benefits from BD conservation are not always adequate and sometimes ignored against benefits from production and trading. It is recommended that more BD valuation studies shall be conducted, and that BD conservation awareness shall be improved at provincial, district and commune levels, especially within government organizations and the business community.
- The government has stipulated that all organizations in both the public and private sectors have to integrate environment protection, natural resources and BD conservation in their development plans and strategies. However, this requirement has not been implemented in all agencies. It is recommended that environment protection, natural resources and BD conservation shall be addressed in all development plans, strategies of NA, the government, ministries, and provinces.
- Overall responsibility for BD conservation is assigned to MONRE, and BD conservation activities have been assigned to different organizations, specifically: (i) the management of all terrestrial, inland and marine PA systems are assigned to the agriculture sector - MARD and DARDs; (ii) study and research programs on BD conservation are managed by MOST, VAST and universities. Therefore, BD conservation actions lack focus, including through a National Action Plan on BD conservation. It is recommended that the government adopts a National Action Plan on BD conservation, led by a central BD conservation committee, which shall consider all measures to improve BD conservation, including legislative revisions, institutional rearrangements of assigned responsibilities between organizations, improvement of policy enforcement capacities, and fund raising.

6.3 Finance Mechanisms

- The government budget is the most important financing source for BD in VN, but the government budget for BD is low, and does not match BD's and ES' contribution to the economy. Different studies on natural resources valuation at the local level show that PAs/NPs receive government budget support much lower than the value of natural services they contribute to the economy. It is recommended that government will consider arranging expenditures of the revenue income relating to BD, including NRT, EPT and others, towards increased financing for BD conservation.
- Different finance mechanisms for BD conservation and natural resources protection are in place, among which PFES is the most successful. However, the management of the PFES mechanism needs to be improved, by developing a system of National BD criteria based on species and regions that serves improving BD finance allocations. Also a new Decree needs to be adopted that regulates collecting payments from all sectors specified in the new Law on Forestry, especially from eco-tourism, water supply, manufacturing and aquaculture.
- Globally, ODA allocations in support of BD conservation have remained stable, but ODA allocated to VN is decreasing since the country reached middle-income status in 2010. However, considering the increasing impact on BD and the environment from rapid economic development and population growth in recent decades, and the international commitments adopted by VN, the government and MPI may specify that securing ODA support for BD is a priority for the country in the coming years.
- Trust Funds are suitable channel to mobilize financing for BD. It is recommended that the engagement of the business community and NGOs in managing TFs such as VNFF and VEPF should be increased, to improve their financial viability. The TFs on BD off-set as stated in the National Constitution and the Law on BD should be designed and set up. It is recommended to adopt a Decree for the Community Development Fund on BD conservation, improve its operations.
- Government budget allocations approaches focus more on institutional aspects (ministerial and provincial budget allocations) than on sectors, in line with most annual budget allocation guidelines and published information. There are no data on budget allocations by sectors, despite the applied classification of the Government Budget Source Code (Decree 300/2016/TT-BTC on Budget Revenue Sources) and the Government Budget Expenditure Code (Decree 324/2016/TT-BTC, dated 21 December 2016), in which separated lines for Environment Protection (9.250) and Nature and Biodiversity Conservation (9.271) are considered. It is proposed that data on budget and expenditures for BD are included in government publications at the central and local levels.
- There is uncertainty whether BD conservation entities will receive all financial resources approved by government, because many entities are under designated local management (PPC, DARD and others). The topical monitoring mission on BD financing is important to improve government policy enforcement. It is recommended that government spending for environment protection, including BD, is included in the annual monitoring program of the NA and local People's Councils at provincial, district and commune levels. This will help to confirm that BD conservation activities receive appropriate government budget to operate, in line with adopted government commitments.
- Other financial mechanisms like surcharge on tourism, lotteries and stamps for BD are potential options to generating more financial resources for BD conservation. The global reach of the BIOFIN project also could help VN learning from other finance mechanisms, including possibly low-cost approaches to raise BD funding like bio-prospecting, nutrition quota.

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Annex 2 Matrix of Aichi Targets and alignment with VN NBS goals

	Aichi Targets (2010)	VN NBS (2013) - Issues
	Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	
1	By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	3.2.1. Change in behavior and awareness of state management organizations and communities towards biodiversity conservation and sustainable use.
2	By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	3.2.3. Strengthen integration of biodiversity conservation in policy development.
3	By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.	3.1.4. Control activities that have negative impacts on biodiversity.
4	By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	2.1. Viewpoints e) Biodiversity conservation must be integrated into national, sectoral and provincial development strategies, plans and policies. 3.1.3.a). support production of agricultural, forestry, and fisheries products that meet international standards for conservation and sustainable use of biological resources. 3.2.3. Strengthen integration of biodiversity conservation in policy development.
	Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	2.3. Overall target to 2020. That naturally important ecosystems, endangered, rare, and precious species, and genetic resources are preserved and used sustainably, contribute to the development of the green economy, and actively respond to climate change.
5	By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	3.1.1. Conservation of natural ecosystems. a) Consolidate and complete system of natural protected areas. Establish biodiversity corridors connecting natural habitats of endangered, rare, and precious species prioritized for protection.
6	By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	3.1.1.b) Continue to implement the targets and tasks in the mangrove forest restoration program under Decree 405/TTg-KTN dated 16 March 2009; Prepare and implement the national plan for conservation and sustainable use of wetlands with priority given to critical river basins. 3.1.2.a) Continue to effectively implement the targets and tasks of the program to protect rare and precious aquatic species at risk of extinction until 2015, with a vision to 2020, attached to Decree 485/QD-TTg dated 2 May 2008 of the Prime Minister. 3.1.4.a) Limit overexploitation and changes to fishing, harvesting, and breeding practices of agricultural, forestry, and fisheries products.

