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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROGRAM DOCUMENT

FOR A

PROPOSED DEVELOPMENT POLICY CREDIT

IN THE AMOUNT OF

SDR 63.5 MILLION

(US\$90 MILLION EQUIVALENT)

TO THE

SOCIALIST REPUBLIC OF VIETNAM

FOR A

CLIMATE CHANGE AND GREEN GROWTH DEVELOPMENT POLICY FINANCING

June 3, 2016

Environment and Natural Resources Global Practices  
East Asia and Pacific Region

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VIETNAM - GOVERNMENT FISCAL YEAR  
January 1 – December 31

CURRENCY EQUIVALENTS  
(Exchange Rate Effective as of December 31, 2015)

Currency Unit = Vietnamese Dong (VND)  
US\$1 = VND 21,345

ABBREVIATIONS AND ACRONYMS

AFD	Agence Francaise de Development
AQM	Air Quality Management
ASEAN	Association of Southeast Asian Nations
BAU	Business As Usual
CC	Climate Change
CC-GG	Climate Change – Green Growth
CPEIR	Climate Public Expenditure and Investment Review
CPS	Country Partnership Strategy
DA	Deposit Account
DFID	Department of International Development
DP	Development Partner
DPF	Development Policy Financing
DWRM	Department of Water Resources Management
EU	European Union
ESMAP	Energy Sector Management Assistance Program
FA	Financing Agreement
FCPF	Forest Carbon Partnership Facility
FDI	Foreign Direct Investment
FIT	Feed-In Tariff
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environmental Fund
GG	Green Growth
GGAP	Green Growth Action Plan
GHG	Greenhouse Gas

GoV	Government of Vietnam
GRS	Grievance Redress Service
IDA	International Development Agency
ICZM	Integrated Coastal Zone Management
IMF	International Monetary Fund
(i)NDC	(intended) Nationally Determined Contribution
INTOSAI	International Organization of Supreme Audit Institutions
IPF	Investment Project Financing
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
MARD	Ministry of Agriculture and Rural Development
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MONRE	Ministry of Natural Resources and Environment
MOST	Ministry of Science and Technology
MOIT	Ministry of Industry and Trade
MOT	Ministry of Transport
MPI	Ministry of Planning and Investment
NAP	National Action Plan
NCCC	National Climate Change Committee
NCCS	National Climate Change Strategy
NDC	Nationally Determined Contribution
NPL	Nonperforming Loan
PCU	Program Coordination Unit
PDO	Program Development Objective
PDP	Power Development Plan
PEMSEA	Partnerships in the Environmental Management for the Seas of East Asia
PFES	Payments for Forest Ecosystem Services
PFM	Public Financial Management
PM	Particulate Matter
PPA	Power Purchase Agreement
PSIA	Poverty and Social Impact Analysis

REDD	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
SBV	State Bank of Vietnam
SEDP	Socio-Economic Development Plan
SEDS	Socio-Economic Development Strategy
SP-RCC	Support Program to Respond to Climate Change
TA	Technical Assistance
VAMC	Vietnam Asset Management Company
VGGS	Vietnam Green Growth Strategy
WBG	World Bank Group
WHO	World Health Organization

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**SOCIALIST REPUBLIC OF VIETNAM**

**CLIMATE CHANGE AND GREEN GROWTH DEVELOPMENT POLICY FINANCING**

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**SUMMARY OF CREDIT AND PROGRAM**

**SOCIALIST REPUBLIC OF VIETNAM**

**CLIMATE CHANGE AND GREEN GROWTH DEVELOPMENT POLICY**

**FINANCING**

Borrower	Socialist Republic of Vietnam
Implementation Agency	Ministry of Natural Resources and Environment (MONRE)
Financing Data	IDA credit SDR 63.5 million(US\$90 million equivalent) IDA standard terms for blend countries
Operation Type	Single-tranche programmatic development policy financing First in a series of three operations
Pillars of the Operation and Program Development Objective(s)	The program development objective is to (a) improve inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action; (b) develop and safeguard selected natural resources services; and (c) promote selected cleaner production systems. Pillar 1. Improving inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action Pillar 2. Developing and safeguarding selected natural resources services Pillar 3. Promoting selected cleaner production systems
Result Indicators	Pillar 1: Improving inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action <ul style="list-style-type: none"> <li>• Number of coastal provinces that have adopted their provincial integrated coastal zone management programs and are under early implementation Baseline (January 2016): 0 provinces Target (December 2019): 5 coastal provinces (20 percent of coastal provinces)</li> <li>• Number of priority sectors and provinces for which climate change and green growth investment programs are identified, reported to, and information used by the NCCC to review progress in implementing priorities and to develop recommendations Baseline (January 2016): 0 sectors and 0 provinces Target (December 2019): 3 sectors; 8 provinces</li> <li>• Percentage increase in the number of projects and programs meeting climate change and green growth policy objectives in selected sectors and provinces Baseline (January 2016): 0 percent increase Target (December 2019): 15 percent increase</li> </ul> Pillar 2: Developing and safeguarding selected natural resources services

	<ul style="list-style-type: none"> <li>• Number of provinces with water source protection corridors delineated on maps and with an action plan to address threats to the integrity of these protection corridors (in conformance with Decree 43 and DPF 2 circulars) Baseline (January 2016): 0 provinces Target (December 2019): 6 provinces (10 percent of provinces)</li> <li>• Number of hectares of farms utilizing more advanced and efficient irrigation practices for selected crops Baseline (January 2016): 50,000 ha Target (December 2019): 400,000 ha</li> <li>• Percentage increase of coastal forest area Baseline (January 2016): 0 percent Target (December 2019): 10 percent</li> <li>• Percentage reduction of the annual rate of net emissions (accounting for reduction in emissions and increase in sequestration as a result of changes in forest cover and forest quality) in selected priority provinces (measured in tons of CO<sub>2</sub>e/year) Baseline (January 2016): 0 [reference is the average annual rate of net emission (forest reference level) based on reference a 2000-2012 period] Target (December 2019): 7 percent of reduction of annual rate of net emission in the selected priority provinces relative to forest reference level</li> </ul> <p>Pillar 3: Promoting selected cleaner production systems</p> <ul style="list-style-type: none"> <li>• Number of city air quality management (AQM) plans adopted Baseline (January 2016): 0 Target (December 2019): 3</li> <li>• Percentage of enterprises in 6 key sectors/industries that are part of and report to the emission registry (in conformance with the reporting criteria defined in the DPF 2 Circular on emissions inventories) Baseline (January 2016): 0 percent Target (December 2019): 60 percent</li> <li>• Percentage of NO<sub>x</sub> emission reductions in light-duty road transport in target year as compared to a business-as-usual (BAU) case Baseline (January 2016): Projected trend under BAU case in target year Target (December 2019): 6.85 percent reduction</li> <li>• Percentage energy saved in selected end-use sectors as compared with business-as-usual (BAU) case Baseline (January 2016): Projected trend of annual energy use of selected end-use sectors to 2019 Target (December 2019): 3.2 percent</li> <li>• Percentage increase in installed capacity of grid-connected non-hydro renewable energy Baseline (January 2016): 0 percent (270 MW) Target (December 2019): 250 percent (960 MW)</li> </ul>
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	<ul style="list-style-type: none"> <li>Expected GHG emissions reduction associated with electricity generation and consumption to 2030 as compared to the baseline emissions pathway in Vietnam’s Nationally Determined Contribution<sup>1</sup>  Baseline (January 2016): 0  Target (December 2019): To be finalized by end of 2016<sup>2</sup></li> </ul>
Overall risk rating	Substantial
Climate and disaster risks	Are there short- and long-term climate and disaster risks relevant to the operation (as identified as part of the SORT environmental and social risk rating)? No
Operation ID	P155824

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<sup>1</sup> This is composed of both the expected GHG emissions reduction associated with 1) electricity generation from grid-connected non-hydro renewable energy and 2) electricity consumption from energy efficiency measures in the selected end-user sectors covered in the DPF series

<sup>2</sup> The target is expected to be set by the end of 2016. This target will be expressed as a range (upper and lower bounds) of expected reductions in GHG emissions based on the emission reduction potential of low-carbon projects/investments enabled by the policy package included in the policy track. The target will be evaluated in 2019 adjusting for factors such as market penetration hurdles for specific technologies

# IDA PROGRAM DOCUMENT FOR A CREDIT FOR A CLIMATE CHANGE AND GREEN GROWTH DEVELOPMENT POLICY FINANCING TO THE SOCIALIST REPUBLIC OF VIETNAM

## 1. INTRODUCTION AND COUNTRY CONTEXT

1. **This program document describes the first, single tranche operation for a credit in the amount equivalent to US\$90 million in a series of three development policy financing (DPF) operations to the Socialist Republic of Vietnam.** The operation will assist the Government of Vietnam (GoV) strengthen its climate change and green growth reform action as a contribution to improving sustainability and quality of growth. It builds on the first Climate Change DPF series, the World Bank's sustained dialogue on climate change and green growth with Vietnam, including coordinated lending and advisory support, and strong government ownership of program objectives. The latter has been confirmed by the structured preparation process of this program carried out by the government at the request of the Office of the Prime Minister as the chair of the National Climate Change Committee (NCCC). The work has been led by the Ministry of Natural Resources and Environment (MONRE), with close engagement of the Ministry of Planning and Investment (MPI), key line ministries, and the Ministry of Finance (MOF). Recent dialogue has also confirmed active engagement by the National Assembly and of the Central Committee of the Communist Party.

2. **Vietnam has experienced rapid and inclusive economic growth since the early 1990s.** Economic renovation (*Doi Moi*) reforms launched in 1986 have transformed it from one of the world's poorest countries to a lower-middle-income one—with per capita gross national income (GNI) of US\$1,980 in 2015. Growth has also been inclusive: incomes have risen across the income distribution, with only modest increases in inequality. The percentage of people living in extreme poverty dropped from 50 percent in the 1993 to less than 3 percent today. Key social indicators and access to basic infrastructure have also improved substantially. Nonetheless, significant challenges remain. In particular, a slowdown in productivity growth, remaining welfare gaps of ethnic minorities (who make up 14 percent of the population but 60 percent of the poor), and environmental degradation coupled with the impact of global climate change threaten the long-term sustainability of the country's development. Furthermore, despite major infrastructure spending needs, Vietnam faces shrinking financing options on account of growing fiscal pressures and insufficient private sector participation. Finally, the institutions of governance that were adequate to carry the country to its lower-middle-income level are now exposing gaps that need to be addressed with urgency and boldness, especially as pressures emerge from economic integration, urbanization, an aging population, and aspirations of a rising middle class. These challenges are well understood by the government, as reflected in the recent *Vietnam 2035* report it jointly prepared with the World Bank Group.

3. **Rapid economic growth in Vietnam in recent decades has created opportunities for people and businesses; however, the effects of climate change on development achievements will be significant unless measures are taken to build resilience and adapt to impacts.** While 184 countries have laid a foundation for making a significant dent in global greenhouse gas (GHG) emissions growth through the submissions of (intended) nationally determined contributions [(i)NDCs], it is clear that the current trajectory from emissions to date has already set warming to increase by 1.5 to 1.75°C through 2030. Furthermore, despite significant efforts, the risk is still high that further warming will reach levels that will bring larger, irreversible climate impacts. Under this scenario, climate-induced impacts in Vietnam will continue to threaten the livelihoods of people, in particular in coastal or low-lying deltas (more than 50 percent of the total population), as well as the large percentage of the workforce whose income depends on natural resources and other key vulnerable

assets. This is largely attributed to Vietnam's high and increasing exposure to gradual-onset impacts associated with rising sea levels, ocean warming, and increasing acidification, combined with sudden-onset impacts associated with tropical cyclones and rapidly increasing heat extremes. Further loss of mangrove forests due to human activities, aggravated by sea level rise, and associated with drainage and groundwater extraction, will accelerate coastal erosion. In this context, Vietnam's high vulnerability to climate-induced impacts, in particular in coastal areas and deltas that span administrative boundaries, highlights the need for area-based and landscape approaches to climate adaptation and resilience. Addressing these challenges, particularly in the Mekong Delta and in coastal areas, is complex and requires an integrated and comprehensive approach, consisting of incremental policy and institutional reforms, confidence-building efforts across all key stakeholders, and the ramping up of ambition over time.

**4. Building adaptation and resilience of the poor is critical. The poor are most often disproportionately affected by climate events, a result of a combination of high exposure and low asset base, which reduce their ability to cope and adapt to changes.** The impacts caused by high exposure to climate-related vulnerabilities, including floods, droughts, extreme temperatures, and changes in growing seasons, are expected to be felt in particular by the poor. For example, for a 50-year return period under a high climate scenario, assuming no protection an overlay of flood models and present socioeconomic data suggest that 40 percent of today's poor people in Vietnam will be exposed to flooding.<sup>3</sup> Further, rural households are exposed to substantial climate variability, including months with extreme and unusual rainfall and temperature deviations and self-reported climate events, such as storms, floods, and droughts. These have a particular impact on the poorest and most vulnerable people in rural areas, as they rely on ecosystem-based incomes (that is, crops, livestock, forestry, fisheries) for up to 50 percent of their total incomes. Poor households are characterized by low asset accumulation which reduces their ability to cope with climate impacts. For example, survey data from several provinces in Vietnam indicate that many poor households feel more vulnerable to floods as a result of living in flood-prone areas, such as along river banks or outside of protective dikes. They also have substandard quality of housing and are less likely to have sufficient assets to buffer the effects of floods.<sup>4</sup> The data also indicate that the poor who lack arable land, labor, education, or financial resources are less able to adopt coping strategies such as the use of drought-resistant seeds or engage in non-farm wage employment. As the current policy framework in Vietnam does not adequately address slow-onset hazards or promote longer-term adaptation and resilience building, many poor households are significantly exposed and vulnerable to climate impacts.

**5. Vietnam is in the middle of an economic transition where a greener inclusive growth trajectory is needed to avoid locking into unsustainable paths and to serve as a means to generate immediate local co-benefits, including improved domestic competitiveness.** Environmental and social stresses will further increase as the incomes increase and urbanization and industrialization put growing pressures on land, water, air, and sectors, starting with energy.<sup>5</sup> How Vietnam handles this transition will be a determining factor for the country's future growth trajectory and ability to move into the ranks of higher-income countries. The increase in fossil fuel usage associated with coal-fired power plants in Vietnam has led, and will continue to lead, to significant increases in emissions from air pollutants and GHGs. On-the-ground measurements of particulate matter (PM) indicate that the average PM<sub>2.5</sub> reading for Hanoi is more than 60 mg/m<sup>3</sup>, with certain months having an average of

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<sup>3</sup> World Bank. 2015. Climate Change and Poverty in Vietnam (Draft).

<sup>4</sup> World Bank. 2015. Climate Change and Poverty in Vietnam: A Qualitative Analysis (Draft). Analysis was undertaken in Bac Ninh, Hoa Binh, Kon Tum, An Giang, and Kien Giang Provinces.

<sup>5</sup> Government of Vietnam and World Bank. 2015. Vietnam 2035 Report.

95–110 mg/m<sup>3</sup>, considerably higher than the World Health Organization (WHO)’s advocated standard of 10 mg/m<sup>3</sup>.<sup>6</sup> Further, with energy use growing faster than in any country in the region (electricity demand expected to grow at about 10 percent per annum until 2030) and the intensity of energy consumption among the highest in the world, Vietnam’s total GHG emissions have almost tripled and its carbon intensity (of gross domestic product [GDP]) has increased by 48 percent from 2000 to 2010. These figures mean Vietnam has the second highest carbon intensity in the region after China. Under current trends and policies, the share of coal for power will rise from 17 percent in 2010 to nearly 60 percent by 2030, of which around 80 percent will be imported.<sup>7</sup> Addressing this complex challenge requires a multi-pronged approach to put the regulatory and incentives framework in place that promotes cleaner forms of energy to meet increasing energy demand and to delink growing energy consumption from economic growth. This highlights the need for Vietnam to act early to avoid investment in technology and infrastructure that will ‘lock in’ highly energy inefficient economic structures. Successfully doing so will lead to positive spillover effects with regard to economic growth, productivity, and avoided health costs.

**6. A window of opportunity exists in the context of the 2016-2020 Socio-Economic Development Plan (SEDP) before the post-2020 period, to accelerate reforms that can strengthen the country’s resilience to climate change and promote a lower-carbon, greener growth development path.** In recent years, the GoV has shown leadership by promoting and directing the implementation of a climate change and green growth agenda that aims to support the quality of growth by developing policies and institutions (for example, National Climate Change and Green Growth Strategies and Action Plans and the formation of the NCCC) and mobilizing investments. Further, the country has built a broad constituency from the National Assembly and the Central Committee of the Communist Party, requesting actions and results down to the subnational level. This is evidenced in the committee’s Resolution 24-NQ/TW on ‘Active Response to Climate Change, Improvement of Natural Resource Management and Environment Protection,’ which declared the fight against climate change as “one of the most important tasks of the entire political system.” In this context, during the 2016–2020 period, it is important to scale up policy implementation as the government aims to build on the achievements of the previous SEDP period (2011–2015) and prepares for the implementation of commitments articulated in its (i)NDC for the post-2020 period.

**7. To bring forward implementation, building on experience and lessons discussed at the NCCC,<sup>8</sup> the government, at the request of the prime minister, has decided on the development of a post-2015 phase of the Support Program to Respond to Climate Change (SP-RCC).** The program will support strategic and operational coherence to implement policy reforms, mobilize resources, and strengthen capacity for climate change and green growth action. The multisector policy framework under the Post-2015 SP-RCC aims to directly support and facilitate implementation of the

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<sup>6</sup> MONRE Data.

<sup>7</sup> World Bank. 2015. Exploring a Low Carbon Development Path for Vietnam. World Bank, Energy Sector Management Assistance Programme, and U.K. Department for International Development.