	Aichi Targets (2010)	VN NBS (2013) - Issues
7	By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	3.1.1.b) Strengthen protection activities in primary forests, and take measures to prevent deforestation and illegal logging in natural forests, special-use forests, and protection forests. 3.1.2.b) Conservation of native plant varieties, livestock and wild relatives of precious, rare species.
8	By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	3.1.4. Control activities that have negative impacts on biodiversity. a) Control activities considered unsustainable or causing environmental pollution such as conversion of land and water surface area use and agricultural practices: Take measures to control environmental pollution with adverse impacts on biodiversity.
9	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	4.1.4.c) Control, halt and prevent damage of invasive alien species; enhance biosafety management of genetically modified organisms.
10	By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	3.1.1.b) Implement measures to protect and restore coral reefs and sea grass ecosystems of appropriate scale and scope.
Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity		
11	By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	2.4. Specific targets: To improve the quality and increase the area of protected ecosystems, ensuring that the area of terrestrial protected areas accounts for 9% of the total territorial area; marine protected areas account for 0.24% of the sea area, forest coverage reaches 45%, primary forest remains at 0.57 million hectares coupled with effective protection plans; mangrove forests, sea grass beds, and coral reefs are maintained at the current levels.
12	By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	2.4. Specific targets: To improve the quality and populations of endangered, rare and precious species, ensuring that no new case of species extinction is reported, and significantly improve the status of endangered, rare and threatened species.
13	By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	2.4. Specific targets: To compile an inventory, store and conserve native, endangered, rare and precious genetic resources (including animals, plants and microorganisms) to ensure that they are not impaired or eroded.
Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services		
14	By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	3.1.1.a) Develop long-term plans for investment in the buffer zones of protected areas and implement a sustainable economic development model for households in these zones.
15	By 2020, ecosystem resilience and the contribution of biodiversity to carbon	2.4. Specific targets: 15% of degraded critical ecosystems are restored; the numbers of

	Aichi Targets (2010)	VN NBS (2013) - Issues
	stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	internationally recognized protected areas are increased to 10 Ramsar wetlands, 10 biosphere reserves, and 10 ASEAN heritage parks.
16	By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	3.1.3.a) Replicate a model for the management of protected areas involving community participation, and implement mechanisms to share benefits in an equitable way amongst involved parties. 3.1.3.c) Establish a mechanism for managing access to genetic resources, sharing benefits, protection and traditional knowledge of genetic resources.
	Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building	
17	By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	2.1.e) Biodiversity conservation must be integrated into national, sectoral and provincial development strategies, plans and policies. 3.2.3. Strengthen integration of biodiversity conservation in policy development. 2.1.a) Develop criteria and guidelines for integrating biodiversity conservation into the strategies, master plans and planning at national, sectoral and local levels.
18	By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	3.1.1.a) highlighting the involvement of and benefits to the communities living in the buffer zones. 3.1.3.a) Replicate a model for the management of protected areas involving community participation, and implement mechanisms to share benefits in an equitable way amongst involved parties.
19	By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	3.2.4. Promote scientific research, development and the application of modern technology in conservation and sustainable use of biodiversity: a) Promote scientific research on the conservation and sustainable use of biodiversity; Focus research and development on the application of models for breeding and reintroduction of wild species into nature, the sustainable use of species and genetic resources, and efficient eco-tourism activities.
20	By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	3.2.5. Increase of financial resources for biodiversity conservation. a) The State shall ensure resources and budgets in accordance with the delegated level to implement activities of the Strategy. b) Encourage and mobilize community participation and business-sector investment in biodiversity conservation; Conduct research on the establishment of a biodiversity conservation fund; Develop mechanisms to diversify investment sources for biodiversity conservation, particularly payments for environmental services, biodiversity offsets, and other financial mechanisms through carbon markets and private sector investment.

Annex 3 Priority Programs, plans, projects in VN NBS

	Name of priority project	Focal Agency for preparation and submission	In cooperation with	Submission time
1	Plan on strengthening the institutional systems for biodiversity management	MONRE	MOH; MARD; Provincial People's Committees	2015
2	Plan on investigation, inventory and development of national biodiversity database	MONRE	Provincial People's Committees; MOST; MARD; VAST	2016
3	Program on control of illegal exploitation, trade and consumption of endangered wildlife	MARD	MONRE; MOIS; MOIT	2014
4	Plan on strengthening management capacity for system of natural protected areas	MARD	MONRE; Provincial People's Committees; Management Board of PAs	2014
5	Program on the conservation and sustainable use of genetic resources	MOST	MONRE; MARD; MOH; Other concerned ministries, ministerial level agencies, and government agencies	2015
6	Plan to strengthen biodiversity crime prevention	MPS	MONRE; MARD	2014
7	Plan on restoration of degraded critical ecosystems	MARD	MONRE; Provincial People's Committees	2014

Annex 4 Biodiversity Impacts, Risks and Opportunities related to Sector Dependencies

No.	Sector	Impacts from sectoral development	Risks	Opportunities
1	Agriculture	<ul style="list-style-type: none"> • Agricultural intensification and increasing use of agrochemicals of different origins have contributed to the decline of bird and insect populations in rural and suburban areas. Many useful birds eradicating pests have been extinguished, leading to outbreaks of disease in the field. 	<ul style="list-style-type: none"> • Reduce pollination due to the loss of insects as result of the overuse of chemical fertilizers and pesticides. • Lower harvest. • Rich natural genetic sources available for exploitation. • Higher cost for production, reduce income of farmers. 	<ul style="list-style-type: none"> • MARD promotes organic agriculture with the hope helping to expand the market with higher price/profit. • National Green Growth Strategy approved. • Customers switching to suppliers that offer eco-certified products.
2	Forestry	<ul style="list-style-type: none"> • Approximately 25 million people derive 20-50 per cent of their income from non-timber forest products (NTFP), including hundreds of species of medicinal plants and latex plants. • The terrestrial and coastal vegetation helps to regulate the climate through carbon storage, filtering air and water, decomposition of waste, and mitigation of harmful effects of natural disasters such as landslides, floods and typhoons. Mangrove forests save billions of VND in annual dike maintenance and repair costs, as well as damage to rural and urban community infrastructure along the coast. 	<ul style="list-style-type: none"> • Conversion of forest to cash crops: The 2015 land census shows that from 2014 to 2015, 4,027 ha of forest land was converted to other land. Thousands of hectares of coral reefs and sea grass beds in VN have been lost due to marine exploitation or aquaculture. The need for fish and shrimp pond owners to generate rapid financial returns is driving a shift from extensive aquaculture to unsustainable forms of intensive aquaculture. • In the years 2006-2009, the area of forest disturbed by fires nation-wide was 1,400 ha/year on average. • Unsustainable forest management leads to high poverty rates, especially among local ethnic minority groups. 	<ul style="list-style-type: none"> • The Forest Development Strategy for 2006-2020 (Decree 18/2007/QĐ-TTg, dated 5 February 2007 outlines the targets to sustainable develop as 16.2 million hectares of forest, including 8.4 million hectares of production forest, 5.7 million hectares of protection forest and 2.2 million hectares of PAs, increasing the forest coverage to 47% by 2020. • A list of 30 NPs, 58 NRs, 11 Species Conservation areas, 45 Landscape Conservation Areas, 20 Experimental Research Forest Areas, and 16 MPAs has been approved • The government approved the policy on investment on forest for 2011-2020 (Decree 24/2012/QĐ-TTg, dated 1 June 2012; Decree 38/2016/QĐ-TTg, dated 14 September 2016) and the Forest Development Strategy for 2011-2020 (Decree 18/2007/QĐ-TTg, dated 5 February 2007). • The government stated on 20 June 2016 to close 2.25 million hectares of natural forest from exploitation and conversion.
3	Fishery	<ul style="list-style-type: none"> • Some 20 million people depend on fisheries for most or part of their income, and exploit and use over 300 marine species 	<ul style="list-style-type: none"> • The industrial farming of catfish in high density in the Mekong Delta is also a cause of organic pollution in many water 	<ul style="list-style-type: none"> • Increased public awareness on water protection. • Government approved policies on environment protection to 2020 and vision 2030 (Decree 1216/QĐ-TTg, dated 5

		and over 50 freshwater aquatic species of economic value.	<p>areas, affecting natural ecosystems and aquatic communities in these areas.</p> <ul style="list-style-type: none"> • Over-fishing and use of destructive fishing techniques such as explosives, poisons and electrical shocks are used rampantly and uncontrolled in both inland waters and the sea, poses serious threat to natural ecosystems in VN. • Higher cost and lower profit in fishing. • Reduce of seafood export due to water and/or products contaminated. 	<p>September 2012), the Fishery Development Strategy to 2020 (Decree 1690/QĐ-TTg, dated 16 September 2010), the Master Plan on Fishery Development to 2020 and 2030 (Decree 1445/QĐ-TTg, dated 16 August 2013).</p> <ul style="list-style-type: none"> • Increase the control on, and fines for, destructive fishing techniques. • Master Plan on Lobster Farming to 2020 and 2030 (Decree 1412/QĐ-BNN-TCTS, dated 22 April 2016) in the coastal zone of 8 provinces has an estimated budget of VND 233 billion (US\$ 9.7 million), 96% of which is provided from the government budget.
4	Tourism and Recreation	<ul style="list-style-type: none"> • BD and beautiful terrestrial, coastal and island landscapes also underpin much of VN's rapidly expanding tourism industry 	<ul style="list-style-type: none"> • Construction of low-environment-efficiency tourism service sites on islands, in coastal zones and PAs. • Construction of cable car in different PAs (Hoang Lien Son NP, Yen Tu Conservation area...). • Poor tourism development capacity. 	<ul style="list-style-type: none"> • Tourism industry is increasing rapidly. • Government approved Tourism Development Strategy to 2020 and vision 2030 (Decree 2473/QĐ-TTg, dated 31 December 2011). • Eco-tourism companies have to pay 1-2% of their annual revenue to PFES Fund (Decree 99/2010/NĐ-CP, dated 24 September 2010 and Decree 147/2016/ND-CP, dated 2 November 016).
5	Hydropower	<ul style="list-style-type: none"> • Hydropower dams and reservoirs often cause flooding in important terrestrial habitats that used to be natural forests, while creating barriers to migratory fish, altering the biological behavior of aquatic species, and causing big impacts on rivers downstream from the dams, even to coastal estuaries. Many hydropower reservoirs with artificially managed discharges cause major alterations to seasonal flow regimes, causing harms to human, the economy, and particular effect on downstream ecosystems. 	<ul style="list-style-type: none"> • Increase operational cost as unstable water supply/stream due to clearing forest and climate change/ drought. 	<ul style="list-style-type: none"> • Several hydropower projects have been removed for environment protection purpose (Order of Government Office, 191/TB-VPCP, dated 22 July 2016). • In 2017, there are 17 hydropower projects and 69 feasibility sites in Dak Lak province that have been removed. • Hydropower stations have to pay VND 20 per kwh commercial power to the PFES Fund for forest protection purpose (Decree 99/2010/NĐ-CP, dated 24 September 2010). This payment rate has almost doubled to VND 36 per kwh from 1 January 2017.

Source: Compiled by the author

Annex 5 Sector dependencies and impacts on biodiversity

Sector	Agriculture	Forestry	Fishery	Tourism and Recreation	Hydropower
Share to GDP - 2015 - 2020 (forecast)	12.8% 11.0%	0.5% 1.0%	3.7% 3.0%	4.3% 7.0%	4.0% 5.0%
# of workers and % of labor force - 2015 (%) - 2020 (%)	12,259,000 23.2% 21.0%	6,000,000 11.4% 10.0%	5,000,000 10.0% 12.0%	2,736,200 5.2% 7.5%	146,000 0.3% 0.4%
Priority Trends (priority BD trends that are most important to the sector)	<ul style="list-style-type: none"> About 800 crop varieties, and 14 key cattle and poultry varieties. VN also possesses a wealth of agro-biodiversity. It is situated within one of the Centers of Origin of domesticated plants and has been the source of some 40 crop species. Local crop varieties and livestock breeds – including the famous pot-bellied pig - have been developed over many hundreds of years and often possess valuable characteristics, such as disease and pest resistance. More than 6,000 varieties, genotypes and landraces of rice have been recorded in VN. Agricultural expansion and 	<ul style="list-style-type: none"> 20,000 terrestrial and water plants; around 10,500 terrestrial animals. From 2006 to 2011, over 100 species new to science were discovered and described for the first time in VN, including 21 reptile species, 6 frog species and 1 ferret species. The overexploitation of plants not only affects BD, but also the livelihoods of households living dependently on forest products. Lack of data constrains assessments of the magnitude of this threat, but its effects on many groups of plants, for instance orchids, are potentially severe. The area of natural forest has declined severely, and it is estimated that only half a million hectares of primary forests remain, scattered in the Central Highlands and north- 	<ul style="list-style-type: none"> About 2,000 invertebrates and freshwater fish, and over 11,000 marine species. From 1943 to 2005, at least 220,000 hectares of mangrove forests have been lost because of deforestation and aquaculture development. Thousands of hectares of coral reefs and sea grass beds in VN have been lost due to marine exploitation or aquaculture. The need for fish and shrimp pond owners to generate rapid financial returns is driving a shift from extensive aquaculture to unsustainable forms of intensive aquaculture. This, in turn, is leading to mangrove depletion, the loss of habitat for many 	<ul style="list-style-type: none"> Besides the advantage of unique natural ecosystems and diverse species composition, over the last 20 years a range of new discoveries has highlighted and reconfirmed VN's global importance for BD. A new genus of large-hoofed mammal, the Saola (<i>Pseudoryx nghetinhensis</i>) was discovered in 1992, the world's largest land-dwelling animal to be discovered more than 50 years after the Kouprey (<i>Bos sauveli</i>) was discovered in Indochina (in 1937). Three new deer species have also been discovered: the Silver-backed Chevrotian (<i>Trangulus versicolor</i>); Large-antlered Muntjac (<i>Megamuntiacus vuquangensis</i>); and the 	<ul style="list-style-type: none"> The large forest coverage in the country has provide huge regular water to streams and rivers. Most of rivers are in mountainous with high slope, creating the potential for hydropower development. The loss in quality and quantity of forests in the last two decades has led to the loss of profit for hydropower stations, due to lack of water source.