<sup>8</sup> The NCCC is the highest-level interministerial body on climate change and was created by Decision 43/QĐ-TTg (2012). Its mission is to lead, coordinate, harmonize, and monitor climate change and green growth program implementation, including international cooperation. The NCCC chair is the prime minister, with a deputy prime minister and the Minister of MONRE as first and second vice chairs. Members include several ministers (the MPI, the MOF, the Ministry of Agriculture and Rural Development [MARD], the Ministry of Commerce, the Ministry of Transport [MOT], and Ministry of Industry and Trade [MOIT]) and experts. Line ministries, provinces, and implementing bodies report every six months to analyze, assess, and synthesize the management and implementation of strategies and to analyze objective and subjective reasons affecting the implementation of strategies.

government's identified priorities under both the National Climate Change Strategy (NCCS) and the Vietnam Green Growth Strategy (VGGS) and related action plans. It also guides and supports reforms that attempt to unlock barriers to effective implementation of climate change and green growth action prioritized as part of the 2016–2020 SEDP,<sup>9</sup> and in support of implementing and building the enabling environment to increase the ambition of Vietnam's (i)NDC. The Post-2015 SP-RCC also contributes to further bring together development partners (DPs), while recognizing the importance to engage across sectors to foster convergence in the dialogue, evidencing trade-offs, and taking actions.

8. **The series supports a package of reforms pursuing a program development objective (PDO) consisting of** (a) improving inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action; (b) developing and safeguarding selected natural resources services; and (c) promoting selected cleaner production systems.

9. **The operation supports the government's goal to enhance the enabling environment for climate change and green growth interventions in Vietnam, building on the priorities identified jointly by the government and DPs and in support of the SEDP 2016–2020.** The engagement areas are consistent with priorities articulated in the Bank's Country Partnership Strategy (CPS) for Vietnam (2012–2016). The formulation of the Post-2015 SP-RCC has benefited from Bank engagement on climate change and sector-specific engagement<sup>10</sup> with the government. The programmatic series of operations offers the opportunity of a focused platform to promote reforms in key complex areas and in a challenging context where changes take time, such as for the development of renewable energy, energy efficiency, and for addressing climate risks in key vulnerable areas.

## 2. MACROECONOMIC POLICY FRAMEWORK

10. **Risks notwithstanding, the macroeconomic policy framework is considered adequate for this operation.** Macroeconomic stability and sustainability have been broadly maintained, although rapidly rising public debt and low (and declining) forex reserves give growing cause for concern. Increased exchange rate flexibility introduced at the start of the year to counter volatile external conditions, seems appropriate under current conditions and should be used to support a build-up of reserves to buffer future external shocks. Despite lower inflation, the authorities have also maintained policy interest rates unchanged since late 2014, contributing to low and stable rates of core inflation, which stands at 1.2 percent (y/y, Feb' 2016). However, in light of the recent pick-up in credit growth, renewed overheating in the real estate sector and other forms of excessive risk-taking need to be managed by calibrating the macro-prudential policies. Over the medium-term, the multiplicity of the SBV's objectives has to be reduced, giving it a more explicit price stability focus, while strengthening its operational and research capacity. With regard to the fiscal policy, while the countercyclical stance that was introduced in the aftermath of the global financial crisis was appropriate to offset weak domestic demand, the situation now calls for a credible medium-term fiscal consolidation plan. Even though the risk of acute debt distress is still low, public debt has risen fast and with strengthening of domestic demand the rationale for countercyclical expansionary fiscal policy is diminishing. An

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<sup>9</sup> The SEDP serves as Vietnam's five-year development plan, elaborating the objectives of the 2011–2020 Socio-Economic Development Strategy (SEDS) for the 2016–2020 period and identifying specific measures and resources that are needed for its implementation.

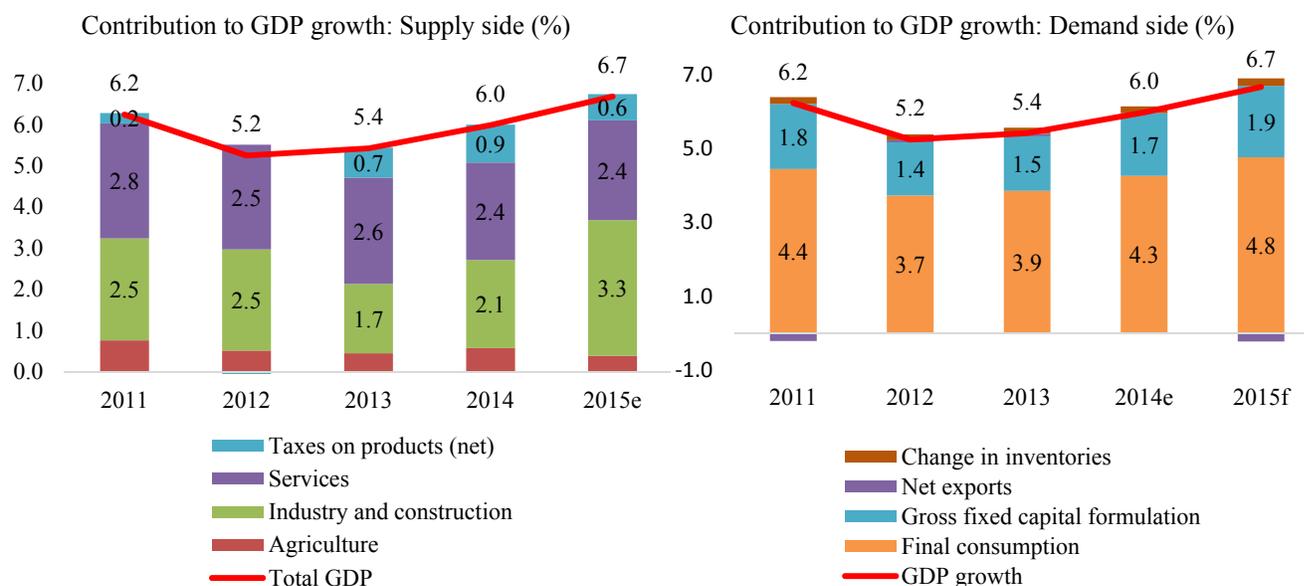
<sup>10</sup> In particular on energy, forests, water resources, and in the Mekong on climate resilience.

acceleration in the resolution of balance sheet weaknesses in the SOE and banking sector would also be important to contain medium-term macroeconomic risks.

## 2.1 RECENT ECONOMIC DEVELOPMENTS

11. **Vietnam’s economy has weathered recent turbulence in the external environment, reflecting resilient domestic demand and robust performance of export-oriented manufacturing.** After slowing down during 2012 and 2013, growth recovered to 6 percent in 2014 and further accelerated to an estimated 6.7 percent in 2015. Low inflation and strengthening consumer confidence supported an uptick in private consumption, while investment was lifted by robust FDI and a recovery of credit growth, which benefitted from still supportive monetary policy. Exports of the foreign-invested manufacturing sector also accelerated, but this was offset by a slowdown of commodity exports and a surge in imports of capital and intermediate goods, resulting in a marginally negative contribution of net exports (Figure 1, right panel). On the production side, economic growth was driven by improved performance of the manufacturing and construction sectors, which grew by 10.6 and 10.8 percent, respectively. Service sector performance also picked up, growing by 6.3 percent because of buoyant retail sales, which was only partially offset by weak performance of the tourism sector. By contrast, the agriculture sector recorded a lower growth of 2.4 percent compared to 3.4 percent in 2014, reflecting the falling price of agricultural commodities and unfavorable weather conditions (El Nino) (Figure 1, left panel).

**Figure 1. Growth Momentum Is Picking Up, Driven by Domestic Demand and Strong Performance of Export-Oriented Manufacturing**

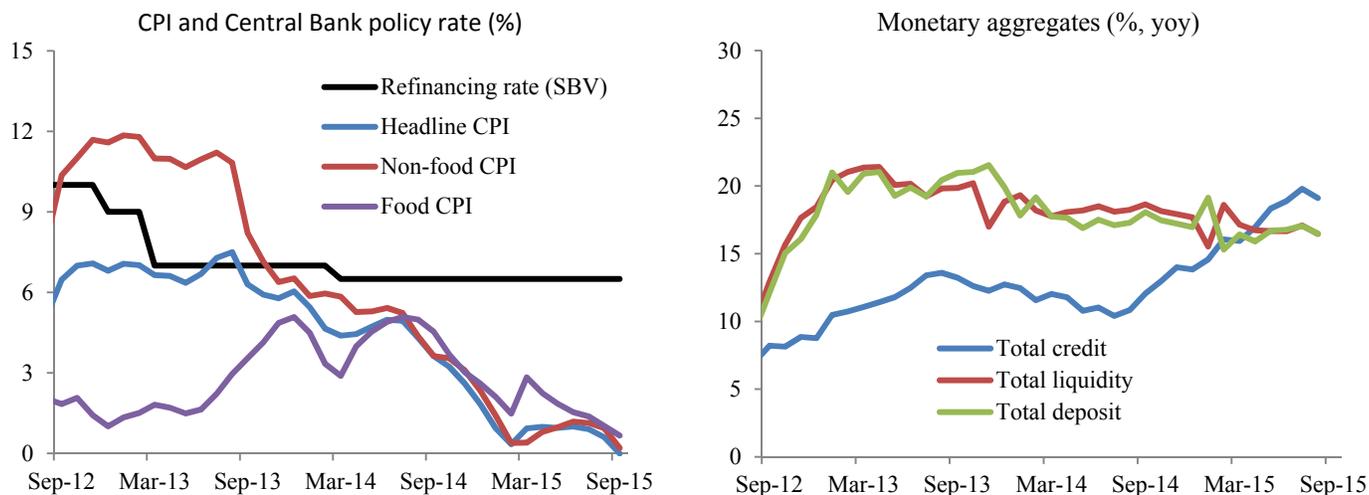


Source: Bank staff, based official data.

12. **Reflecting lower oil and food prices and stable core inflation, headline consumer price inflation has moderated.** Average inflation stood at 0.63 percent in 2015 as opposed to 4.1 percent in 2014. Energy price inflation is easing, because of lower international oil prices, which pushed fuel and transport prices down. Food price inflation fell to 1.5 percent in 2015 (Figure 2, left panel). Core

inflation has also been stable, but there has been slight uptick in 2016 (1.2 percent, y/y, February 2016), partly reflecting seasonal factors.

**Figure 2. Record Low Inflation and Turnaround in Credit Growth**



Source: Bank staff, based official data.

13. **Credit growth picked up markedly underpinned by a still supportive monetary policy.** Against the backdrop of declining inflation, the State Bank of Vietnam (SBV) has its policy rates by a cumulative 850 basis points since 2012, including a 50 basis point reduction in October 2014, with the discount rate and refinancing rate standing at 4.5 percent and 6.5 percent, respectively. Concurrently, the SBV also relaxed macro-prudential measures with Circular 36 (issued in November 2014), which increased the lending limit on short-term deposits (to 60 percent from 30 percent) and lowered risk weights for certain lending activities, including real estate loans. While there has been no further monetary easing this year, credit growth has picked up markedly, measured at around 18 percent in 2015—the highest expansion since 2011 (Figure 2, right panel).

14. **Conditions in the banking system have stabilized, benefiting from ample liquidity and the more benign macroeconomic environment.** Price and exchange rate stability together with a recovery of the real sector and in particular the property market have alleviated asset quality pressures. Some actions have also been taken to address structural weaknesses, especially with regard to consolidation in the sector. This has largely happened through mergers and acquisitions, supplemented with the SBV taking over three of the smaller insolvent banks and placing experienced managers in key positions to facilitate a turnaround in their performance.<sup>11</sup>

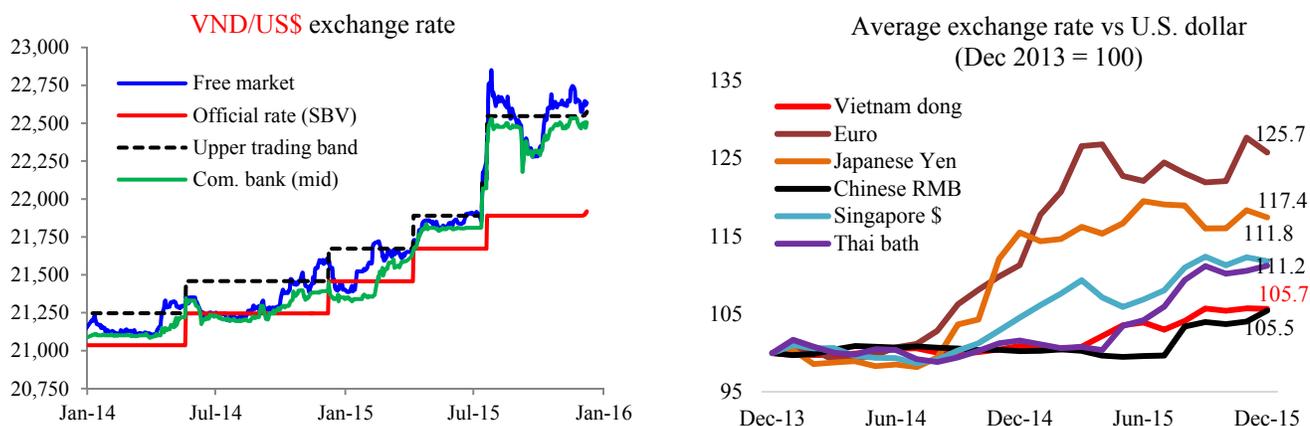
15. **However, the banking sector continues to exhibit lingering asset quality risks.** System-wide nonperforming loans (NPLs) are reported to have declined to about 3 percent of total loans, but this is likely to understate the true level of problem loans. Part of the reduction in reported NPLs is due to transfers of NPLs (equal to about 3.8 percent of gross loans) to the Vietnam Asset Management

<sup>11</sup> Despite progress, the target of reducing the total number of commercial banks to 15–17 by 2017 remains a challenging task (there are still 34 commercial banks remaining).

Company (VAMC).<sup>12</sup> While Banks are required to gradually provision against assets transferred to VAMC, the underlying credit and associated capital impairment risks have not been fully eliminated. In addition, resolution of NPLs by VAMC has progressed slowly, with less than 5 percent of the transferred bad debts resolved. Efforts in this regard have been hampered by the absence of an enabling legal framework for insolvency and asset titling as well as for protecting VAMC and commercial bank staff against possible lawsuits arising from potential losses to the state in case a fair-market-price-mechanism cannot be established. However, new regulations that took effect on October 15, 2015, introduced a fair-market-value mechanism for NPL purchase by VAMC and allow greater flexibility in the disposal of NPLs, including through direct sale of bad debts.

16. **In addition, lack of transparency remains an impediment to a more decisive effort to tackle structural weaknesses in the banking sector.** The implementation of Circular 2 was an important step forward. It has strengthened the loan classification system by requiring banks to classify loan quality according to the lowest rating assigned to the respective borrower in the central Credit Information Centre. However, underlying accounting and reporting standards are yet to be aligned to international standards and further reforms are needed to strengthen regulatory and supervisory systems. Moreover, special financial audits of banks (an unmet trigger of this operation) could be implemented to provide more accurate assessments of NPLs, the related recapitalization needs, and provide key information for the design of more credible debt resolution schemes, including restructuring and recapitalization plans. They would also help identify the main patterns of interconnectedness across banks and borrowers, thereby allowing to recognize of systemic risks.

**Figure 3. Exchange Rate Pressures Were Accommodated by Progressive Devaluation, but the Dong Has Gained Relative Strength**



Source: Bank staff, based official data.

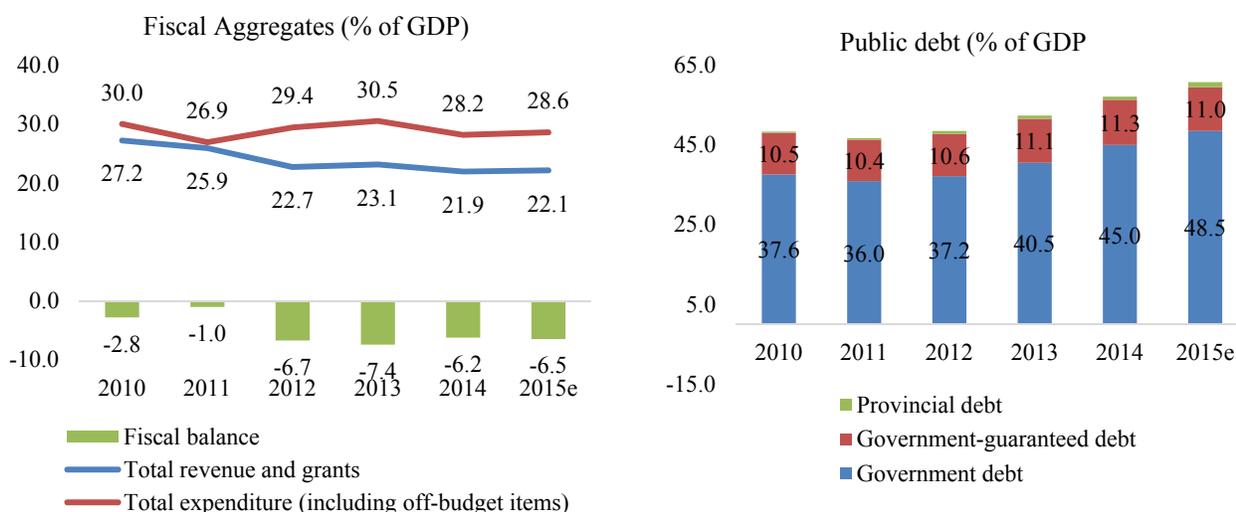
17. **Amidst volatility in international currency markets, rising exchange rate pressures were diffused with periodic devaluation and greater exchange rate flexibility.** Vietnam continues to operate a crawling peg system, with the exchange rate in relation to the U.S. dollar serving as the main nominal policy anchor. Pressures on the currency have built up since early 2015 on account of both a rising trade deficit and weakening currencies across Asia, which exerted pressure on the SBV to follow suit. These pressures were further exacerbated by the depreciation of the Chinese renminbi in early

<sup>12</sup> VAMC purchases are done in exchange for VAMC bonds and banks are required to provide for provisioning against transferred assets within five years (coinciding with the maturity of VAMC bonds).

August. Reluctant to raise interest rates and with limited forex reserves at its disposal (less than three months of import cover), the SBV accommodated these growing pressures by devaluing the dong three times, in January, May, and August 2015 by a cumulative 3 percent and by widening the trading band from  $\pm 1$  to  $\pm 3$  percent. Overall, in 2015, the dong fell by about 5 percent against the U.S. dollar in nominal terms or roughly 3 percent in real terms (figure 3, left panel). In early January 2016, the SBV moved to a more market-based exchange rate policy by setting a daily reference rate of dong versus the dollar, instead of one-off periodic devaluations as applied in the past. The new mechanism takes into account movements in major foreign currencies that are relevant to Vietnam’s trade and investment activities. This step aims to preserve currency market stability and ward off pressures on export competitiveness associated with the dong’s appreciation against currencies of major trading partners (Figure 3, right panel).

18. **Against the backdrop of a strengthening real economy, accumulated fiscal imbalances need to be addressed to ensure sustainable public finances.** The average fiscal deficit during 2009–2014 increased to about 5 percent of GDP, markedly higher than the 1.2 percent during 2003–2008. Vietnam’s fiscal deficit (including off-budget items) increased to an estimated 6.5 percent of GDP in 2015 (Figure 4, left panel). Budget pressures partly reflect a countercyclical fiscal policy response that helped avert a sharper slowdown in recent years, but also tax reforms that permanently reduced revenue raising capacity. The revenue-to-GDP ratio has declined steadily to 21.9 percent of GDP in 2014, down from 27.3 percent of GDP in 2010. A cyclical downturn in tax revenue and especially oil-related revenue was compounded by tax policy changes, including Corporate Income Tax (CIT) rate cuts (to improve competitiveness), tax incentives, temporary tax stimulus, and reductions in tariff schedules in the context of the Association of Southeast Asian Nations (ASEAN) and other trade agreements. On the expenditure side, expenditure growth moderated somewhat in 2014 and 2015 after rapid expansion during 2012–2013 driven largely by lower government investment. With domestic demand strengthening, the need for fiscal stimulus is now reduced and a gradual growth-friendly fiscal consolidation would help rebuild fiscal buffers and ensure a sustainable debt trajectory.

**Figure 4. Accumulated Fiscal Imbalances Have Pushed Up Public Debt**



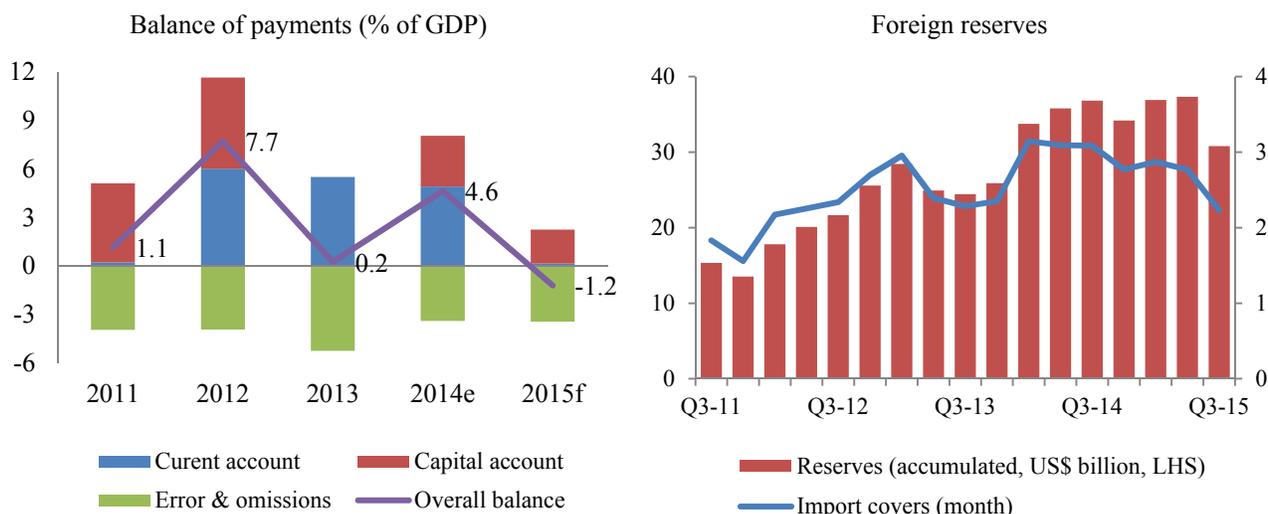
Source: Bank staff based official data.

19. **Vietnam’s public-debt-to-GDP ratio has increased rapidly over the past few years.** Sizable fiscal deficits have raised concerns about the medium-term sustainability of the current fiscal position and corresponding public debt path. Vietnam’s public and publicly guaranteed debt increased markedly from 48.4 percent of GDP in 2010 to an estimated 60.8 percent in 2015 (Figure 4, right panel). Of this, 48.5 percent of GDP is debt directly owed by the central government, 11 percent of GDP is debt guaranteed by the central government, and about 1.3 percent of GDP is debt of provincial governments. The debt level is fast approaching Vietnam’s statutory debt limit of 65 percent of GDP. The government has mainly relied on domestic debt to meet its growing financing needs. The share of domestic debt in total public debt increased from 45 percent in 2010 to 55 percent in 2015. While reducing exchange rate risks, the greater reliance on domestic debt has increased the average interest rate and significantly shortened the maturity profile of public debt, reflecting a relatively shallow domestic debt market with few participants, mainly from the banking sector. As a result, debt service payments pose an increasing burden on the budget. Interest expenditures have risen sharply, both as share of GDP and share of government revenue. In 2015, the government spent about 9 percent of its total revenue (including grants) on interest payments (up from 4.3 percent in 2010), crowding out more productive spending. Payment of public debts, including amortization, has risen to about 16 percent of government revenue in 2015, highlighting intensifying fiscal financing risks.

20. **Vietnam’s export performance remains strong despite a slowdown in export growth in 2015.** Against the backdrop of subdued global trade growth since 2009, Vietnamese export performance stands out. Exports expanded rapidly, at an average of 21.5 percent, over the past five years (2010–2014), reflecting strong foreign direct investment in expanded manufacturing capacities in major labor-intensive sectors. Overall export growth moderated somewhat, to 8.1 percent in 2015, mainly due to slowing traditional exports of the domestic sector reflecting a sharp fall in export prices as well as declining volumes in key commodities such as crude oil, coal, rice, coffee, and rubber. In contrast, the foreign-invested manufacturing sector, which now accounts for about 70 percent of Vietnam’s total export value, continued to expand rapidly by 18.5 percent in 2015. As such, Vietnam’s export performance stands out, not only in comparison to other countries in the region but globally.

21. **Meanwhile, imports, especially of capital goods, continued to surge, reflecting the uptick in investment activity and high import content of some of Vietnam’s exports.** Imports grew by 12 percent in 2014 and kept the same growth rate of 12 percent in 2015, resulting in an emerging trade deficit of nearly US\$3.2 billion compared to a surplus of US\$2.4 billion in 2014. On the one hand, the growth in imports indicates ongoing capacity extension of production facilities, reflecting positive investor sentiment. On the other hand, the emerging trade deficit also points to underlying structural weaknesses in Vietnam’s export sector, where its major exports—garments, electronics, and footwear—have high import content requiring imports of raw material and intermediate inputs.

**Figure 5. Current Account Surpluses and Robust FDI Have Allowed for a Gradual Buildup of Reserves, Albeit from a Relatively Low Level**



Source: SBV and Bank estimates

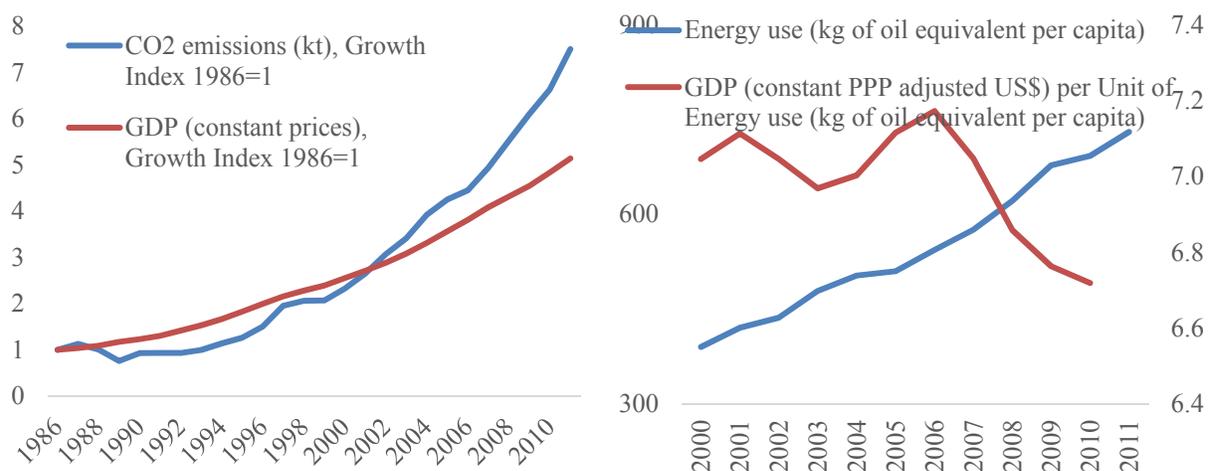
22. **Due to the weakening of the trade position, Vietnam’s current account has narrowed significantly during the first half of 2015.** After posting a current account surplus of about 5.4 percent of GDP in 2011–2014, the current account narrowed to 0.01 percent of GDP at the end of the first three quarters of 2015. An emerging trade deficit (for goods and services) and transfer payments related to the repatriation of profits in the FDI sector were only partially offset by robust remittance inflows.

23. **Despite a weakening current account balance, external financing risks are mitigated by robust FDI inflows and Vietnam’s largely long-term concessional external debt.** Strong and diversified FDI inflows and external loans bolstered the financial account and allowed for further buildup of reserves. FDI disbursement increased rapidly by 17.4 percent to about US\$14.5 billion in 2015. External debt rollover rates also remained solid, aided by stable official inflows and by credit rating upgrades as both Moody’s and Fitch upgraded Vietnam’s sovereign rating by one notch due to its stable outlook. However, interventions by the SBV in the third quarter put pressure on international reserves, which declined to 2.2 months of import cover at the end of September 2015 compared to 2.8 months of imports at the end of 2014 (Figure 5).

### Box 1. Macroeconomic Impacts of CC-GG DPF Policy Program

**Mitigating the environmental impact of growth and fostering climate change adaptation, including through the measures supported by this DPF, is an integral part of a comprehensive strategy to address macroeconomic risks of climate change.** Vietnam’s strong growth record has been associated with a rising environmental footprint. Over the past decade, CO<sub>2</sub> emissions have tripled and energy consumption increased by more than 80 percent. Meanwhile, energy efficiency has been declining in recent years. At the same time, Vietnam’s economy is highly vulnerable to climate change. Coastal flooding and erosion, salinity intrusion, and higher incidence of extreme weather events pose high risks to many key sectors of the economy. In addition to reducing large welfare costs associated with environmental externalities, the measures supported by this DPF therefore contribute directly to mitigating economic risks associated with climate change while moving Vietnam onto a low-carbon growth path. First, by supporting integrated and coordinated coastal zone management and improved management of coastal forests, it will contribute to improve sustainable use of coastal resources—a key economic asset for various industries, including fishery, aquaculture, forestry, and tourism. Second, by enhancing resource mobilization for and prioritization of investments in climate resilient infrastructure, it will contribute to address significant investment needs within a tight fiscal environment. Third, by improving the quality of environmental regulations, it will encourage more energy-efficient consumption behavior and thereby reduce energy demand at the household and enterprise levels. Fourth, by continuing reforms of the power sector, it will extend incentives for power generation from renewable sources, thereby promoting an evolution of Vietnam’s energy mix. At the economy-wide level, these measures will require short-term fiscal and private investment, but are expected to contribute to a stronger basis of Vietnam’s growth potential which should also progressively include a lower dependence on energy imports (notably coal and gas).

**Figure 6. Rapid Growth Was Associated with an Increasing Environmental Footprint, Exacerbated by Declining Energy Efficiency**



Source: Bank Staff based World Development Indicators.

## 2.2 MACROECONOMIC OUTLOOK AND DEBT SUSTAINABILITY

24. **The medium-term outlook for Vietnam is broadly positive.** Forward-looking indicators suggest that economic recovery will remain on track. GDP growth is expected to moderate to 6.2 percent in 2016, due to slow-down in exports and domestic demand and especially investment growth. On the supply side, growth is expected to continue to be led by manufacturing and construction. GDP growth is forecasted to stabilize at around 6.3 percent in the outer years (in line with potential growth) (Table 1). The baseline scenario assumes fiscal and monetary prudence as well as continuation of

structural reforms to improve efficiency in resource allocation across the economy and strengthen competitiveness, including those supported by the EMCC series.

25. **Inflation is expected to remain low on account of low global energy and food prices before rebounding somewhat in the medium term.** Moderate inflation expectations decrease the likelihood that the SBV will tighten monetary policy over the short term. In this context, banks' lending is forecasted to continue to accelerate in the near term, in response to increasing demand for credit and improved banks' balance sheets. Given the increasing demand in the fourth quarter of 2015, credit growth is projected to exceed the annual target of 15 percent set by the SBV. In addition, a program to consolidate or close small, weak banks should further strengthen the financial system.

**Table 1. Vietnam Key Economic Indicators**

	2013	2014e	2015e	2016f	2017f	2018f
<b>Real economy</b>						
Real GDP (% change)	5.4	6.0	6.7	6.2	6.3	6.3
Agriculture	2.6	3.4	2.4	1.0	1.5	2.0
Industry and construction	5.1	6.4	9.6	9.0	8.8	8.5
Services	6.7	6.2	6.3	6.4	6.3	6.3
Index of industrial production (year-on-year change, %)	5.9	7.6	9.5	8.5	8.2	8.2
Unemployment rate (% , urban areas)	3.6	3.4	3.5	3.5	3.5	3.5
<b>Prices</b>						
Consumer price index (% change, period-end)	6.0	1.8	0.6	3.3	4.0	4.2
Consumer price index (% change, annual average)	6.6	4.1	0.6	3.5	3.8	4.0
GDP deflator (% , change)	4.8	3.7	-0.2	3.2	3.3	3.3
<b>Fiscal accounts (% GDP)</b>						
Total revenue and grants	23.1	21.9	22.1	22.2	22.1	22.2
Total expenditure (including off-budget items)	30.5	28.2	28.6	28.1	27.8	27.7
Fiscal balance	-7.4	-6.2	-6.5	-5.9	-5.7	-5.5
Public and publically guaranteed debt	52.4	57.2	60.8	62.2	63.2	63.9
External public and publically guaranteed debt	28.2	27.1	26.5	27.6	27.9	28.2
<b>External accounts</b>						
Exports of goods (fob, % GDP)	77.4	80.7	84.6	88.3	93.7	99.8
Exports of goods (% change)	15.3	13.8	8.1	10.1	11.9	12.2
Imports of goods, (cif, % GDP)	77.4	79.4	86.5	91.9	98.4	106.5
Imports of goods (% change)	16.0	12.0	12.0	12.4	12.9	13.9
FDI (Inflows, US\$, billions)	8.9	9.2	9.7	10.6	11.5	12.8
Current account balance (% GDP)	5.5	4.9	0.0	-0.6	-0.5	0.2
Reserves, including gold (US\$, billions)	25.8	34.4	31.7	38.9	47.6	58.4
Reserves (in months of imports)	2.3	2.8	2.3	2.4	2.6	2.8
<b>Monetary</b>						
Credit to the economy (% change, period-end)	8.8	12.7	18.0	18.0	18.0	16.0
Short-term interest rate (3-month deposits, period-end)	6.5	5.5	5.0	---	---	---
Stock market - Vietnam index (Jul 2000 =100)	505	546	579	---	---	---
<b>Memo items</b>						

<i>GDP (nominal, VND, trillions)</i>	3,584	3,938	4,193	4,610	5,055	5,538
<i>GDP (nominal, US\$, billions)</i>	171	186	192	---	---	---

*Source:* Bank staff, based on official data.

*Note:* cif = cost, insurance, and freight; fob = free on board.

26. **The trade balance is projected to continue to weaken due to a combination of moderating exports and sustained import growth stoked by stronger domestic economic activity.** However, robust remittances will contain the current account deficit. Over the medium term, robust export growth is expected to be sustained, especially as Vietnam is expected to reap the benefits of the recently concluded Transpacific Trade Agreement, the EU Free Trade Agreement, and ASEAN Free Trade Area. Imports are also expected to continue to expand rapidly, due to strong demand for imports of intermediate and capital goods as well as pick up consumer goods, in particular those for which import tariffs will be reduced (for example, cars). Despite volatility in capital flows in emerging markets, FDI inflows to Vietnam are expected to remain resilient, reflecting robust investor confidence and Vietnam's favorable economic prospects. Portfolio inflows, which until now have been negligible, are also expected to pick up gradually over the medium term, as a result of recent steps to liberalize foreign ownership restrictions in Vietnam's capital market and greater reliance on international bonds to meet fiscal financing needs. Overall, foreign reserves are expected to increase gradually over the projection period. However, given low reserve levels, more exchange rate flexibility may be needed in case capital outflows occur, especially in the context of fragile global financial conditions.

**Table 2. Balance of Payments Financing Requirements and Sources (US\$, billions)**

	2014e	2015e	2016f	2017f	2018f
<b>Financing requirements</b>	<b>20.5</b>	<b>30.7</b>	<b>33.6</b>	<b>34.2</b>	<b>34.5</b>
Current account deficit	-9.1	-0.3	1.2	1.2	-0.4
Long-term debt amortization	4.7	4.1	5.4	6.1	6.5
Short-term debt amortization	17.3	19.0	20.6	19.6	20.0
Other capital outflows (including deposits)	7.6	7.9	6.4	7.3	8.4
<b>Financing sources</b>	<b>20.5</b>	<b>30.7</b>	<b>33.6</b>	<b>34.2</b>	<b>34.5</b>
FDI and portfolio investment (net)	8.1	8.7	9.8	10.9	12.2
Long-term debt disbursement	9.7	9.8	9.2	8.6	8.1
Short-term debt disbursement	19.0	18.6	18.6	19.0	19.2
Other capital inflows (including deposits)	-1.4	-2.1	3.2	4.5	5.7
Change in the reserves	-8.6	2.3	-7.1	-8.7	-10.8
Errors and omissions	-6.3	-6.6	0.0	0.0	0.0

*Source:* Bank staff, based official data.