	<p>intensification: Economic development and population growth have led to an intensification and expansion of permanent agriculture in many deltas in VN. In the Mekong Delta, especially Dong Thap Muoi and Long Xuyen, almost all natural grasslands have now been converted for intensive rice cultivation, affecting habitats of several endangered species, and eroding some important wild genetic resources.</p>	<p>central VN.</p> <ul style="list-style-type: none"> • Deforestation due to shifting cultivation is one of the direct threats to forest loss and degradation. Although shifting cultivation has been correlated with forest degradation and loss in some parts of the country, there is also evidence that, in other areas, shifting cultivation is being practiced with minimal impacts on biodiversity. • In VN, every year hundreds of fires occur and destroy thousands of hectares of forests, causing damage worth hundreds of billions VND, having a serious impact on the environment and biological communities in forest ecosystems. According to the Forest Protection Department, between 2006-2009, the area of forest disturbed by fires nationwide was 1,400 ha/year on average. • Particularly in the first eight months of 2011 alone, there were 214 fires and 263 cases of violation of regulations on forest fire prevention and fighting. 	<p>water birds, and environmental pollution.</p>	<p>Annamite muntjac (<i>Munticus truongsonensis</i>). Other species have been discovered and described in VN include 3 species of turtle, 15 lizards, 4 snakes, 31 frogs, 55 fish, over 500 invertebrates and more than 200 species of vascular plant.</p>	
<p>Dependencies (how does the sector depend on BD and ES)</p>	<ul style="list-style-type: none"> • In 2010, agriculture contributed over 20% to the GDP and 28 percent of total exports. • The production of local special species (fruits, 	<ul style="list-style-type: none"> • Approximately 25 million people live in or near forests, and derive 20-50 per cent of their income from non-timber forest products, including hundreds of species of medicinal plants and 	<ul style="list-style-type: none"> • Some 20 million people depend on fisheries for most or part of their income, and exploit and use over 300 marine species and over 50 	<ul style="list-style-type: none"> • BD and beautiful terrestrial, coastal and island landscapes also underpin much of VN's rapidly expanding tourism industry. • In 2016 Viet Nam received 	<ul style="list-style-type: none"> • All hydropower plants depend on water from rivers. The river network density is high, ranging from under 0.5-2 km/km².

	<p>cereals, animals) helps farmers to expand to domestic and international markets to earn higher incomes.</p>	<p>latex plants.</p>	<p>freshwater aquatic species of economic value.</p>	<p>897,279 international visitors, an increase of 17.9% compared to 2015, and 62,000,000 domestic visitors, an increase of 8.8% compared to 2015.</p> <ul style="list-style-type: none"> • Eco-tourism is becoming popular in PAs, which on one hand promotes discovery and education on the protection of nature, and on the other hand brings benefits to local people providing the service. • Six of the 238 priority eco-regions identified by the World Wide Fund for Nature (WWF) are located in VN. These are the Annamite Range Moist Forests; Indochina Dry Forests; Mekong River; Northern Indochina Sub-Tropical Moist Forests; South-east China-Hainan Moist Forests; and Xi Jiang Rivers and Streams (Bang River – Ky Cung). A significant number of VN's PAs have been accorded international or regional recognition, including 5 Ramsar sites, 8 Biosphere Reserves, 2 natural World Heritage sites and 5 ASEAN Heritage Sites. A total of 63 Important Bird Areas (IBAs) have been identified, accounting for about 5% of the total land 	<ul style="list-style-type: none"> • River stream volume and quality depends on the catchments they are located in, and the forest coverage in them.
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				area of the country. The 4 provinces with the highest number of IBAs (19) are Dak Lak, Lam Dong, Gia Lai and Quang Binh.	
Impacts (how does the sector impact BD and ES)	<ul style="list-style-type: none"> • The conversion of forest to cash crop plantations is a particularly significant cause of the loss of natural forests in VN. • There has been extensive replacement of natural forests by a variety of cash crops, including sugarcane, tea, coffee, cocoa, rubber, cashew, and most recently cassava (for export to China to be turned into biofuels). • Agricultural intensification and increasing use of agrochemicals of different origins have contributed to the decline of bird and insect populations in rural and suburban areas. Many useful birds eradicating pests have been extinguished, leading to outbreaks of disease in the field. 	<ul style="list-style-type: none"> • Plant species with high economic values are often particularly at risk, most notably timber species. VN's forests support a great diversity of commercially valuable timber species, including <i>Erythrophleumfordii</i>, <i>Dalbergia</i> spp., various members of the Dipterocarpaceae family (such as <i>Dipterocarpus</i> spp., <i>Shorea</i> spp. and <i>Hopea</i> spp.) and various conifers, such as <i>Fokienia hodginsii</i>. Stocks of most timber species have declined significantly over recent decades, although the implications of this for the long-term viability of populations of these species are not fully known. Other economically valuable plant species threatened by over-exploitation include <i>Aquilaria crassna</i>, which is a source of agarwood, and <i>Anax Vietnamensis</i>, which is used to produce a tonic; both of these species are threatened with extinction in VN. • Reforestation programs have been carried out for many years, they tend to focus on monoculture eucalyptus and pine plantations that contribute 	<ul style="list-style-type: none"> • Over-fishing in many freshwater bodies, which in turn results in reduced of catch volume. • Many high-value aquatic species have been in serious decline, such as ca Anh vu, ca Lang, ca Chien, lobster, abalone, and scallop. Destructive fishing techniques such as the use of explosives, poisons and electrical shocks are used rampantly and uncontrolled in both inland waters and the sea, posing serious threat to natural ecosystems with high BD such as rivers, streams, swamps, lakes, sea grass beds and coral reefs in coastal areas. • Many coastal mangroves, lagoons and intertidal mudflats have undergone widespread and rapid conversion to ponds for farming of shrimp, clam and other aquatic species, and as a result, primary mangrove forests in many provinces have almost vanished 	<ul style="list-style-type: none"> • Fast tourism development creates a high demand for construction of hotels and luxury resorts, especially along the beach and in the forest. • Large areas of land with high BD value, including in NPs and PAs, have been allocated to tourism companies. • BD loss increases due to tourism construction as well as uncontrolled behavior of visitors. E.g. cutting trees and flowers; destroying mountains and forests, capturing wild animals. 	<ul style="list-style-type: none"> • The construction of hydropower stations has destroyed large area of natural forest. • Many hydropower reservoirs with artificially managed discharges cause major alterations to seasonal flow regimes, causing harm to humans, the economy, and particularly affect downstream ecosystems. • Hydropower dams and reservoirs often cause flooding of important terrestrial habitats previously natural forests, while creating barriers to migratory fish, altering the biological behavior of aquatic species, and causing big impacts on rivers downstream from the dams, even to coastal estuaries.

		<p>little to the conservation of BD.</p> <ul style="list-style-type: none"> • Intertidal mudflats in VN are the feeding areas for hundreds of aquatic species, migratory and resident shorebirds. The conversion of intertidal mudflats through mangrove afforestation at the estuary of the Red River is a potentially serious threat to the most important areas for migratory shorebirds, such as Black-faced Spoonbill (<i>Platalea minor</i>). 	<ul style="list-style-type: none"> • The industrial farming of catfish in high density in the Mekong Delta is also a cause of organic pollution in many water areas, affecting natural ecosystems and aquatic communities in these areas. 		
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Source of statistical figures: General Statistic Office of Viet Nam (VN GSO), and estimation.

Annex 6 BIOFIN Catalogue for Viet Nam - Biodiversity Financing Solutions

No	Menu	INDEX	Solution Type	Level	Select	Related Policy	Remark
1	MR 03.07	BO	Biodiversity offsets	A	1	The National Constitution of VN determines that government has policy and encourages environment protection and BD conservation, BD off-set is imposed to all parties who cause BD lost (article 63). The Law on BD (2008) determines the principle on BD lost compensation (Article 75)	There is no national BD-offset mechanism set up. There are some business companies that voluntary spent for BD offset in their projects. For example, Coca Cola has since 2008 been supporting activities aimed at protecting Tram Chim National Park and supporting sustainable livelihoods among communities living in its buffer zone. Holcim Ltd., an international company specializing in the manufacture and distribution of cement and aggregates, has since 2007 been providing funding to BD conservation in and around Kien Giang Man and the Biosphere Reserve. These activities are currently being followed up with the initiation of a BD offset program, aiming to compensate for the unavoidable impacts of limestone quarrying and clay extraction by supporting the establishment of two new NRs.
2	MR 03.07	BIO	Bioprospecting	A	1	The program on the conservation and sustainable use of genetic resource is one of seven priority programs in the VN NBS	Government Decree 1671/QĐ-TTg, dated 28 September 2015 on Approval Program on the conservation and sustainable use of genetic resources to 2025 and vision 2030 determines 3 main actions (collect/reserve genetic resources, investment reservation facilities, and develop national genetic database), as well as 10 priority tasks to realize this program.
3	DM 08.24	CM	REDD+	B	1	Since 2008, Viet Nam is involved in various programs on Reduced Emissions from Deforestation and Forest Degradation (REDD), resulting in the following policies: (i) National Action Plan on REDD in 2011-2020 (Decree 799/QĐ-TTg, dated 27 June 2012; (ii) the Program on reducing GHG in agriculture to 2020 (Decree 3119/QĐ-BNN-KHCN, dated 16 December 2012.	The structure of REDD management in VN has been set up to conduct activities up to 2020. VN was one of the original UN-REDD Program “pilot” countries. The UN-REDD Program has assisted the Government of VN in establishing a national REDD+ Network, where various stakeholders come together to coordinate REDD+ related issues
4	DM 08.20	CTI	Products sold for conservation or wildlife	B	3	There is no specific government policy	Several NPs including Cat Ba, Phu Quoc, Ba Vi, Phong Nha-Ke Bang have developed and sell a range of products from toys, cloths, caps etc. to help generate profit for conservation and endangered species.
5	MR 03.07	CD	Corporate and	A	3	VN NBS has called business corporations to	A BD offset assessment has been carried out for the Long Son

No	Menu	INDEX	Solution Type	Level	Select	Related Policy	Remark
			corporate foundations' donations			participate in BD financing including establish BD conservation fund, BD offset	Petrochemical complex in the in the southern province of Ba Ria-Vung Tau (Sustainable financing for BD conservation – a review of experiences in German development cooperation, UFZ Discussion Papers, 8/2017). FDI Honda company in VN has invested VND 3.5 billion (US\$ 146,000) for CDM forest plantation project in Hoa Binh province in 2003-2011, and VND 4.9 billion (US\$ 205,000) for CDM forest plantation project in Bac Kan province in 2013-2020.
6	MR 03.07	CS	Technology upgrade and maintenance	B	1	Law on save and efficiency use energy (50/2010/QH12, dated 17 June 2010)	National Program on save and efficient use of energy 2006-2015 was completed; and a new one for 2016-2020 is under preparation to be approved in 2018.
7	MR 03.07	DBS	Debt-for-Nature Swaps (detailed review)	A	1	VN has participated in Bilateral and Multilateral Debt-for-Nature (DNS) Initiatives from 1996 and there was US\$ 10.4 million worth of debt placed under the DNS scheme.	VN has applied the DNS mechanism for forest development projects.
8	MR 03.07	DRI	Disaster risk insurance	A	3	The Law on Insurance Business (24/2000/QH10, dated 09 December 2000); Policy on piloting insurance in agriculture (24-NQ/CP, dated 28 October 2008)	Assets insurance is fast developing in VN. Insurance consulting companies like AEGIS provides services on insurance for agriculture, forestry and fishery. But actual insurance for natural assets like forest has not been applied due to high risk.
9	MR 03.07	GL	Green microfinance	B	3	Government Policy on the Organization and Operation of Microfinance in VN (28/2005/NĐ-CP, dated 9 March 2005); Decision of Central Bank on License provision to microfinance agencies (03/2018/TT-NHNN, dated 23 February 2018)	VN Microfinance Working Group (http://www.microfinance.vn) has supported to develop microfinance schemes in different sectors and provinces. There are some microfinance schemes focusing on poverty alleviation/ livelihood improvement with natural/ forest protection.
10	MR 03.07	GL	Community finance	B	1	Law on Fishery (2017) has encouraged Community Fund (CF) establishment to support aquatic resource protection and development (article 22).	CF is small fund created by different entities like NPs, NGOs, community development projects or local people to meet its objectives. CF may have different name in different locations. CF is funded by ODA projects of FAO, IFAD, ADB, JICA and other international donors. Most CFs have developed small revolving savings-credit scheme to mobilize local small savings and expand its participants. Each CF has own targets. Some of them have focused on integration poverty reduction with BD conservation or environment protection. For example, in NP of Cat Ba, Xuan