27. **The fiscal deficit is expected to start adjusting through consolidation efforts to avoid further increases in public debt.** In the socio-economic development plan (SEDP) 2016-20, the government has made commitments to restore fiscal discipline over the medium term to achieve a fiscal deficit of 4 percent of GDP by 2020. In line with this commitment the approved 2016 budget targets a headline fiscal deficit of 5.8 percent of GDP and the deficit is expected to be gradually reduced to about 4.8 percent of GDP in 2018. As a result, the underlying primary deficit will decline from 4.5 percent of GDP in 2014 to 3 percent of GDP in 2018. As such, the size of the planned adjustment is sufficient to stabilize the debt-to-GDP-ratio over the medium, but it is important that this deficit reduction is achieved through a quality and growth-friendly adjustment. Strengthening revenue collection, in particular from the non-oil sector, will require continued efforts to reduce tax evasion and broaden the revenue base of major taxes, such as VAT and CIT, including through the withdrawal

of various tax incentives introduced over the past years. On the expenditure side, civil service reform and employment rationalization would help restrain further growth of the wage bill. Investment, especially off-budget, is also expected to decline further reflecting withdrawal of stimulus measures, but given Vietnam's infrastructure investment needs is crucial to sustain adequate levels capital spending.

**Table 3. Key Fiscal Indicators (% of GDP)**

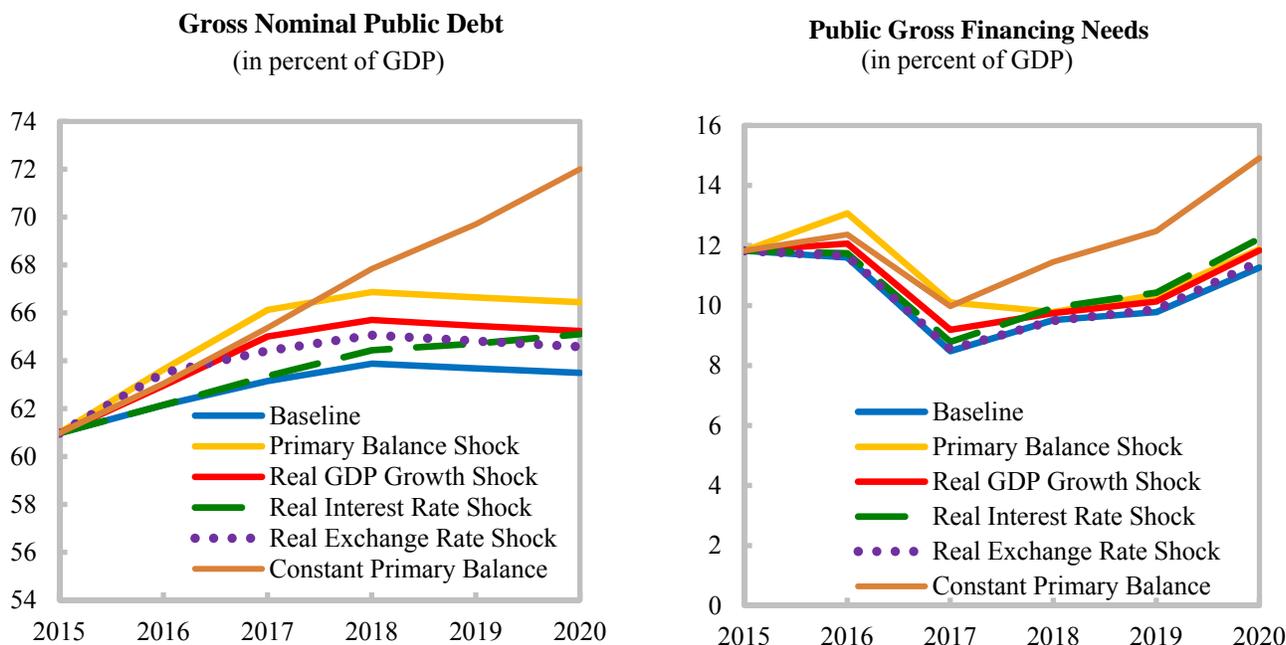
	2013	2014e	2015e	2016 p	2017f	2018f
Total revenue and grants	23.1	21.9	22.1	22.2	22.1	22.2
Revenue (excluding grants)	22.8	21.8	22.0	22.1	22.0	22.2
Tax revenue	19.5	18.2	17.9	17.8	17.9	18.2
Oil revenues	3.4	2.5	1.5	1.2	1.1	1.0
Non-oil tax revenues	16.1	15.7	16.4	16.6	16.8	17.2
Corporate income tax	5.6	4.9	4.6	4.4	4.3	4.2
Trade taxes	2.2	2.4	2.3	2.0	1.9	1.8
VAT	6.2	6.1	6.3	6.4	6.6	7.0
Other taxes	2.2	2.2	3.2	3.9	4.0	4.2
Non-tax and capital revenues	3.3	3.5	4.1	4.4	4.1	4.0
Grants	0.3	0.2	0.1	0.1	0.0	0.0
Total expenditure	30.5	28.2	28.6	28.1	27.8	27.7
Current	21.2	20.3	21.2	20.7	20.7	20.7
Administrative	2.7	2.5	2.6	2.6	2.5	2.4
Economic	2.0	1.9	2.0	1.8	1.8	1.8
Social	9.9	10.9	9.6	9.0	9.0	9.0
Education and training	4.7	4.5	4.5	4.2	4.2	4.2
Health and population	1.7	1.6	1.7	1.6	1.6	1.6
Pension and Social protection	3.0	2.8	2.9	2.6	2.5	2.5
Interest payment	1.3	1.7	2.0	2.1	2.3	2.5
Others	5.2	3.4	5.0	5.2	5.2	4.9
Capital	7.6	5.3	5.1	5.8	5.8	5.9
Off-budget expenditures	1.7	2.5	2.3	1.6	1.3	1.2
Overall fiscal balance	-7.4	-6.2	-6.5	-5.9	-5.7	-5.5
Primary deficit	-6.1	-4.5	-4.5	-3.8	-3.4	-3.0

Source: Bank staff, based official data.

28. **Public debt is assessed as sustainable but hinges on successful implementation of the envisaged fiscal consolidation program and remains subject to substantial risks.** Large fiscal deficits over the past few years have eroded fiscal buffers, shortened the maturity profile, and increased the debt service burden on the budget. Without adjustment of the current fiscal position, Vietnam's debt path will quickly enter the territory of increased risk of distress and pose headwinds to growth and macroeconomic stability. It is therefore crucial that fiscal consolidation plans in line with current government commitments are consistently implemented to ensure the public debt trajectory returns to a sustainable path. The need for fiscal restraint is especially important in the context of the prospective decline in access to concessional external financing. In the baseline scenario, which is based on the overall macroeconomic framework and predicated on successful implementation of the planned adjustment, public debt will peak at 63.9 percent of GDP in 2018, then stabilize, and gradually decline

from there onward. This baseline assessment is subject to considerable risk, including in particular delays in fiscal consolidation and persistent primary deficits exceeding the debt stabilizing level as well as growth and exchange rate shocks.

**Figure 7. Public Debt Is Sustainable but Subject to Considerable Risks**



Source: Bank staff, based official data.

29. **The baseline outlook for Vietnam is positive, but there are downside risks.** On the domestic front, slow structural reform progress poses significant risks to medium-term growth prospects. Structural reforms remain critical for Vietnam’s competitiveness and medium-term growth prospects, in particular given its gradual reform path and remaining institutional legacies with incomplete market institutions. Risks of reform slippages are somewhat mitigated by the recent conclusion of the Transpacific Trade Agreement, which is expected to serve as an external anchor for structural reforms, including in difficult reform areas such as competition, State Owned Enterprise (SOE) management, public procurement, and liberalization of services, including financial services and telecommunications. Fiscal risks are also substantial and delays in implementing fiscal consolidation would pose a serious risk to debt sustainability. Growing expenditure pressures deriving from high recurrent expenditures, including on the wage bill, can make efforts to reduce the deficit challenging. Fiscal risks are further aggravated by contingent liabilities associated with SOE debt and state-owned banks. With credit growth accelerating, risks in the banking sector, including possible overheating, are also intensifying and, if not managed prudently, can result in renewed instability with adverse impacts on growth. On the external front, slower-than-expected growth in key export markets, notably the United States, EU, Japan, and China, may pose a risk to export performance and growth. In addition, with the anticipated policy rate liftoff in the United States, financial market volatility is expected to remain relatively high, leading to capital outflows from emerging markets and causing sovereign spreads to rise, with the latter being of particular concern to Vietnam, given its large gross public financing needs that are expected to partially be met by international bond issuances.

## 2.3 IMF RELATIONS

30. **While there is currently no active IMF program in Vietnam, the IMF maintains regular macroeconomic surveillance and policy dialogue in the context of its Article IV consultations.** The previous IMF Poverty Reduction and Growth Facility ended in April 2004. Since then, the engagement with the IMF has focused on regular macroeconomic surveillance, policy dialogue and technical assistance support, including in fiscal policy, debt management, banking sector supervision, macroeconomic modeling and monetary policy. The World Bank and the IMF team are collaborating and exchanging views on pertinent fiscal and macroeconomic policy issues.

## 3. THE GOVERNMENT'S PROGRAM

31. **The development of the government's Post-2015 SP-RCC (for the 2016–2020 period) reflects sustained, high-level national leadership and ownership.** The program, which builds on the previous phase of the SP-RCC,<sup>13</sup> is expected to further the policy development engagement and serve as an enabling framework bringing policy formulation, investment, and capacity and knowledge development for climate change and green growth in a more convergent manner. This approach also aims to increase the scope and level of climate change and green growth transformation, financing, and implementation in Vietnam. Recognizing the importance of the 2016–2020 period, the prime minister (as chair of the NCCC) requested the government to design and develop a new phase of the SP-RCC (for the post-2015 period) in support of both climate change and green growth agendas, with implementation starting in 2016. The government recognizes that climate change is a complex threat, requiring short- to longer-term action, and that while earlier engagement laid the foundation to address climate challenges, a sustained effort is critical during the 2016–2020 period. The government also recognizes that addressing its key climate change challenges is an important dimension to greening and improving the quality of growth and that the Post-2015 SP-RCC can serve as a coherent framework to bring the two agendas together.

32. **Through an extensive cross-ministerial consultative process, the SP-RCC Policy Framework exhibits a high level and quality of policy dialogue through participation of relevant decision makers and a focus on a strategic and selected number of programmatically organized policy actions.** In particular, the process ensures that policy actions address (a) important policy barriers and incentives for encouraging both public and private sector investment in mitigation and adaptation; (b) cross-sectoral and/or interregional gaps in climate change and green growth policies; and (c) an increased emphasis on mitigation, with policies identified that provide development co-benefits. In parallel, the government aims at a more coordinated and programmatic approach for financing climate change and green growth activities and for developing a knowledge and capacity base to be accounted within policies and investments.

33. **The Post-2015 SP-RCC aims to operationalize the government's stated climate change and green growth priorities.** The specific objective of the Post-2015 SP-RCC is to support the implementation of the tasks of the NCCS, VGGs, and related sectoral strategies as well as the development of policy, science and technology, and coordination of financial resources and actions for

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<sup>13</sup> The first phase of the SP-RCC served as a platform for coordinated CC policy development and dialogue between the government and international development partners. Through annual cycles, DPs and the government mutually agreed on climate change-related policy actions to be delivered and implemented. The SP-RCC has played a role in harmonization and coordination between the international community and the government through discussions on the policy matrix, which usually also included DPs who do not fund the SP-RCC. The SP-RCC has been effective at bringing together DPs and line ministries and policy dialogue and coordination have improved.

climate change and green growth. The result areas of the program correspond to the strategic priorities of the NCCS and VGGs and prioritized action in support of the implementation of the two strategies, as articulated in the National Action Plan on Climate Change and the Green Growth Action Plan (GGAP) for the period up to 2020. The Post-2015 SP-RCC will also bring about key policy reforms that aim to operationalize priorities articulated in Vietnam’s (i)NDC, which builds on the priorities set out in the NCCS and VGGs. This includes addressing policy barriers that hinder the uptake of sustainable energy, the mobilization of resources toward adaptation and the key cross-sectoral and inter-boundary issues surrounding efforts to build resilience. The NCCS aims to establish a clear structure and identify specific tasks to be accomplished to achieve climate change response objectives. Ten strategic objectives are identified in the NCCS that cover both adaptation and mitigation.<sup>14</sup> The VGGs establishes renewable energy and energy efficiency as important parts of sustainable development and shifts the economy toward a low-carbon green trajectory. The VGGs also proposes more efficient use of natural capital, reduction of GHG emissions, and an improvement in environmental quality.<sup>15</sup> The NCCS and VGGs provide complementary and partially converging priorities, which support and drive the climate change and green growth response.<sup>16</sup> The two policies are mutually reinforcing. Implementation of both strategies is carried out by different line ministries and coordinated under the guidance of the NCCC by the MONRE and MPI, respectively. The Post-2015 SP-RCC serves as a catalyst for bringing these two agendas closer together with a governance structure and policy framework that is rooted in both strategies and action plans. The Post-2015 SP-RCC provides an operational multisector platform to leverage and speed up action on climate change and green growth policy development.

**Figure 8. A Summary of Vietnam's (intended) Nationally Determined Contribution**

**Mitigation Commitments:** By 2030 Vietnam will reduce GHG emissions by 8 percent compared to BAU<sup>17</sup> (with domestic sources) and up to 25 percent (with international support), in which:

- Emission intensity per unit of GDP will be reduced by 20 percent compared to 2010 levels (and 30percent w/international support);
- Forest cover will increase to the level of 45 percent (also contributes to adaptation)

<sup>14</sup> The ten strategic objectives of the NCCS are (a) proactively coping with natural disasters and climate monitoring; (b) guaranteeing food security and water resource; (c) actively responding to sea-level rise in vulnerable areas; (d) protection and sustainable development of forests; (e) greenhouse gas emission reduction to protect the global climate; (f) increasing the role of the government in CC response—integration and institutional capacity; (g) community capacity development to respond to CC; (h) science and technological development for a CC response; (i) international cooperation and integration to enhance the country’s status in CC issues; and (j) diversification of financial resources and more effective investment for CC response.

<sup>15</sup> The GGAP presents activities grouped under four themes: (a) institutional improvement and formulation of GGAPs at the local level; (b) reducing GHG emissions intensity and promoting the use of clean and renewable sources of energy; (c) greening production; and (d) greening lifestyle and promoting sustainable consumption.

<sup>16</sup> The strategic phases of the NCCS are linked to Vietnam’s industrialization and socioeconomic trajectory. The first and second phases of the NCCS prioritize adaptation priorities with ‘special attention’ to reducing GHG emissions during the second phase (2013–2025). With the start of the third phase (in 2026), the NCCS dictates that GHG emission reduction should be a criterion for Vietnam’s socioeconomic development planning. As noted, GHG emission reduction is one key overarching priority of the VGGs, with efficiency in the use of natural capital and improvement in environmental quality also highlighted and adaptation implicitly included.

<sup>17</sup> **Notes:** Greenhouse gases covered include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (CH<sub>4</sub>), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>). The emissions cover the energy sector (including fuel combustion from industries and transport); agriculture; land use, land use change, and forestry (LULUCF); and waste. The BAU scenario was developed based on the assumption of economic growth in the absence of climate change policies

**Adaptation Commitment:** Implementation of plans developed in accordance with the current situation and projections until 2030 dependent on national resources and particularly on international support. Key indicator :at least 90 percent of Socio-Economic Development Plans (across ministries and localities) have integrated disaster risk management and climate change adaptation

Priority Mitigation Measures	Priority Adaptation Measures
<ul style="list-style-type: none"> <li>- <b>Strengthen the leading role of the State</b> (e.g. integrate CC in strategies and dev. plans; improve institutions; CC policies &amp; mechanisms, GHG inventory &amp; MRV systems)</li> <li>- <b>Improve EE, reduce energy consumption</b> (e.g. innovate technologies, apply energy savings in residential sector; develop public passenger transport; restructure freight to a shift towards rail and inland waterways; standards on fuel consumption)</li> <li>- <b>Change the fuel structure in industry and transportation</b> (e.g. reduced share of fossil fuel; RE and low GHG emission energy, CNG &amp; LPG buses &amp; taxis, apply market instruments to promote structural change and improve EE; phase out fossil fuel subsidies, labeling of energy saving equip.)</li> <li>- <b>New &amp; renewable energy</b> (e.g. on- and off grid technologies; develop RE technology market, local industries and service providers)</li> <li>- <b>Sustainable agriculture</b> (e.g. R&amp;D; apply production processes and techs to reduce emissions; replicate tech that treat and reuse byproducts and waste from ag production)</li> <li>- <b>Forests, carbon sequestration &amp; biodiversity</b> (e.g. special priority regions; integrate resources such as REDD+, PFES, and private sector)</li> <li>- <b>Waste Management</b> (e.g. WM planning and capacity; promote 3R; advanced waste treatment ; landfill gas and waste-to-energy)</li> <li>- <b>Communication &amp; Awareness</b> (e.g. promote pub awareness; TA to people/communities)</li> <li>- <b>International Cooperation</b> (e.g. research, enlist support for finance and capacity)</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Respond pro-actively to disasters and improve climate monitoring</b> (e.g. modernize hydromet forecasting, sea level monitoring, produce SEDPs based on CC scenarios; implement disaster prevention plans/measures; develop infra. And residential plans, resettle households frequently affected by natural hazards, community-based adaptation, capacity building)</li> <li>- <b>Ensure Social Security</b> (e.g. review, adjust, and develop livelihood and production processes that are appropriate under CC; strengthen the insurance system; infrastructure standards, IWRM, transboundary water issues, ensure food security through sustainable ag; ecosystem- and community-based adaptation, sustainable forest management, protect, restore, plant and improve coastal forests &amp; mangroves, especially in coastal estuaries and Mekong and Red river deltas)</li> <li>- <b>Responding to sea level rise and urban inundation</b> (e.g. ICZM, use sea level rise scenarios in urban &amp; land use planning, anti-inundation measures for large cities, resilient urban infrastructure, urban drainage, sea &amp; river dykes, control saline water intrusion)</li> </ul>

## 4. THE OPERATION

### 4.1 LINK TO GOVERNMENT PROGRAM AND OPERATION DESCRIPTION

34. **The operation, the first in a programmatic series of three single tranche DPF operations, supports the GoV’s Post-2015 SP-RCC.** The policy matrix and result framework for this operation was identified and developed in close partnership with line ministries through a cross-ministerial

program's preparation process organized by the government. This process is led by the MONRE at the request of the prime minister and involves the MARD, MOIT, Ministry of Science and Technology (MOST), MOT, and MPI. The choice of a programmatic series responds to the government's desire for a sustained multi-sectoral platform to promote a stronger integration of climate change and green growth policy reforms over the short to long term. The operation will support a subset of priority policy tracks from the government's policy matrix for the 2016–2020 period. The three pillars and six policy tracks of the series support the priorities of the government matrix. The prioritization was based on the aforementioned extensive consultations with the government and DPs, which resulted in consensus for principles for selection of policy actions.