No	Menu	INDEX	Solution Type	Level	Select	Related Policy	Remark
							Thuy, Ba Be, Na Hang, Bidoup-Nui Ba.
11	DM 08.08	GP	Green procurement	A	3	Decision of Ministry for Agriculture and Rural Development (83/QĐ-BNN-TCLN, dated 12 January 2016) on Program for Sustainable Forest Management and Forest Certification in 2016-2020	The program targets the sustainable management and exploitation of forests, BD conservation, and forest certification (FSC) provision to meet domestic and international market environment protection standards. By 2020 the forest certification will be given to 500.000 hectares of forests in VN.
12	MR 03.07	HR	Human resources management	A	3	The plan on strengthening the management capacity for system of natural PAs is one of seven priority programs in the VN NBS.	The government has approved the plan on strengthening the management capacity for the system of natural PAs to 2025 and Vision 2030. The plan defines 3 tasks/solutions - develop policy on PA management capacity improvement, capacity building training and IT application (Decree 626/QĐ-TTg, dated 10 May 2017).
13	DM 08.20	LS	Conservation extension services	B	3	Government has policy on extension service for production and service in agriculture, fishery, forestry and handicraft in rural areas (02/2010/NĐ-CP, dated 8 January 2010) that integrates income improvement with environment protection.	Public extension service organizations have been set up from central to village levels.
14	MR 03.07	MPD	Mobilization of private donations	A	2	Government policy on International NGO in Viet Nam (Decree 340-TTg, dated 24 May 1996); International NGO registration in VN (Decree 12/2012/NĐ-CP, 1/3/2012), The operation of Viet Nam NGO (Decree 88/2003/NĐ-CP, dated 30 July 2003).	There are different international NGOs (e.g. WWF, IUCN) and VN-based NGOs (e.g. PanNature, Viet Nam Association for Conservation of Nature and Environment) devoted to nature protection and BD conservation in VN. They have mobilized large donations from the private sector for this purpose.
15	MR 03.07	ODA	Increasing Official Development Assistance (ODA)	A	1	ODA mobilization is defined in the Law on Public Debt. approved by the VN NA in November 2017 and in force from 1 July 2018. The MOF is responsible for ODA mobilization and international debt payment.	According to the plan for ODA mobilization in 2016-2020 (Government Decree 251/QĐ-TTg, dated 17 February 2016), the government expects to secure US\$ 39.5 billion for 1203 projects, in which projects on environment protection, climate change resilience and green growth are among the four priority sectors. Large international donors include WB, ADB, IMF, OFID, NDF, EU, UNAIDS, UNDP.
16	MR 03.07	ODA	Bilateral ODA	B	1	Policy on ODA management (Decree 16/2016/NĐ-CP, dated 16 March 2016)	To mobilize bilateral ODA, the VN government works with different other governments such as Ireland, GB, Austria, Belgium, Canada, Kuwait, Denmark, Germany, the Netherlands,

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							South Korea Italy, Norway, Japan, New Zealand, Australia, China, Singapore and others.
17	MR 03.07	ODA	Climate aid	B	1	VN National Strategy on Climate Change for 2016-2050 (Decree 2139 /QĐ-TTg, dated 5 December 2011) considers that ODA mobilization is an important financial source for implementation of this strategy.	The government approved the Support Program for Resilience in Climate Change (SP-RCC) for 2016-2020 (Decree 2044/QĐ-TTg dated 27 October 2016). SP-RCC focuses on mobilizing ODA for climate change mitigation. MONRE is responsible for receiving ODA from partners including AFD, JICA, WB.
18	MR 03.07	ODA	Multilateral ODA	B	1	Policy on ODA management (Decree 16/2016/NĐ-CP, dated 16 March 2016).	Large international donors that support VN include WB, ADB, IMF, OFID, NDF, EU, UNAIDS, UNDP.
19	MR 03.07	ODA	Other Official Flows (OOF)	B	1	There are some ODA projects have OOF.	ODA received by VN includes grants (10-12%), preferential loans (80%) and OOF (8-10%). http://www.thesaigontimes.vn/155671/ODA
20	MR 03.07	NCA	Promoting Natural capital (NC) accounting	A	1	Development of the NC accounting system and its integration into the national account system is being addressed in different government policies, including (i) the Sustainable Development Strategy of VN for 2011-2020 (Decree 432/QĐ-TTg, dated 12 April 2012); (ii) the Solution on Climate Change Resilience, increasing natural resource protection and environment management (Decree 24-NQ/TW of CPV); (iii) the National Strategy on Green Growth; and (iv) the National Strategy on Environment protection to 2020 and Vision to 2030.	There is a National Research Program on Developing the System of Economic Environment Accounts (SEEA) and its integration into the System of National Accounts (SNA). The program is conducted between 2016-2019 by the Institute for Strategy and Policy on Natural Resource and Environment (ISPONRE) of MONRE.
21	MR 03.07	PES	Payment for Ecosystem Services (PES)	A	1	The government policy, including Decree 99/2010/ND-CP, dated 24 September 2010; Decree 147/2016/ND-CP, dated 2 November 2016, and the revised Law on Forestry (No.16/2017/QH14, dated 15 November 2017, to enter into force from 01 January 2019) has classified more detail on PES (PFES	In VN, PES is so far only applied in the forest sector, and called Payment for Forest Environment Service (PFES). Business companies in hydropower, clean water provision, manufacturing and tourism pay defined rates to forest owners including private farmers, NPs and PAs. The payment rates are as: hydropower company: 36 VND per kwh of commercial power; clean water provision company: 52 VND per 1 m ³ of commercial water; tourism company: 1%-2% of annual revenue; manufacturing company: not yet decided. From 2011 to 2015, annual collected PFES amounts to VND 1,200 billion on average (US\$ 50 million