35. **The series supports a package of reforms pursuing a program development objective (PDO) consisting of** (a) improving inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action; (b) developing and safeguarding selected natural resources services; and (c) promoting selected cleaner production systems.<sup>18</sup>

36. **The operation supports the government's goal to enhance the enabling environment for climate change and green growth interventions in Vietnam, building on the priorities identified jointly by the government and DPs in support of the SEDP 2016-2020.** In addition to being fully in line with the government's goals, as articulated in its (i)NDC as well as its NCCS and VGGs, the operation responds to the CPS for Vietnam and the Bank's corporate goals of reducing poverty and boosting shared prosperity and enhancing sustainability. Sustained Bank engagement, through targeted advisory services and analytics support and lending, over the past years has actively contributed to the framing of the Post-2015 SP-RCC.

37. **The nature of the climate change and green growth challenges in Vietnam requires policy development and reform that need time and a programmatic engagement.** Thus, this operation aims to further build foundations, becoming more ambitious over time. To this effect, the series will: (1) provide support to an improved reform dialogue on selected climate change and green growth issues (through regular consultations, expert reviews, and monitoring and discussion via high-level forums with the NCCC and Development Partners); (2) focus on climate change and green growth policy development and reform areas that are priorities of the GoV; (3) sequence policy development and reform within these areas to focus on implementation and enforcement; and (4) support the measurement of progress against indicators that are contained within a programmatic results framework that encourages synergies towards common goals across line ministries and an increased focus on implementation readiness and on-the-ground action.

38. **The operation contributes to strengthen the integration between the climate change and green growth agendas in Vietnam.** In particular, the DPF and parallel technical assistance (TA) have supported the Post-2015 SP-RCC to reinforce the dynamic and multisector institutional convergence approach that both the climate change and green growth strategies and action plans make concrete. Bringing these two reform agendas together has also allowed for broader constituency linkages to be built across line ministries and around both agendas. For example, green growth focus has catalyzed further policy development on mitigation with competitiveness and development co-benefits serving

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<sup>18</sup> Improvement in inter-sectoral planning and investment finance programming refers to the processes that line ministries, provinces, and cities undergo to better plan and deliver on objectives and outcomes that require coherent and convergent interventions across sectors, particularly while utilizing a climate lens. The selected natural resources services included as part of this DPF series are water and forest resources. The selected cleaner production systems include those in the industrial and transport sectors, residential appliances, and renewable energy.

as primary drivers for action. The Green Growth Strategy has also supported dialogue on adaptation and resilience, particularly related to water resources and forests. The series of operations also serve as a tool to promote financing and incentives that are mutually reinforcing for climate change and green growth objectives (e.g., incentive mechanisms for renewable energy).

39. **The operation incorporates lessons learned from other DPFs, in particular from the previous CC DPF series.** While not yet finalized, a draft implementation completion and results report is available which is informing the preparation of this new series, particularly through an analysis of the lessons learned. The lessons ascertained from the implementation of the CC DPF series (FY12–14) and integrated into the design of this new operation are highlighted below:

- **Effective cross-sectoral platforms are needed to achieve significant progress on policy and institutional reforms that address climate change.** The series harnesses progress achieved by the government under the SP-RCC, facilitating government leadership and DPs' engagement across sectors and promoting collaboration and coordination between ministries on selected inter-sectoral priority issues. The platform helps to reduce fragmentation among DPs that support the Post-2015 SP-RCC as well as those interested in supporting capacity and knowledge development in the program's defined policy areas.
- **Sustained programmatic engagement is essential to achieve progress in the context of a complex, multisector reform agenda that requires a series of incremental steps to move from planning to financing and implementation.** The series of operations supports action-oriented policy reforms that build upon (a) certain foundational policy developments initiated in the past few years; (b) higher-level policy actions that set the stage for deeper reforms and promote area-based climate change adaptation across sectors; and (c) targeted incremental actions that allow for the facilitation of low-carbon action and generation of non-climate benefits.
- **Multisector operations require proactive engagement and progress on convergence across sectors to address trade-offs, harness coordination, and open new policy development areas.** Consensus building can be strengthened with additional technical assistance based on international good practices and coupled with regular monitoring and policy dialogue sessions to help bring line ministries together to cooperate to carry out reforms.
- **An accountability framework rooted in the government's regular annual and medium-term planning cycles facilitate a feedback cycle.** The government has adopted a five-year policy matrix that coincides with the five-year period of the new SEDP, which embeds the Post-2015 SP-RCC and related policy development financing in a strong national policy framework validated by the National Assembly and Central Committee of the Communist Party. Accordingly, the government's accountability framework for the Post-2015 SP-RCC is based on a multi-sectoral policy matrix that is submitted to and approved by the prime minister on an annual basis with biannual reporting to the NCCC on progress of policy formulation and implementation. As line ministries are accountable to the prime minister and not just the MONRE, a strong level of accountability is promoted.
- **Bringing the climate change and green growth agendas together requires a concerted policy reform push to leverage synergies and limit institutional disconnects.** The SP-RCC, supported by this DPF series, reflects this by institutionalizing the support process to the priorities of both the NCCS and VGGs as the program's priority policy areas. Preparation of

the Program has evidenced some increased coordination under the guidance of the Office of Government (OOG), in recent months between the MONRE and MPI, which are mandated to lead the climate change and green growth agendas, respectively.

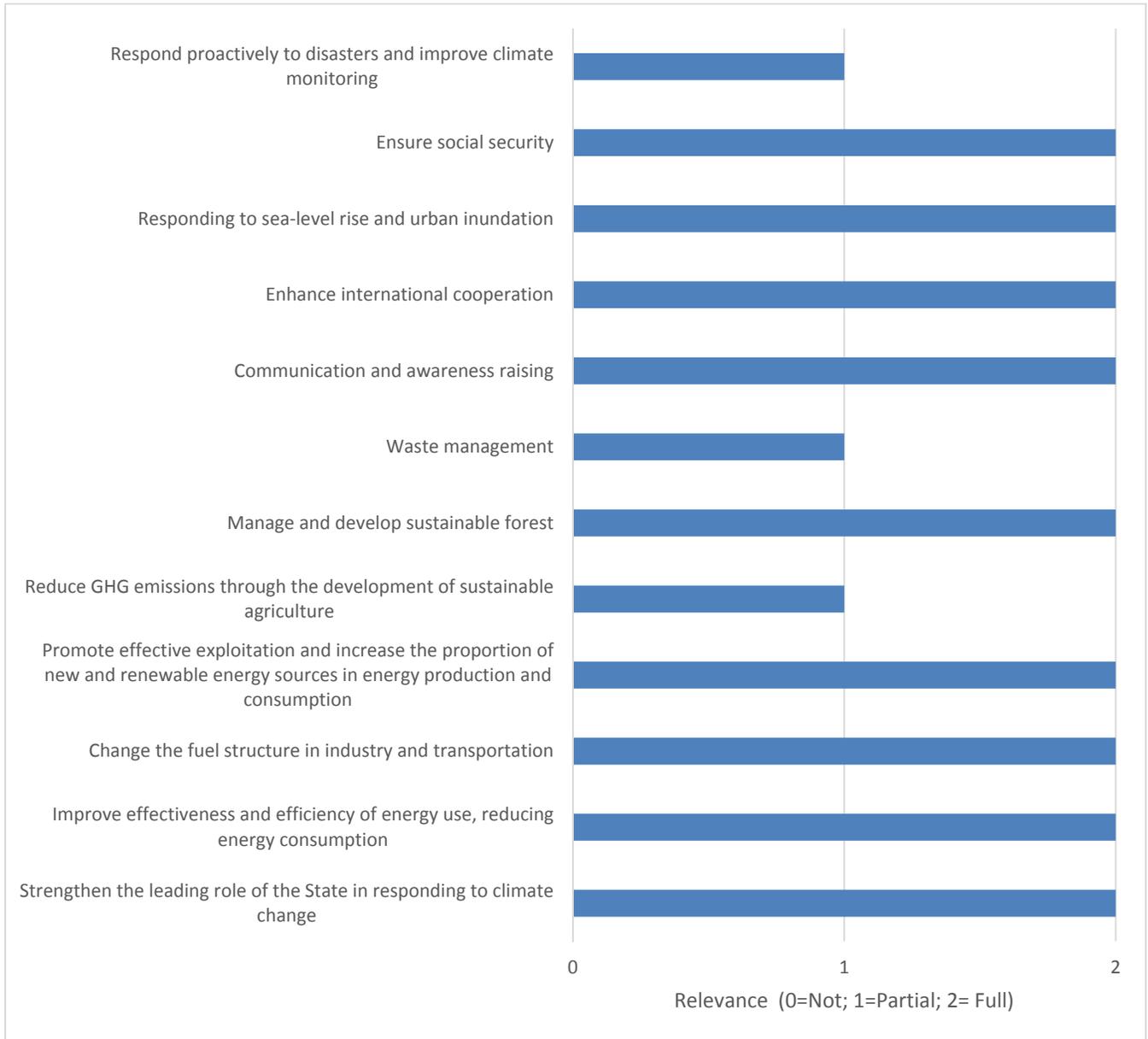
- **Enabling an increased convergence of policies, programs, and resources between line ministries, across DPs, and between the national and subnational levels of government is a strong value addition of this engagement.** The series continues the incremental progress made by the government to promote sectoral, spatial, and financial synergies to address priorities, such as area-based adaptation in targeted vulnerable areas and key cross-sectoral environmental degradation issues (for example, air quality) that inhibit the quality of Vietnam's growth path and generate local and global problems.
- **The level and strength of engagement with the government, supported by targeted analytical work, technical assistance, and global knowledge sharing, is key to achieving reforms critical to making progress on climate change and green growth action.** The NCCC, chaired by the Prime Minister, is equipped and mandated to take decisions on cross-sectoral issues that may arise in policy formulation related to both climate change and green growth. Further, the Bank has supported the government and other DPs to prepare the Post-2015 SP-RCC and will provide further targeted technical and analytical support to agencies in the policy reforms supported by the series.

#### **4.2. PRIOR ACTIONS, RESULTS, AND ANALYTICAL UNDERPINNINGS**

40. **The series of operations contains a selective and cohesive subset of six policy tracks and ten prior actions.** All prior actions have been completed. The policy tracks were identified as critical in support of Vietnam's (i)NDC and the implementation of the prioritized actions under the NCCS and VGGS. The policy tracks and actions are grouped into three pillars that collectively aim to unlock key policy barriers to allow for a scaled-up climate change and green growth response: (a) Pillar 1 aims to improve inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action; (b) Pillar 2 aims to develop and safeguard selected natural resources services; and (c) Pillar 3 aims to promote selected cleaner production systems. The details and rationale of the prior actions are discussed below while the policy and results matrix is summarized in annex I.

41. **The prior actions were identified following the government's efforts to deepen selected reform areas and to engage in sectors that are important to address climate change and green growth.** The operation has a strong analytical underpinning from technical assistance tasks, economic and sector work, capacity building programs, and specific lending operations -- as presented in annex 4. This includes both Bank and other DP initiatives, alongside analytical assessments and studies from the government and national institutes. The operation also supports reforms that are aligned with the (i)NDC, which includes elements contained in both the NCCS and VGGS (see Figure 9 for an analysis of the alignment).

**Figure 9. DPF’s Relevance to Vietnam’s (i)NDC Priorities**



**Pillar 1. Improving Inter-Sectoral Coastal Planning and Public Investment Finance Programming across Selected Key Sectors in Support of Climate Change and Green Growth Action**

42. **Pillar 1 supports the GoV’s efforts to improve inter-sectoral planning and financing for climate change and green growth.** The two policy tracks within Pillar 1 aim to tackle both key area-based cross-sectoral obstacles that arise in development across the long low-lying coast of Vietnam in the face of climate impacts and actions that support better inter-sectoral mobilization of resources for climate change and green growth. In both cases, influencing how improvement of information and approaches should improve combined outcomes of planning and financing. Pillar 1 is therefore

composed of two policy tracks: 1.1. Enabling Area-Based Adaptation and Resilience in Coastal Areas and 1.2. Improving the Mobilization of Resources for Climate Change and Green Growth.

*Policy Track 1.1. Enabling Area-Based Adaptation and Resilience in Coastal Areas*

43. **Vietnam's coastal areas play a key role in the country's sustainable socioeconomic development.** With its 3,260 km of shoreline, Vietnam is essentially a coastal country. Furthermore, with 50 percent of its population living in coastal provinces and 50 percent of its major cities located in coastal areas, Vietnam is extremely vulnerable to the impacts of climate change. This vast coastal area, defined to cover six nautical miles for the marine part and all communes and cities contiguous to the sea,<sup>19</sup> is home to ecosystems with high biodiversity as well as tremendous economic potential, which are important both for conservation and for the development of coastal industries, including tourism, navigation, trade, fisheries, and urban development. Overall, Vietnam's coastal and marine areas contribute to about 48 percent of the national GDP. The high value of coastal resources leads to overexploitation and conflicts over their use, which is exacerbated by the impacts of climate change. This in turn calls for enhanced management and protection of these areas.

44. **In addition to Vietnam's exposure to extreme weather events, climate change contributes to sea-level rise and coastal erosion, ocean acidification, salinization, and stratification, water scarcity and flooding, and increases in water temperature.** As a result, and coupled with relatively low adaptive capacity on the coast, Vietnam is among the most vulnerable to the effects of climate change on natural and man-made coastal systems and livelihoods globally.<sup>20</sup> These impacts have direct and immediate detrimental results on several key coastal economic activities, including fisheries, maritime transport, tourism, and aquaculture, as well as on critical watersheds and coastal forests. Furthermore, as recent studies show, climate change aggravates poverty in coastal areas through three major channels: (a) in the poorest developing countries, populations in low-elevation coastal areas have a high incidence of poverty and, as a result, have the lowest adaptive capacity and can least afford to protect themselves; (b) coastal hazards directly impact the livelihood of poor coastal populations; and (c) these populations are further and indirectly affected by the disappearance of key nearshore ecosystems such as mangroves, marshes, coral reefs, sea-grass beds, and barrier islands.<sup>21</sup> Coastal ecosystems play a major role in mitigating these impacts and need protection throughout the national coastline, and particularly along the coasts of the Mekong Delta.

45. **This combination of vulnerability to the impacts of climate change and importance of the coastal area as an engine for economic growth in Vietnam in turn call for a genuine 'green growth approach'.** Under such an approach, strengthened management of natural capital cannot only yield positive environmental benefits, but also provide resilience to agriculture, fisheries, and broader economic activities such as tourism that rely on intensively used natural resources along the coast and are therefore dependent on healthy coastal ecosystems. There is now clear awareness on the part of policy makers in Vietnam of the need to avoid locking the economy into unsustainable patterns that have prevailed for too long.

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<sup>19</sup> Definition provided in the Integrated Coastal Zone Management Strategy of Vietnam to 2020 with vision to 2030.

<sup>20</sup> Alison et al. 2009. Vulnerability of National Economies to the Impacts of Climate Change on Fisheries: *Fish and Fisheries*, DOI: 10.1111/j.1467-2979.2008.00310.x.

<sup>21</sup> Barbier, E.B., 2015. Climate Change Impacts on Rural Poverty in Low-Elevation Coastal Zones: *Estuarine, Coastal and Shelf Science*. <http://dx.doi.org/10.1016/j.ecss.2015.05.35>

46. **The government has developed plans for most sectors and areas;<sup>22</sup> however, their implementation typically overlaps and lacks coordination among the respective stakeholders along the coast.** This results in conflicts between the needs for economic development, urbanization, national security, and environmental preservation in the coastal areas and an increasingly urgent sense of the need to develop a more comprehensive and integrated response to sustainability and addressing climate risks. Competing demands often arise from the development of industrial zones, ports, coastal fisheries and aquaculture, mining, electricity, and tourism. Economic activities and rapid urbanization along the coast, combined with upstream development, have had adverse impacts on these areas, including the destruction of protective coastal forests.<sup>23</sup> These threats, compounded with the increasing impacts of climate change, call for an explicit and more systematic approach to address these issues of rapidly growing importance.

47. **In the face of these growing threats to Vietnam’s coast, the government is developing new policy approaches that aim to limit the magnitude and severity of these impacts and to increase convergence of efforts in support of sustainability and the management of trade-offs.** To address these challenges, Vietnam has engaged on a path toward Integrated Coastal Zone Management (ICZM), initiated in 2000. ICZM is widely recognized as the optimal approach for adaptation of coastal areas to the impacts of climate change. Following a series of largely DP-supported pilot projects launched locally and at a small scale, the government decided to scale up this approach nationwide with the issuance of Decision 158/2007/QĐ-TTg dated October 9, 2007, adopting the ICZM Program for the central coast toward 2010 with the vision to 2020. This program has been implemented in 14 central coast provinces and contributed technically and financially to the development of the ICZM strategy for Vietnam. The implementation of the national ICZM approach was first formalized through two administrative instruments: Decree 25/2009/ND-CP on Integrated Management of Natural Resources and Environmental Protection of the Sea and Islands, which was adopted on March 6, 2009, and Circular 22/2012/TT-BTNMT Stipulating the Formulation and Implementation of a Plan for Integrated Management of Natural Resources and Environmental Protection in Coastal Areas, adopted on December 16, 2012. These documents lacked the full weight of a law (the latter was only developed and issued in 2013), and the related policies needed by those charged with their implementation.

48. **More recently, the government has taken a new, more strategic and legally stronger approach, first through the issuance of a detailed strategy—the ICZM in Vietnam up to 2020 with a vision to 2030 (approved by the prime minister in December 2014) and the adoption of the Law 82/2015/QH13 on Natural Resources and Environment of Sea and Islands.** Chapter IV of the Law 82/2015/QH1, not only defines prohibited and restricted uses on the coast (thereby establishing clear minimum standards upon which the ICZM program can expand), but also empowers stakeholders with clearer authority for the planning, implementation and monitoring of a national ICZM program. Moreover, the Law stipulates that Ministries, ministerial-level agencies and Provincial People’s Committees of coastal cities and provinces must develop ICZM programs under the prescribed scope, content, monitoring and reporting requirements, and indicates that all relevant companies, organizations and individuals must comply with ICZM products (i.e. zoning prescriptions). Additionally, Vietnam, through its (i)NDC, has highlighted the need for ICZM implementation as a priority action for national climate change adaptation by 2030. This reliance on ICZM is important, specifically because ICZM has been found to (a) improve the integration and balancing of multiple sector-specific policies and programs in broader coastal planning and management, (b) enhance

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<sup>22</sup> This includes but is not limited to plans for fisheries, aquaculture, forest management, water resources, tourism, transport, and industrial zones.

<sup>23</sup> Strategy and Action Plan for ICZM Report, Strategic Environmental Assessment, MONRE, 2014

communities' adaptive capacities, (c) support a more equitable distribution of social and environmental benefits, and (d) better address the conflicting views of different social groups on their relative priorities and considerations for developing short- and long-term plans.<sup>24</sup>

49. **The government is enhancing its ICZM policy and institutional capacity through a series of legislative and administrative steps, which are directly supported by this DPF series.** These steps include (1) the adoption of the NAP setting policies, priorities and a legally-stronger strategy for the integrated management of coastal zones; (2) the associated delivery of specific policy guidance to the subnational level where action needs to take place; and (3) the development of coastal functional zoning, which aims to guide provinces in coastal zone management in a cohesive, national approach. Without these reforms, provinces will continue to develop, at best, uncoordinated pilot ICZM activities with limited expected impact. In contrast, the aforementioned policy developments will allow an approach that focuses, first, on setting up a national framework within which all coastal activities can be encompassed and organized and then on the provinces' ability to develop ICZM programs that support integration of activities rather than conflict with each other. Effectively, the policy aim is to better regulate resource uses in coastal areas and provide a framework to enhance coordination between users and sectors, including through a mechanism to address and referee their competing demands. As a result of the full implementation of these policy reforms, it is expected that the resilience and adaptive capacity in coastal areas will increase, with coastal areas better managed. These reforms will provide Vietnam with an operational road map on what uses are permitted, how conflicts are resolved, and, ultimately, how the adaptation deficit that results from these conflicts can be addressed under a more integrated approach.

50. **DPF 1 Prior Action. The government has developed and adopted the National Action Plan setting priorities for the integrated management of coastal zones** (*Evidence: The Recipient, through its Prime Minister, has issued Decision Number 914/QĐ-TTg dated 27th May 2016, adopting the National Coastal Zone Action Plan setting priorities for the integrated management of coastal zones* ). The objective of the NAP is to improve Vietnam's adaptation to the anticipated impacts of climate change on socioeconomic development by (a) developing a national approach to ICZM that sets the parameters under which decisions will be made at all levels, from the national to the provincial, and (b) facilitating trade-offs between, sometimes, conflicting sectors. The content of the NAP specifies the selection of priority tasks, programs, and projects. Implementation is organized into eight task groups, thereby providing a clear road map as to what is expected of whom and by when. Various entities are involved in its implementation with an emphasis on increasing convergence, including the MONRE, MPI, MOF, MARD, and other related ministries and agencies, as well as provincial people's committees, nongovernmental organizations, enterprises, local communities, academies, and other stakeholders. The NAP emphasizes the sustainable use of natural resources in coastal zones and it guides the coordination between sectors involved in setting their priorities on the coasts. More importantly, the NAP recognizes that the bulk of coastal management will be carried out at the provincial level and thus calls for better vertical integration between all levels of government, including support from the national government.

51. **Indicative DPF 2 and 3 triggers. To support implementation of the Law and the NAP as a contribution to meeting green growth and climate change priorities, the GoV's policy in the coastal zone will then be strengthened by two indicative triggers.** First, under DPF 2, the MONRE will develop and adopt specific guidance, directing provinces in the development of provincial ICZM

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<sup>24</sup> IPCC Fourth Assessment Report. Climate Change 2007: Working Group II: Impacts, Adaptation and Vulnerability, Chapter 6, 6.6.1.2 Integrated Coastal Zone Management (ICZM). 2007.

programs. This will guide provinces to develop and improve the content and quality of their programs, ensure consistency across provinces and support interprovincial dialogue, integrate with provincial development planning, better prioritize activities based on local characteristics and particularities, and referee conflicts between uses and users. Emphasis is also focused on the co-management of coastal resources based on best practices, which is a particularly efficient way of ensuring that the interests of the poorest and most vulnerable coastal populations are taken into account. Then, under DPF 3, the government will develop and adopt the coastal functional zoning to guide provinces in the development of functional zoning under provincial coastal zone management programs. Based on lessons learned at the provincial level and strategic directions from the national level, development of this coastal functional zoning plan will be informed by a mapping of the uses and impacts in various regions and an evaluation of the trade-offs within and between regions. Once completed, the coastal functional zoning will put in place the parameters under which national priorities can guide the development and implementation of the provincial ICZM programs.

52. **Expected results.** At the end of this series of operations, it is expected that five coastal provinces will have adopted integrated coastal zone management programs that will be under early implementation. While each provincial ICZM program may vary to reflect differences in local particularities, the extent to which provinces have initiated implementing their programs can be measured by verifying the existence of some key components of early implementation, including, but not limited to, the appointment of a provincial ICM coordinator together with the designation of a provincial ICM committee, and the adoption of a consultative process through which the risk assessments, concerns and priorities of local stakeholders can be incorporated and priority new investments addressing adaptation and resilience can be decided [Baseline: 0; Target: 5 (out of 28)].

**Box 2. Prior Actions for Policy Track 1.1: Enabling Area-Based Adaptation and Resilience in Coastal Areas**

**Prior Action (DPF 1):** The government has developed and adopted the National Action Plan setting priorities for the integrated management of coastal zones (*Evidence: The Recipient, through its Prime Minister, has issued Decision Number 914/QĐ-TTg dated 27th May 2016, adopting the National Coastal Zone Action Plan setting priorities for the integrated management of coastal zones*)

*Policy Track 1.2. Improving Mobilization of Resources for Climate Change and Green Growth*

53. **As climate change intensifies, Vietnam is faced with the increasing challenge of planning and financing action that strengthens adaptation and resilience and promotes a low-carbon development path while avoiding technology and infrastructure that will ‘lock in’ high carbon and inefficient economic structures.** The upcoming period is important for Vietnam as increases in infrastructure development are expected, putting more assets and livelihoods at risk to both climate-change-induced extreme weather events and slow-onset impacts. This emphasizes the need for a fact-based inter-sectoral approach to risk management to minimize the impact of climate change on economic development and poverty alleviation. Further, as cities in Vietnam are expected to expand tremendously, millions of Vietnamese will likely switch to an urban lifestyle and seek convenience and comfort that correspond to increases in income. This will lead to an increase in the number of power and industrial plants, modern modes of transport and new commercial and residential buildings, all of which can be developed in a manner consistent with the government’s climate change and green growth objectives. Within this period, it is also important for the government to begin institutionalizing efforts to implement Vietnam’s (i)NDC, which will require concrete action to promote no-regret or low-regret mitigation measures and to mobilize finance to fill the adaptation gap.

54. **Mobilizing resources for climate change and green growth to address these increasing demands will require a continued proactive engagement from the government to improve the scale and quality of financing.** The government has already adopted a number of programs and initiatives, chief among them being the National Target Program to Respond to Climate Change, which has been a 10-year, two-phase program that culminated at the end of 2015 and focused on scientific analysis, capacity building, and supporting the development of sector and provincial climate change action plans. While this program has sensitized and mainstreamed climate change within line ministries and provinces, there are opportunities to further enhance the level and efficiency of public investment. A recent climate public expenditure and investment review (CPEIR) requested and led by the MPI (and carried out with support from the Bank) indicates continued government financial commitment to a firm climate change response, despite a tightening fiscal environment. Nevertheless, it is apparent that the magnitude, targeting, and effectiveness of public financing are not yet sufficient to address Vietnam’s key climate-induced development challenges and to promote greener and higher quality growth. Vietnam’s (i)NDC considers this challenge of resource mobilization for adaptation a priority. The government is working toward accessing additional international finance for climate change response and green growth programs and projects from development partners, targeted climate finance initiatives such as the Green Climate Fund (GCF), and the private sector. However, it is evident that Vietnam will also need to continue to leverage a significant portion of financing for climate change and green growth, particularly for adaptation, from the national budget.<sup>25</sup>

55. **Recognizing these challenges, policy track 1.2 aims to support government reforms that improve the mobilization of the national budget toward Vietnam’s climate change and green growth objectives, as articulated in its (i)NDC, NCCS, and VGGS, and enhance the decision making and spending for implementation.** Enhanced integration of climate change and green growth in the context of the 2016–2020 SEDP, the prior action to be recognized in DPF 1, sets the climate change and green growth priorities of the government within the official development agenda. It will direct all sectors and provinces to develop their development plans and make budget allocations in the next five years to operationalize these priorities. Institutionalizing an identification and tracking framework for climate change and green growth investment programs, the indicative trigger for DPF 2, will help the government map and assess the allocation for implementation of these priorities and set the stage for better planning and financing towards CC-GG outcomes in the future. A government review of a subset of the major resilience investment programs, the indicative trigger for DPF 3, will assess the effectiveness of financing against adaptation and resilience objectives and will inform the mobilization and allocation of resources and the design of future investment planning. The implementation of the tracking framework and the subsequent review will target investments in key sectors (e.g., MARD, MOT, and MONRE) as well as those in areas where livelihoods and assets are significantly vulnerable to climate risks (including provinces in the Mekong River Delta and coastal areas). These reforms can support the NCCC in making recommendations that can, in particular, be used for the preparation of the midterm review of the 2016–2020 SEDP and 2021–2025 SEDP, with the view to initiate a feedback cycle where knowledge generated on the government’s climate change and green growth response is used to better inform future planning and investment decision making.

56. **DPF 1 Prior Action: The government has established climate change and green growth as a priority direction to guide implementation under the 2016–2020 SEDP** (*Evidence: The Recipient, through its Prime Minister, has issued Decision Number 40/2015/QĐ-TTg dated September*

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<sup>25</sup> As noted in the CPEIR, about 69 percent of the government’s climate change response expenditures from the five key climate-relevant line ministries from 2010–2013 are from domestic sources with a vast majority directed toward adaptation.

14, 2015 governing the principles, criteria and norms for allocation of state budget funds for development investment during the period of 2016 to 2020, and has submitted Socio-Economic Development Plan 2016-2020 to the National Assembly to establish climate change and green growth as a priority under this Plan. The 2016–2020 SEDP sets the stage for the next five years of Vietnam’s development agenda and is the basis on which the government plans its investment program. A clear signal from the government within the 2016–2020 SEDP will facilitate line ministries, provinces, and cities’ planning process to support the prioritization of projects and programs that address Vietnam’s key climate challenges and promote greener growth, as well as those that generate climate co-benefits. The SEDP places “response to climate change, natural resources management, and environmental protection” as a prioritized objective and requires that consideration of sustainable development, climate change, and green growth be integrated into the preparation, appraisal, and approval of investment programs that are funded by the state budget. Further, it emphasizes the need to consider climate risks in regional development and urbanization. It directs industrial production toward using more environmental friendly technology and discourages energy-intensive investment or investments that cause environmental degradation and require excessive use of natural resources and energy. Decision 40/2015/QĐ-TTg from the prime minister, which guides the allocation principles, criteria, and norms of capital for investment and budgeted target programs for the 2016–2020 period, indicates a greater uptake of investments towards climate change and green growth objectives. This is evidenced by a Target Program for Green Growth and Climate Change, one of 21 target programs that capture a portion of the fiscal space within the government’s public investment budget,<sup>26</sup> as well as other target programs that incorporate climate change and green growth elements.<sup>27</sup> These target programs collectively aim to increase the scale and effectiveness of financing to scale up the implementation of climate change and green growth policies.

57. **Indicative DPF 2 trigger. In an effort to assess whether investments guided by the 2016–2020 SEDP are being directed towards Vietnam’s climate change and green growth priorities, the indicative trigger for DPF 2 supports a reform that establishes a climate change and green growth investments projects and program identification and tracking framework.** The MPI plans to establish a climate change and green growth investment project and program identification and tracking framework that will offer a unifying methodology (building on the one developed from the CPEIR) to map current and planned climate change and green growth spending in Vietnam. Implementing the process will enable the government to (a) conduct analyses of budgetary changes in certain response areas by tracking climate change response and green growth allocations over time; (b) link its climate change response and green growth investments to policy objectives to provide improved assessment of policy implementation and a feedback mechanism into reform processes; and (c) inform resource mobilization and budget allocation for climate change and green growth actions.

58. **Indicative DPF 3 trigger. Building on this framework, the indicative trigger for DPF 3 supports the MPI submission to the Prime Minister of a review that assesses the design of a selected number of major climate change and green growth projects and programs against**

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<sup>26</sup> The indicative envelope of financing for the target programs has not yet been set by the government.

<sup>27</sup> Other target programs that incorporate climate change and green growth elements include those for sustainable aquaculture development, sustainable forestry development, which among others prioritizes protection of large special forest areas, and Agriculture Restructuring and Disaster Risk Management and Residential Protection, which includes the promotion of projects to ensure agricultural resilience and upgrade and strengthen river embankments and sea dikes. Further, the decision also establishes a target program to address pollution caused by landfill and pesticide residue. Other budgeted target programs, such as the target programs for coastal economic zones, border area economic zones, industrial zones, industrial parks, high-tech parks, high-tech agriculture zones, and tourism infrastructure development, prioritize waste water and solid waste treatment.

**adaptation and resilience objectives.** This review will be issued by MPI and submitted to the Prime Minister and the NCCC as an input to guide the budget allocation for adaptation and the policy and financing dialogue on climate change and green growth. This assessment will mobilize the development of a methodology to measure and track the adaptation and resilience results achieved by the investments mobilized through adaptation and resilience programs and projects. In particular, this work will aim at setting up a measurement system (including a results chain, indicators and, measurement methodologies, and baselines) to measure and track the outputs, outcomes and impacts of projects and programs with adaptation and resilience objectives.

59. **Expected results.** The policy measures are expected to set the stage for better alignment of financing and targeting toward climate change and green growth objectives and allow for better informed decision making for climate change and green growth investments. As a result, it is expected that by 2019, the government will identify and report climate change and green growth investment programs in three priority sectors and eight provinces to the NCCC with information used to review progress in implementing priorities and to develop recommendations<sup>28</sup> [Baseline: 0 sectors, 0 provinces; Target: 3 sectors and 8 provinces]. It is also expected that there will be a 15 percent increase in the number of projects and programs that meet climate change and green growth policy objectives in selected sectors and provinces (in the same three sectors and eight provinces as above) [Baseline: 0 percent increase; Target: 15 percent increase].

**Box 3. Prior Actions for Policy Track 1.2: Improving Mobilization of Resources for Climate Change and Green Growth**

**Prior Action (DPF 1):** The government has established CC and GG as a priority direction for implementation under the 2016–2020 SEDP (*Evidence: The Recipient, through its Prime Minister, has issued Decision Number 40/2015/QĐ-TTg dated September 14, 2015 governing the principles, criteria and norms for allocation of state budget funds for development investment during the period of 2016 to 2020, and has submitted Socio-Economic Development Plan 2016-2020 to the National Assembly to establish climate change and green growth as a priority under this Plan.*

**Pillar 2. Developing and Safeguarding Selected Natural Resources Services**

60. **Pillar 2 supports the GoV’s efforts to enhance the enabling environment to increase selected natural resources services for climate change and green growth.** This pillar includes policy tracks that deliver integrated and mainstreamed climate change and green growth responses into both public and private natural resource investments in water and forest sectors. As a result, Pillar 2 is composed of two policy tracks: 2.1. Improving Water Protection and Efficiency and 2.2. Developing Forest Resources Services. Both policy tracks include policy actions that promote linkages between climate change and green growth. Improved forest management is an effective way of achieving climate, environmental, and employment objectives. Both water and forest resources underpin conventionally measured economic growth by providing inputs to agriculture, manufacturing, and services and by increasing the productivity of agriculture and the reliability of infrastructure services through climate control. Forest products are also an important source of rural livelihoods.

*Policy Track 2.1. Improving Water Protection and Use Efficiency*

<sup>28</sup> As mentioned, these recommendations would in particular be used for the preparation of the midterm review of the SEDP 2016–2020 and 2021–2025 SEDP.