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						in VN) since 2009.	per year). Total accumulated collected PFES by December 2016 amounts to about VND 6,511 billion (US\$ 271 million). By June 2016, 97.2% of PFES (VND 5,586,497 million) was collected from the hydropower sector, 2.6% (VND 149,680 million) from the clean water provision sector and 0.15% (VND 8,615 million) from the tourism sector. In total VND 5,024 billion (US\$ 209 million) or 90% of collected PFES money has been disbursed to about 500,000 farmers to protect 5.87 million hectares of forests, equal to 44% of the total national forest area.
22	MR 03.07	PES	Payment for Ecosystem Services-state intermediation and/or fee	B	1	The government policy, including Decree 99/2010/ND-CP, dated 24 September 2010; Decree 147/2016/ND-CP, dated 2 November 2016, and the revised Law on Forestry (No.16/2017/QH14, dated 15 November 2017, to enter into force from 01 January 2019) has classified more detail on PES (PFES in VN) since 2009.	In VN, PES is so far applied in the forest sector, so called Payment for Forest Environment Service (PFES). Business companies in hydropower, clean water provision, manufacturing and tourism pay defined rates to forest owners. The payment is conducted through the VN Forest Protection and Development Fund (VNFF) - the government financial entity. VNFF is established at central and province levels. The central VNFF collects PFES from large payers that work in two or more provinces. The central VNFF keeps 0.5% of collected PFES as service fee, and transfers 99.5% to provincial VNFFs.
	DM 08.20	EC	Compensation for planned environmental damage	A	2	Civil Law Law on Environment Protection Government policy on Evaluating environment loss (Decree 03/2015/NĐ-CP, dated 6 January 2015)	Article 624 of the Civil Law defines that individuals, entities have to compensate for environment loss that is caused by them. Article 133 of the Law on Environment Protection determines the approach in environment loss compensation (mutual voluntary agree, sue to court) and for the evaluation of environmental losses (long term and short-term impact consideration, cost for environment restoration). The Government has assigned MONRE and provincial authorities with the responsibility to request any individual/entity to compensate environment loss caused by them.
23	MR 03.07	ED	Penalties and other compensation for unplanned environmental	A	1	Government policy on Administrative Penalty in Environment protection violence (Decree 155/2016/NĐ-CP, dated 18 November 2016)	Each case of violation in environment protection, environment pollution, BD conservation will be fined up to VND 1 billion (US\$ 40,000) for an individual and up to VND 2 billion (US\$ 80,000) for an organization.

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			damage				
24	MR 03.07	PST	Promotion of sustainable tourism	A	3	Law on Tourism (09/2017/QH14, dated 19 June 2017)	The Law on Tourism is in force from 1 January 2018, to encourage sustainable eco-tourism development.
25	MR 03.07	REM	Remittances	A	1	<p>The government has no restriction on remittance.</p> <p>The State Bank of Viet Nam (SBV) has issued an Order (CT 03/CT-NHNN, 03/2015) on Increasing Green Loans and Social-Environmental Risk Management in credit provision.</p>	<p>There are about 4 million Vietnamese living and 0.5 million working in nearly 100 countries around the world. The money they sent to their relatives in VN increases fast: from US\$ 0.14 billion in 1993 to USD\$ 11 billion in 2013, and US\$ 13.2 billion in 2015. But it reduced to US\$ 9 billion in 2016 and 2017. Between 2002 and 2015, remittance was about 6.0% of GDP.</p> <p>It is expected that a part of this remittance is deposited in the banking system, and that banks invest in some projects on environment and nature protection following the policy of Central Bank.</p> <p>To promote the National Action Plan on Green Growth for 2014-2020, the SBV has issued Order CT 03/CT-NHNN, 03/2015 on Increasing Green Loans and Social-Environmental Risk Management in credit provision. SBV requests all commercial banks to consider more loans for green growth projects.</p>
26	MR 03.07	SST	Eco-labels	B	1	The government has a policy to support eco-label development (Decree 04/2009/NĐ-CP, dated 14 January 2009), while the green procurement is encouraged in the National Strategy on Green Growth (Decree 1393/QĐ - TTg, dated 25 September 2012).	The MONRE has a policy (Decision 221/QĐ-BTNMT, dated 29 February 2012) on developing Green Label products and services. The Vietnam Green Label program managed by VEA/MONRE has supported environment protection and BD conservation.
27	MR 03.07	TFI	Taxes, fees and quotas in the fishery sector	A	1	Taxes and fees on fishery are addressed in the government policy on fishery development (67/2014/NĐ-CP, dated 7 July 2014, and 172/2016/ND-CP, dated 27 December 2016).	To implement the government policy on fishery development, the MOF has removed 9 taxes/fees on fishery (Decision 117/2014/TT-BTC, dated 21 August 2014).
28	DM 08.08	TFI	Refining incentives and other regulations in the fishery	B	2	The fishery protection and development program to 2020 has been approved by the government (Decree 188/QĐ-TTG, dated 13	Enforcement of the policy is low, therefore fishery protection is low effective.

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			sector			February 2012)	
29	MR 03.07	TNRR	Taxes on natural resources (non-renewable)	A	2	Natural resource tax was approved by the NA in late 2015 (Decree 1084/2015/UBTVQH13, dated 10 December 2015).	The tax rate on the mining of metal and non-metal materials is 6-27% of revenues - calculated by multiplying its price with the production volume – that companies have received in the year
30	MR 03.07	TNRR	Taxes on fuel	B	1	The Law on Environment protection tax was approved by the NA on 15 November 2010 and is in force from 01 January 201.	The tax rate on petroleum is VND 1,000 – 4,000 VND per liter, for coal VND 10,000 – 50,000 VND per ton.
31	MR 03.07	TNRN	Taxes on renewable natural capital	A	1	Natural resource tax was approved by the NA in late 2015 (Decree 1084/2015/UBTVQH13, dated 10 December 2015).	The tax rate on natural marine products is 2-10%.
32	DM 08.24	TFF	Taxes, Fees and Royalties in the Forestry Sector	A	2	Natural resource tax was approved by the NA in late 2015 (Decree 1084/2015/UBTVQH13, dated 10 December 2015).	The tax rate on natural timber, bamboo, firewood is 00% of revenues - calculated by multiplying the price with the production volume – that companies have received in the year
33	DM 08.24	TFF	Forestry Concession Fees	B	2	The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015).	Forestry Concession Fees are applied and the collected fees are integrated into the government budget
34	DM 08.24	TFW	Water tariffs	B	2	Natural resource tax was approved by the NA in late 2015 (Decree 1084/2015/UBTVQH13, dated 10 December 2015).	The tax rate on natural water extraction varies between 1% and 10% of the production sales price.
35	DM 08.24	TFW	Water abstraction charges	B	2	The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015)	Fee on water extraction license.
36	DM 08.24	TFW	Wastewater fees	B	3	<p>The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015)</p> <p>The environment protection fee for waste water is defined and adjusted in different government policies including: Decree 67/2003/NĐ-CP, dated 13/6/2003, Decree 04/2007/NĐ-CP, dated 8 January 2007, Decree 26/2010/NĐ-CP, dated 2010, Decree 25/2013/NĐ-CP, dated 29 March 2013, Decree 154/2016/NĐ-CP, dated 16 November 2016.</p>	<p>The rate on environment protection fee for waste water is imposed by government. It is adjusted in different government decisions between 2003 and 2017. Decree 154/2016/NĐ-CP 16 November 2016 defines that from January 2017, the environment protection fee for waste water is collected by the clean water provision companies and transferred to local government financial organizations, according:</p> <p>Environment protection fee for waste water of residence: 10% of collected fees are retained in clean water provision companies and 25% for local environment to cover fee collection cost.</p> <p>Environment protection fee for waste water of industry: 25%</p>