61. **Water is vital for sustaining Vietnam’s growth while improving public health and the environment.** Although Vietnam uses only about 10 percent of available water on a national basis, regional and, especially, seasonal shortages are major limiting factors to industrial and agricultural development. Of the 16 river basins in Vietnam, 10 currently face shortages during the dry season and 60 percent of inflow originates from neighboring countries where water use is also growing. Critical ecosystems such as the Mekong River Delta are seeing lower flows, causing the delta to subside, inland movement of saline water, disrupting fisheries, and affecting the quality of irrigation supplies. Furthermore, the delicate balance of upland ecosystems and crops is greatly affected by more severe weather patterns and flooding. Urban areas are also affected, with uncontrolled sand mining of riverbeds, along with the development of riverbanks and floodplains, exacerbating flooding in Hanoi, Ho Chi Minh City, and other urbanizing areas, particularly on the coast. Additionally, these challenges are making access to clean water even more difficult, especially for the poor. Although access to clean water has improved greatly over the last two decades—from 60 percent in urban areas in 1993 to 89 percent in 2010 and from 17 to 57 percent in rural areas—millions still do not have access to clean water.

62. **These challenges, which are exacerbated by a changing climate, have already had negative impact on sustainable socioeconomic development and poverty reduction.** Water contamination is detrimental to human health, impairing labor productivity (for example, saltwater intrusion may cause hypertension and diarrheal disease), and water inundation is harmful for the about 41 percent of Vietnam’s urban population living in informal settlements, both displacing populations and damaging water and sanitation infrastructure.<sup>29</sup> Additionally, water shortages, along with contamination and inundation, are affecting the agricultural sector and the people who depend on it for their livelihoods. The agriculture sector in Vietnam accounts for about 22 percent of the country’s GDP, 30 percent of exports, and 60 percent of total employment.<sup>30</sup> In particular, the Mekong Delta, which produces about half of the country’s rice, is expected to be severely affected by the rising sea level. Projected changes in climate and a rapidly growing economy make meeting increased demands for water resources even more challenging.

63. **Water is closely linked to other critical sectors, and policy interventions need to recognize these linkages.** Rapid economic growth in Vietnam is leading to an increase in water pollution along with greater pressure on available water resources. Unsustainable forest cutting and poor forest management often means a loss of watershed storage and pollution filtering capacity. For the country to grow along a green pathway while addressing climate shocks, water must be used more efficiently (especially in agriculture) and watersheds (including forest cover) need greater protection. The ecological health of near-coastal systems depends on water quality and minimum flows in contributing watersheds.

64. **To address these complex water sector issues, and to improve Vietnam’s water protection and use efficiency, the government has committed to a strong policy agenda.** The government developed and adopted the NCCS and the VGGs, which include several provisions on improvements in water resources management. In support of these national strategies, the Bank’s first CC DPF series (FY12–14) included a major pillar on advancing climate resilient development through improving the resilience of Vietnam’s water resources, including a legal and organizational framework for Integrated Water Resources Management (IWRM). Key accomplishments from this DPF series include adoption

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<sup>29</sup> Turn Down the Heat, 2013.

<sup>30</sup> Jaffee et al. 2012. “From Rice Bowl to Rural Development: Challenges and Opportunities Facing Vietnam’s Mekong Delta Region.”

of the 2012 Law on Water Resources and two additional high-level IWRM instruments: (a) the Decree on Administrative Sanctions in Water Resources and (b) the NAP for Water Resources Management or NAP-WRM. This is supported by Vietnam's (i)NDC, which includes a key climate change adaptation priority to "implement IWRM in river basin systems, ensure reservoir safety, strengthen international cooperation in addressing transboundary water issues, and ensure water security."

**65. To further support the implementation of Vietnam's climate change and green growth strategies and related action plans, this DPF series will address priority water policies by improving the protection of water resources and fostering efficiency in irrigation water use.** Establishing protection zones or corridors around rivers, lakes, and streams is a first and crucial step to maintain and manage the physical and hydraulic integrity of water resources now threatened by uncontrolled sand mining, urbanization, and increased climate risks. The Water Resources Law lays out needs and responsibilities at the national and provincial levels to fill this gap, while calling for action on convergence and linked issues such as the protection of water sources used for human consumption and agricultural production. Sustainable economic growth cannot occur if unchecked development is allowed to erode protective floodplains, divert the direction of flow from critical wetland ecosystems, or allow the discharge of water pollutants close to drinking water intakes. Without clear maps of water source protection corridors, (a) farmers cannot be assured of the long-term viability of rice paddies, (b) businesses face risks for locating facilities near important sources of industrial water supply and waterway transport, and (c) property developers and potential property owners along such corridors face enormous financial risks and high insurance costs. These all have significant consequences, which will restrain progress along the country's green growth pathway. This is particularly evident in the central coastal, central highlands, and northwestern mountainous regions, where climate impacts are affecting water scarcity and the northeastern region where water pollution from industrial activities are affecting clean water supply. Strong leadership has been expressed in these regions to support early implementation, particularly in Quang Ninh, Bac Giang, and Lao Cai. This DPF series will directly support these policy reforms from the national down to the field scale. By controlling physical encroachment that can negatively impact water quality and exacerbate flooding, this DPF will support sustainable development in areas near rivers, lakes, and reservoirs. Additionally, this series will support the government's policy reforms to bolster water savings and efficiency improvements for irrigated agriculture, a sector that accounts for an average of 82 percent of water use in Vietnamese river basins. Advancing more efficient irrigation will help respond to drought, adapt to the consequences of climate change, and reduce shocks to the agriculture sector, thereby supporting economic growth. The operation also recognizes that Vietnam faces increasing demands for water as the country grows, that water resources are increasingly challenged by upstream development, especially in the Mekong Delta, and compounded by climate change, and that improved efficiency in use is an imperative.

**66. DPF 1 Prior Actions. To support improvements in water protection and use efficiency within the context of the water law and action plan, the government has developed and adopted two key policies: (a) a policy guiding the establishment and management of water source protection corridors** (*Evidence: The Recipient, through its Prime Minister, has issued Decree Number 43/2015/ND-CP dated May 06, 2015 regulating identification and management of water source protection corridors.*) **and (b) a policy on advanced and efficient upland irrigation** (*Evidence: The Recipient, through its Minister of Ministry of Agriculture and Rural Development, has issued Ministerial Decision Number 1788/QD-BNN-TCTL dated May 19, 2015 adopting an action plan to develop advanced irrigation and water saving for upland crops in support of the restructuring of water resources sector.*). Decree 43 will provide the definitions and requirements for provinces to map and manage 'buffer zones' to control certain land use activities from rivers, lakes, and reservoirs. It

provides very specific requirements on (a) delineation of protection zones based on particular water body type and degree of urbanization; (b) land uses that are prohibited in the established water protection corridors; and (c) timing for reviewing and approving demarcation plans by authorities at both central and provincial levels. As the provinces implement this decree, the government could further develop linkages to topics such as improving wastewater treatment and groundwater management, as well as develop more specific operational guidance. MARD Decision 1788 sets the stage for action to incentivize efficiency improvements for high value crops such as cashew nut, coffee, pepper, vegetables, and fruits, while tailoring interventions to locales where the crops are most productive and especially vulnerable to climate change. The decision initiates improved policy and technical approaches in, for example, large-scale irrigation plans of select provinces, issuing standards for advanced and efficient irrigation by crop, medium-term investment plans financed by the state and international donors, encouraging applied research and adoption of new technologies, training and awareness raising for farmers and other stakeholders, and encouraging international cooperation ranging from technical collaboration to marketing.

**67. Indicative DPF 2 and 3 triggers. The government will (a) develop and adopt policy guidelines for protecting the quality and function of water sources, including drinking water intakes, and (b) establish and report on the list of all priority water source protection corridors identified and adopted at the provincial level.** As a first priority step, the government is planning to prepare two important circulars with supporting technical annexes: (a) a circular guiding the protection of river banks, river beds, and alluvial (shallow) ground protection and (b) a circular regulating the identification of sanitary protection zones for sources of domestic water supply. Together, implementation of these policies will help bolster the resilience of water sources, thereby reducing threats from sand mining in sensitive zones and construction of structures that block river flow. Next, the government, working closely with the provinces, will establish and report on the lists of all priority water source protection corridors identified and adopted at the provincial level. Approval and publication of the lists (as required by Article 11 of Decree 43) takes the form of a Provincial People's Committee Decision. Lists must be accompanied by supplementary information on targeted water uses for each corridor (for example, water supply and drainage, biodiversity, cultural heritage, urban, storage for hydroelectric and irrigation systems) and the process used for developing and consulting on the lists. It is expected that some provinces will be making progress during DPF 3 towards an implementation plan to reduce threats to the physical integrity of the corridor, as well as on threats to water intakes. The circular on sanitary protection zones, for example, will likely address the problem of industrial discharge near water intakes, and some provinces may take into account technical advice contained in the circular to reduce the impact of such discharges on water quality within the context of such implementation plans. While all 63 provinces and cities in Vietnam need to publish a list of where corridors will be established by July 2017, it is very likely that resource constraints will be a factor with regard to whether the provinces will all be able to comply in a timely manner. By this date they are not required to have the corridors shown on maps and demarcated in the field, though some provinces may have made progress in this regard. Given MONRE's overall coordination role for Decree 43, MONRE will issue a report to the prime minister summarizing the lists approved and published by provinces and cities.

**68. Indicative DPF 2 and 3 triggers. The government will support water use efficiency by developing and adopting (a) a policy on incentives to encourage the development of small irrigation systems, farm irrigation, and more advanced and efficient irrigation systems and (b) guidelines for encouraging efficient irrigation for selected priority crops.** First, the government will issue a Prime Minister Decision in 2016, building on the foundational action plan of MARD Decision 1788. The decision is expected to establish basic financial incentives, eligibility criteria, and

program structures for applicants and for the government to enable implementation of more efficient water usage in irrigation systems. MARD is expected to take the lead on developing this policy, establishing regulations for participants, and providing information and training and supervisory support to the provinces. Other ministries will have important roles to play given cross-sector considerations. MONRE will continue to play an overall coordination role for the water sector under this DPF, and MOF and SBV will consider the viability and timing of any financial incentives within its purview. Second, the government will develop and adopt guidelines for encouraging efficient irrigation for selected priority crops. MARD is expected to lead for issuing these guidelines, targeting adoption by members of particular farming groups. The incentives can also be geographically targeted to certain regions. These guidelines will be adopted by MARD through cross-ministerial cooperation under the Water Resources Department and disseminated through the provinces. Studies are already underway to prioritize crops for attention. Benchmarking of water use intensity (volume of water per unit of crop yield) is likely to be included. For scaling up and incentivizing dissemination, it is expected that the government will initiate studies or pilot actions on key issues.

69. **Expected results.** Implementation of these prior actions and indicative triggers will support significant improvements to help ensure the sustainable development and use of Vietnam’s water resources in spite of increased vulnerability from climate change impacts. Collectively, the reforms supported under this DPF series are expected to lead to (a) six provinces with water source protection corridors delineated on maps and with an action plan to address threats to the quality and function of these protection corridors [Baseline: 0 provinces, Target: 6 provinces], and (b) 400,000 ha of farms utilizing more advanced and efficient irrigation practices for selected crops [Baseline: 50,000 ha, Target 400,000 ha].

**Box 4. Prior Actions for Policy Track 2.1: Improving Water Protection and Use Efficiency**

**Prior Action (DPF 1):** The government has developed and adopted a policy guiding the establishment and management of water source protection corridors (*Evidence: The Recipient, through its Prime Minister, has issued Decree Number 43/2015/ND-CP dated May 06, 2015 regulating identification and management of water source protection corridors*).

**Prior Action (DPF 1):** The government has developed and adopted a policy on incentives for water savings and efficiency improvements (*Evidence: The Recipient, through its Minister of Ministry of Agriculture and Rural Development, has issued Ministerial Decision Number 1788/QD-BNN-TCTL dated May 19, 2015 adopting an action plan to develop advanced irrigation and water saving for upland crops in support of the restructuring of water resources sector*).

*Policy Track 2.2: Enabling the Development of Forest Resources Services*

70. **It is key for Vietnam to develop and leverage the significant potential of forests to contribute to sustainable development and growth at national and subnational levels.** The forestry sector, and especially the timber industry, plays an important socioeconomic role in terms of job creation, income generation, and livelihood support for about 24 million people,<sup>31</sup> especially poor and ethnic minority population living in and around forests in Vietnam. To continue socioeconomic development within forest-dependent communities, the government, through the Forestry Development Strategy 2006–2020, has set objectives to increase the contribution of forestry to GDP from 1.2 percent in 2005 to between 2 and 3 percent by 2020, generate two million more forest-related

<sup>31</sup> Joint Development Partners. 2011. “Vietnam Development Report 2011: Natural Resources Management.”

jobs, and improve forest-based incomes.<sup>32</sup> The government has also set in its 2016–2020 SEDP a forest area target of 42 percent by 2020, which, if achieved, will support the aforementioned objectives. Achieving the socioeconomic targets requires that Vietnam sustainably develop its timber industry, increase timber exports, reduce imports of unprocessed wood, and strengthen market linkages,<sup>33</sup> while at the same time placing a value on and developing other forest services.

**71. Productive and sustainably managed forests provide essential services that underpin climate resilient development and can help generate green revenue in line with Vietnam’s green growth trajectory.** High and increasing exposure to the impacts of climate change,<sup>34</sup> especially along Vietnam’s extensive coastline, highlights the importance of coastal and inland forests to promote adaptation and enhance resilience. Protection and special use forests are particularly impactful in this regard. Forests increase coastal resilience to sea level rise and storm surges by reducing the impact of coastal and inland flooding and coastal erosion.<sup>35</sup> They regulate water flow and quality and stabilize hillslopes, which benefits downstream water users. A co-benefit of improved forest management would be an increase in Vietnam’s ability to store and sequester carbon, contributing to its (i)NDC targets and providing the opportunity for Vietnam to leverage climate finance. Vietnam has demonstrated potential to generate finance from ecosystem services under payment for forest ecosystem services (PFES) schemes. Such schemes have been promoted in Vietnam through policy since 2010 and have enabled forest managers (individuals or communities) to receive compensation for activities that promote ecosystem services. PFES helps finance watershed protection to support hydropower and clean water supply as well as maintain landscape beauty to support tourism. Between 2009 and 2012, payments for these services generated total revenue of US\$85 million (0.02 percent of GDP for that period) with hydropower accounting for 98 percent of the revenue earnings.<sup>36</sup> The approach of managing forests for a diversity of services supports low carbon livelihood development<sup>37</sup> and positions forest as an integral component of Vietnam’s green resilient growth development objectives.<sup>38</sup>

**72. A robust and comprehensive forest policy framework that fosters institutions, finance, and delivery systems is essential to achieve an integrated approach to development in Vietnam.** Vietnam’s current forest policy framework places significant focus on afforestation and timber production. The Law on Forest Protection and Development supported national investment programs for forest rehabilitation, which resulted in a 13 percent increase in forest cover between 1990 and 2013,<sup>39</sup> along with the establishment of institutional and technical capacity. The increase in forest cover over the past three decades has allowed Vietnam to expand its timber industry and increase its timber product exports from US\$219 million in 2002 to US\$5.5 billion in 2013 (estimated),<sup>40</sup> and the

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<sup>32</sup> VN. 2007. “Vietnam Forestry Development Strategy 2006-2020”

<sup>33</sup> Government of Vietnam and World Bank (2015). Draft Vietnam 2035 Report

<sup>34</sup> Coastal impacts of climate change include flooding, coastal erosion, and property damage associated with sea level rise and storm surges and saline intrusion.

<sup>35</sup> Coastal forests reduce the impacts of coastal erosion by reducing and absorbing wave energy. Mangroves have been found to reduce wave height by as much as 90 percent and consequently reduce the erosive power of waves (Powell et al. 2011. “Mangrove Restoration and Rehabilitation for Climate Change Adaptation in Vietnam”).

<sup>36</sup> Pham et al. 2013. “Payment for Forest Ecosystem Services in Vietnam: from Policy to Practice”

<sup>37</sup> CIFOR. 2014. “Payments for forest environmental services in Vietnam: Findings from three years of implementation.”

<sup>38</sup> GoV. 2012. “VN National Green Growth Strategy.”

<sup>39</sup> GoV. 2007. “Vietnam Forestry Development Strategy.”

<sup>40</sup> MARD. 2014. “Forest Sector Development Report in 2013.”

government is actively promoting production of saw-timber.<sup>41</sup> The focus on afforestation mainly for wood supply, however, reduced focus and priority on the development of natural forests that provide a variety of ecosystem services. As a result, forest quality has not been prioritized. Further, deforestation of mangrove and coastal forests over the past six decades, for land for shrimp production, infrastructure development, and agricultural expansion, has deteriorated natural coastal defenses. The ability of forest-dependent communities and other sectors of the economy to harness ecosystem services for livelihoods and incomes has declined. To address these shortcomings, the government, in its 2006–2020 Forestry Development Strategy, articulated a broader vision for forests that focuses on delivering a wider set of ecosystem services that promotes sustainable development, livelihoods, and growth. However, to fully deliver on this vision, there is a need to strengthen the forest policy framework with appropriate incentives that promote forest management that delivers a diverse set of large-scale and high-quality services. These include increasing the value of non-timber forest ecosystem services, as well as the involvement of local government, non-state organizations, and communities in forest management.

**73. Under this policy track, the series of policy actions will promote delivery of forest ecosystem services and enable forests to be an engine of sustainability, supporting green resilient growth.** The policy actions on (a) coastal forest development and (b) forest carbon action plans will help promote the aforementioned incentives by strengthening the planning, governance, and management of forest resources in a manner that promotes inclusion of local government and communities in forest management. On coastal forest development, the prior action recognized under the first DPF operation will develop the framework for planning and managing protection and special use forests on coasts. Building on this, the indicative trigger for the second DPF operation will provide specific guidance for coastal forest use, governance, and financing. The indicative trigger under the third operation will provide policy guidance on the categorization of forest types in coastal areas to support coastal resilience. This third policy action will support the GoV’s intent to increase the proportion of forest area on the coast that is categorized as protection forest,<sup>42</sup> to enhance the adaptation and resiliency capacity of the coastal system to climate change impacts. On the forest carbon action plans, the prior action of the first operation will provide instructions and a framework for provinces to develop actionable plans to protect and develop forests in a manner that sustains incomes and contributes to the reduction of greenhouse gas emissions. In the second DPF operation, several provinces will adopt provincial action plans, and the third DPF operation indicative trigger will incentivize and guide scaled-up action nationally. These policy changes will contribute to climate and green growth action by (a) increasing institutional capacity for managing forest resources and strengthening of capacity for livelihood support and income generation; and (b) increasing adaptation and resilience to climate change events.