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							collected fee is retained by clean water provision companies to cover fee collection cost. The remaining amount is integrated into the local government budget to be used for environment protection tasks and increase capital for local Environment Protection Fund.
37	MR 03.07	TPF	Taxes on pesticides and fertilizers	A	2	Law on Environment Protection Tax was approved by the NA on 15 November 2010 and is in force since 01 January 2012.	Taxes on limited-use herbicides vary from VND 500 to VND 2,000 per kg; Taxes on limited-use pesticides vary from VND 1,000 to VND 3,000 per kg.
38	DM 08.08	TT	Taxes and fees in the tourism sector	A	1	The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015).	Fee on tourism licensing.
39	MR 03.07	TT	Entrance fees	B	1	The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015).	Entry fee in NPs is defined by local authority.
40	MR 03.07	TT	Climbing fees	B	2	Not specified by the government.	NPs can collect fees for services directly from tourists.
41	MR 03.07	TT	Diving fees	B	2	Not specified by the government.	NPs can collect fees for services directly from tourists.
42	MR 03.07	TT	Filming and photography fees	B	2	Not specified by the government.	NPs can collect fees for services directly from tourists.
43	MR 03.07	TT	Camping fees	B	2	Not specified by the government.	NPs can collect fees for services directly from tourists.
44	MR 03.07	TT	Tourism, real estate and commercial concessions	B	2	Not specified by the government.	NPs can collect fees for services directly from tourists.
45	MR 03.07	TT	Mooring Fees	B	2		
46	DM 08.08	TT	Other PA and tourism fees	B	2	Not specified by the government.	NPs can collect fees for services directly from tourists.
47		TFWI	Taxes and fees in the wildlife sector	A	1	Not specified by the government.	NPs can collect fees for services directly from tourists.
48	DM 08.24	TFWI	Penalties for illegal hunting and collecting	B	1	Article 190 of the Law on Criminal (NA Decision 100/2015/QH13, dated 27 November 2015) and the government policy	Decree 389/QĐ-TTg, dated 19 March 2014 and Decree 09/QĐ-TTg, dated 6 January 2017 on the National Steering Committee for Illegal Trading Prevention – called SC 398. SC 398 actively

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						on fines for violations in forest and forest product management (157/2013/NĐ-CP 11 November 2013).	conducts fighting illegal wildlife trade in VN since 2014. Hundred cases of domestic and international illegal wildlife trade have been prevented. In 11/2016, VN organized the third International conference on Illegal wildlife trade with the participation of more than 40 countries and many international organizations. The Preventing Illegal Wildlife Trade project for 2017-2021 has been approved by the government (307/QĐ-TTg, dated 9 March 2017). The project is funded by USAID with US\$ 10 million, and US\$ 0.46 million counterpart funding of VN.
49	DM 08.08	TE	Technology upgrade and maintenance	A	1	Law on Safe and Efficiency Use of Energy (50/2010/QH12, dated 17 June 2010).	The National Program on Safe and Efficiency Use of Energy 2006-2015 is completed; a new program for 2016-2020 is under preparation to be approved in 2018.
50	MR 03.07	TFS	Trust funds	A	1	Trust Fund for Forests (TFF)	The TFF was created in 2004, to support the implementation of the VN Forest Development Strategy (VFDS). TFF's goals focus on the protection of forests, BD conservation and improving the livelihoods of people in forest dependent areas, the enhanced contribution of the forest sector to the national economy; and the increased contribution of forests in terms of climate change mitigation and adaptation. One of TFF's components is the VN Conservation Fund (VCF) that provides financial support to PAs for BD conservation purposes. The main financial source is ODA with a total commitment of € 30.9 million, managed by a joint steering committee of international donors and VN government. From 2016, TFF is integrated into the VNFF as both funds target contributing to implement the VFDS 2006-2020 and complying with the Hanoi Core Statement.
51		TFS	Protected Areas Trust Funds	B	2	Viet Nam Conservation Fund (VCF)	VCF is one of the TFF components, created in 2004. The VCF provides financial support to PAs for BD conservation purposes. There are about 50 NPs and NRs that have accessed to this fund. From 2016 VCF is no longer operational.
52	DM 08.24	EIA	Environmental and Social Impact Assessments	A	2	The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015).	Fees are applied to ESIA, collected and integrated into the government budget.
53	DM 08.24	EIA	EIA Performance	B	3	EIA Performance Bonds are addressed in different policies, including the Inter-	Policies determine that mining companies shall deposit money for environment restoration purposes. The deposit amount

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			Bonds			Ministerial Guide between MOF and MOST (126/1999/TTLT-BTC-BCN-BKHCNMT), Decree 71/2008/QĐ-TTg, dated 29 May 2008, Decree 18/2013/QĐ-TTg, 29 March 2013, and Decree 19/2015/NĐ-CP, dated 14 February 2015.	depends on environment restoration costs during the mining period, which are estimated in the Environment Impact Assessment report. Mining companies shall deposit money one time or several times in the local Environment Protection Fund. Mining companies will receive back any deposit money when the company has completed environmental restoration.
54	DM 08.24	EIA	EIA Permitting and Review Fees	B	1	The Law on Fees and Charges (97/2015/QH13 dated 25 November 2015).	Fees are applied, collected and integrated into the government budget.