**74. DPF 1 Prior Action: Prior actions will build capacity for provinces, including coastal communities, to engage in the development of forest resources services.** They entail the government’s (a) adoption of a policy that enables the development of coastal forests (*Evidence: The Recipient, through its Ministry of Agriculture and Rural Development, has submitted to the Prime Minister, a draft decree governing the management, protection, restoration and development of coastal forests to address climate change*) and (b) instruction (guidelines) on provincial forest carbon action

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<sup>41</sup> MARD. 2014. “Decision on Woodchip Management Plan Period 2014–2020.”

<sup>42</sup> Protection forests are classified in Vietnam as those forests that have critical protection functions, for example, protection of watersheds, tide-shielding, sea encroachment, and wind and sand shielding. These forests have very strict use restrictions, which help ensure their conservation, and they benefit from targeted state budget funding as per the requirements of the Law on Forest Protection and Development ORDER No. 25/2004/L-CTN.

plans (*Evidence: The Recipient, through its Minister of Ministry of Agriculture and Rural Development, has issued Ministerial Decision Number 5414/QD-BNN-TCLN dated December 25, 2015 approving the guidelines for Provincial REDD+ Action Plan (PRAP) preparation to govern the preparation of provincial forest carbon action plans*). The coastal forest decision aims to protect and develop coastal forest that can support livelihoods and resilience co-benefits through coastal protection. Specifically, the coastal forest decision will create stronger incentives for the reforestation and sustainable management of coastal forests by (a) clarifying responsibility for development and management of coastal forest between central and provincial levels; (b) promoting business development among households, small and medium enterprises, and organizations; (c) promoting diversification of livelihood opportunities in coastal areas among households, small and medium enterprises and organizations, and the linking of these livelihoods to coastal forests for example mangrove-based aquaculture and ecotourism; (d) promoting the resilience benefit of coastal forests in protecting coastal assets—property, groundwater, and surface freshwater—against storm surges, sea level rise, and saline intrusion; and (e) setting the parameters to channel state and other capital sources such as international aid or loans for coastal forest development. On the provincial forest carbon action plans the government guidelines will help create an enabling framework for streamlining and systematizing the approach for these plans in a fashion that will facilitate scaling up to a national forest carbon action plan. The action plans will help (a) mobilize and direct state and private sector resources efficiently and effectively and (b) inclusively engage stakeholders, including PPCs, community groups, households, and individuals, in forest management planning to build ownership and strengthen forest governance. The guidelines will also promote provincial capacity and action for developing sustainable forest-based livelihoods and for building resilience of people and natural systems.

**75. Indicative DPF 2 triggers. The proposed triggers for the second operation supports the development of an enabling framework for guiding the implementation of the coastal forest policy, including (a) developing and adopting technical guidance including cost norms for the development of coastal forests and (b) reporting on the adoption of forest carbon action plans by at least three provinces.** The former will clarify the methodologies and resource needs for restoration and management of different types of coastal vegetation and the different types of socioeconomic activities that are encouraged to be developed. Provincial carbon action plans will be developed in several provinces in the North Central Coast regions in 2016 and formal decisions by the PPCs to adopt these are a proposed trigger for DPF 2.

**76. Indicative DPF 3 triggers. DPF 3 will support the development and adoption of (a) guidelines for reviewing forest types in coastal provinces including appropriate forest monitoring systems and (b) the updated national forest carbon action plan.** Review of the forest types in the coastal provinces will help the GoV determine whether the forest types developed there are best suited for the goals of sustainable growth and livelihoods and enhancing coastal resilience. The monitoring and reporting mechanism will enable the government to robustly monitor, assess, and report on the development of coastal forest extent and health, as well as provide a foundation for assessing the value of coastal forest services, both of which are critical to enhancing the value and sustainability of the forest sector on the coast. Additionally, provincial forest carbon action plans will be integrated into an updated national forest carbon action plan to be issued by the prime minister. This will facilitate the comprehensive development and scale-up of forest carbon action plans in other provinces as well as build the potential for leveraging finance, including as part of national climate mitigation.

**77. Expected results.** The policies supported under the DPF series provide incentives for developing and managing forests to provide a diverse set of services to support socioeconomic development, build resilience, and enhance mitigation. By the end of the DPF series, these policy

actions are expected to have led to measurable changes in forest area and an increase in emissions reduction potential from forests. It is anticipated that the coastal forest area will increase by 10 percent (compared to a 2015 baseline) or 30,706 ha by 2019<sup>43</sup> [Baseline: 0 percent; Target: 10 percent]. It is also expected that there will be at least a 7 percent reduction in the annual rate of net emissions (accounting for reduction in emissions and increase in sequestration as a result of changes in forest cover and forest quality) in selected priority provinces (measured in tons of CO<sub>2</sub>e/year)<sup>44</sup> [Baseline: 0 (reference is the average annual rate of net emission (forest reference level) based on reference a 2000-2012 period); Target: 7 percent of reduction of annual rate of net emission in the selected priority provinces relative to forest reference level ].

#### **Box 5. Prior Actions for Policy Track 2.2: Developing Forest Resources Services**

**Prior Action (DPF 1):** The government has developed and adopted a policy on the development of coastal forests (*Evidence: The Recipient, through its Ministry of Agriculture and Rural Development, has submitted to the Prime Minister, a draft decree governing the management, protection, restoration and development of coastal forests to address climate change*).

**Prior Action (DPF 1):** The government has developed and adopted guidance for the preparation of provincial forest carbon action plans (*Evidence: The Recipient, through its Minister of Ministry of Agriculture and Rural Development, has issued Ministerial Decision Number 5414/QĐ-BNN-TCLN dated December 25, 2015 approving the guidelines for Provincial REDD+ Action Plan (PRAP) preparation to govern the preparation of provincial forest carbon action plans*).

### **Pillar 3. Promoting Selected Cleaner Production Systems**

78. **Pillar 3 supports the GoV's efforts to shift to selected cleaner production systems for climate change and green growth action.** In particular, the reforms supported under this pillar aim to support innovation, convergence, and integrated AQM policies in Vietnam by acting on no-regret priorities in selected sectors, generating co-benefits between initiatives that address local air pollution and greenhouse gas emissions. The pillar also supports reforms that remove the barriers for moving sustainable energy to scale. To ensure these aims, Pillar 3 is structured around two policy tracks: 3.1. Engaging in AQM with an Initial Focus on Planning, Inventory, Industrial Permitting, and Cleaner Transport and 3.2. Engaging in Low GHG Emissions Energy Production. As the pollution sources that cause local air pollution, an important challenge targeted under the government's Green Growth Strategy, and climate change are often the same or are closely related, they require many of the same or similar interventions, and given that air pollution source structure is usually complex and covers many sectors, there is a strong interdependency between the two policy tracks. Therefore, some reforms supported within policy track 3.1 (initially transport) and 3.2 (energy efficiency in the industrial sector and renewable energy) will be integrated through the development and implementation of full-scale air quality planning.

*Policy Track 3.1. Engaging in AQM with an Initial Focus on Planning, Inventory, Industrial Permitting, and Cleaner Transport*

79. **Vietnam's poor air quality is causing both significant environmental degradation, including GHG emissions, and public health problems, undermining the potential for sustainable**

<sup>43</sup> The target is set based on the condition that the GoV guarantees sufficient domestic financial to implement Decision 120 on Coastal Forest Protection and Development Plan.

<sup>44</sup> The target is set based on the condition that Vietnam's Emissions Reductions Program is implemented as planned.

**socioeconomic development of the country and impacting the poor.** Vietnam is among the ten countries in the world most affected by air pollution, due to lack of control of polluting sources, including transportation,<sup>45</sup> while total GHG emissions have also almost tripled over the past decade. Transportation needs have grown significantly as the Vietnamese economy has grown. Freight transport has increased by more than 12 percent per year between 1995 and 2006. While road transportation volume trebled from 2005 to 2013, the share in total volume by rail and water declined.<sup>46</sup> Additionally, passenger traffic has grown by about 10 percent per year, as car ownership increased by 122 percent and motorcycle ownership by 233 percent.<sup>47</sup> Although transportation plays a key role in spatial urban development for sustaining economic growth, it is also one of the key contributors to the poor urban air quality in Vietnam and can be directly linked to elevated levels of total suspended particles, including PM, NO<sub>x</sub>, and SO<sub>2</sub> while also contributing about a quarter of Vietnam's GHG emissions.<sup>48</sup> About 14 million Vietnamese living in 26 cities are exposed to more than 70 g of urban vehicle emissions for each ton emitted, with higher levels in some cities—87 g for each ton of emissions in Ho Chi Minh and 120 in Hanoi.<sup>49</sup> Other contributing sectors to urban air pollution include power generation, domestic fuel consumption, agriculture, construction, certain industries sectors (for example, iron and steel, cement, chemical industries) and natural dust. Electricity coverage in Vietnamese households has expanded from 48 percent in 1993 to 98 percent in 2012. Although around 44 percent of Vietnam's energy production is through hydropower and 24 percent from thermal gas, about 23 percent of Vietnam's energy production comes from coal that is regarded as having relatively low cleaning capacity.<sup>50</sup> From 2004 to 2014, overall CO<sub>2</sub> emission in Vietnam from power generation sources increased by 73 percent. In the agricultural sector, Vietnam's fertilizer use per hectare is one of the highest in the world and is still increasing along with expanded and also intensified livestock production, both of which have contributed to increases in emissions of ammonia (NH<sub>3</sub>) and nitrous oxide (N<sub>2</sub>O). Collectively, these sectors are also responsible for producing finer PM<sub>2.5</sub>,<sup>51</sup> which is most harmful to human health. Although further data collection and analysis are required to better understand relative contributions to PM<sub>2.5</sub> levels, concentrations are high in many Vietnamese cities, for example, with annual average PM<sub>2.5</sub> levels in Hanoi above 60 µg/m<sup>3</sup> in 2013 (and certain months with average values above 100 µg/m<sup>3</sup>), compared with the WHO preferred annual average standard of 10 µg/m<sup>3</sup> and interim target of 35 µg/m<sup>3</sup>.

**80. This poor air quality has significant economic, human, and environmental costs.** Air pollution in Vietnam is estimated to result in labor productivity losses of 14 percent of GNI annually,<sup>52</sup> a reduction in the adjusted net saving of 2.5 percent,<sup>53</sup> and up to more than an estimated 30,000 premature deaths each year (although these are satellite-based estimates largely for regional and particularly global use).<sup>54</sup> Many more cases of morbidity are related to preventable diseases, including

<sup>45</sup> World Economic Forum in 2012 in Davos, Switzerland.

<sup>46</sup> Vietnam Statistical Handbook 2014, Vietnam General Statistical Office.

<sup>47</sup> 1 million cars and 20 million motorcycles at the end of 2010, an increase from 450,000 cars and 6 million motorcycles at the end of 2000.

<sup>48</sup> World Bank. World Development Indicators.

<sup>49</sup> Apte et al. 2012.

<sup>50</sup> ADB. 2015. "Assessment of Power Sector Reforms in Vietnam."

<sup>51</sup> Through reactions with NH<sub>3</sub> (mainly from agriculture), SO<sub>x</sub> (mainly from energy and industrial sources), and NO<sub>x</sub> (mainly transport and partly energy/industrial sources).

<sup>52</sup> World Bank. 2010. "Labor Productivity Losses due to Ambient Air Pollution in Vietnam."

<sup>53</sup> Adjusted net saving equals gross national saving, minus consumption of fixed capital, plus investment in human capital, minus depletion of natural capital, and minus pollution damages. It represents a more inclusive measure of changes in a comprehensive set of capital assets that constitute a nation's wealth base, by accounting for physical capital, human capital, natural capital, and environmental degradation.

<sup>54</sup> IHME. 2015.

pneumonia, lung cancer, cardiovascular disease, stroke, and chronic obstructive pulmonary disease.<sup>55</sup> Rising temperature and humidity are also costly, with one recent study suggesting labor productivity will decrease 12 percent by 2045 in Vietnam<sup>56</sup>—a product of heat alone, even without consideration of the compounding effects on air pollution.

81. **To improve public health and reduce negative impacts on the environment, including contributions to climate change, effective AQM policies and programs are needed in support of green, inclusive growth.** The GoV has the challenge of improving air quality that is negatively affected by increasing economic growth and urbanization. Over the last two decades, the government, guided particularly by MOT, has introduced several regulations to control vehicle emissions. These include fuel quality standards as well as emissions standards for all vehicles (QCVN 01:2009/BKHCN). Legislative actions for emission control have also been taken by the government in other sectors. The government has developed and adopted targets for reductions in GHG emissions and energy consumption, as well as prioritized actions on greening production, both industrial and agricultural, and on developing and promoting renewable and new energy technologies. In 2014, the government adopted the Environmental Law of 2014, which set a comprehensive agenda for AQM. Additionally, the Decree on Scrap and Waste Management (2015) now regulates industrial dust and stack emissions. These policies mark the beginning of a more comprehensive approach towards reducing emissions in Vietnam from a broad range of economic activities. Although large scale implementation is yet to start, this policy track is expected to be instrumental in moving the agenda towards implementation and initial results in emissions reductions. Data on ambient air pollution, emissions levels, and source structures still need to be established. Although there are some data available in Vietnam for the transportation sector, less is known about emissions from other economic activities such as industry, power generation, urban construction, and agriculture, and there is no knowledge of the source apportionment to urban air pollution by these sectors. More attention is needed on PM<sub>2.5</sub> formation, as analysis of environmental and economic impacts has thus far focused on total suspended particles and PM<sub>10</sub> levels. This will also be linked to Vietnam's reporting on its progress towards achieving its (i)NDC commitment to reduce GHG emissions by 8 percent by 2030. To meet this target, the (i)NDC identifies several additional measures, including encouraging buses and taxis to use compressed natural gas and liquefied petroleum gas and developing public passenger transport.

82. **To address these gaps in emissions data and continue building on recent AQM policies, the government will support the adoption of the National Action Plan, along with a series of sequential 'no-regret' policy actions that will enable its implementation by 2020.** Given current uncertainties in the extent to which economic sectors contribute to air quality impacts, a set of policy actions have been selected that will support planning, including (a) monitoring and data collection systems, (b) the development of multi-pollutant AQM implementation plans for cities and city/urban clusters, (c) the development and adoption of regulations on vehicle emissions standards and on fuel quality, (d) the initiation of industrial permits for control of air emissions from the relevant industrial sectors, and (e) coordination and planning across institutions and sectors. Based on the rather limited understanding of contributing sources and emission-impact mechanisms at this stage, a sequence of initial actions has been determined that are considered 'no-regret' policies. They are proven internationally to be efficient and cost-effective, regardless of local conditions and relative

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<sup>55</sup> WHO. 2014.

<sup>56</sup> <http://maplecroft.com/portfolio/new-analysis/2015/10/28/heat-stress-threatens-cut-labour-productivity-se-asia-25-within-30-years-verisk-maplecroft/>.

contributions to air pollution from the economic sectors where they intervene. Specifically, this DPF series will enable and support the development of specific AQM plans with multiple benefits (for example, health, energy, climate, agriculture) for selected cities/provinces, encompassing up to 75% of Vietnam's urban population and around 60-65% of its industrial production.<sup>57</sup> By setting overall national PM targets for 2020 and 2025 and developing and implementing cost effective AQM plans to reach these PM targets in these cities, it is also expected that projected increases in overall GHG emissions will be reduced due to co-benefits from implementing emission abatement options. Furthermore, the DPF series will achieve the reduction of road transport emissions from the introduction of Euro 4 and 3 standards and the introduction of more comprehensive approaches to emission reductions from vehicles beyond the regulation from fuel and exhaust emission standards.

**83. DPF 1 Prior Actions. To support improved engagement in AQM, the government has (a) developed and adopted the NAP on AQM (Evidence: The Recipient, through its Prime Minister, has issued Decision Number 985a/QD-TTg dated June 1, 2016 adopting the National Air Quality Management Plan) and (b) has adopted regulations on vehicle emissions standards and on fuel quality (Evidence: MOT Minister Circular 33/2015/TT-BGTVT of July 24, 2015 promulgating national regulation on Euro 4 for new assembled, manufactured, and imported vehicles, and MOST Minister Circular 22/2015/TT-BKHCN of November 11, 2015, on national technical regulation on gasoline, diesel fuel, and biofuels).** The NAP-AQM encompasses a broad range of activities organized under seven focus areas—regulation, organizational strengthening, emissions reduction and prevention, investments and financial incentives, international cooperation, monitoring and inspection, and dissemination and public awareness. Implementation will be under the overall coordination of the MONRE, supported by the Ministry of Home Affairs, with a wide range of additional line ministries providing convergent cross-sectoral support, including the MOT, the MOIT, the Ministry of Commerce, and the Ministry of Health along with the provinces and cities. Additionally, all of the main known contributing sectors will have supportive coordinating roles in the NAP, which will run until 2020 with a view on impacts to be achieved until 2025. NAP priority programs will include Institutional Coordination and Strengthening; Cleaner Transport (Fuels); Cleaner Production; Emissions Monitoring; Emissions Registration; AQ Data Dissemination; and Financing of AQM. In addition to supporting the adoption of the NAP-AQM, DPF 1 will also support and help accelerate the introduction of regulations for immediate action in the transport sector for Euro 4 emission standards for cars and other vehicles as well as for the regulation of gasoline, diesel fuel, and biofuels, replacing the 2009 national technical regulation (QCVN 01:2009/BKHCN) that will support compliance for cars, trucks, buses, motorbikes, and mopeds. Beginning in 2017, it is expected that 100 percent of new assembled, manufactured, and imported vehicles will apply Euro 4 emissions standards, and 100 percent of new assembled, manufactured, and imported two-wheeled motor vehicles will apply Euro 3 emission standards.

**84. Indicative DPF 2 and 3 triggers. Building on DPF 1 prior actions related to AQM, the government will first develop and adopt (a) guidance on complete AQM planning and on emission inventories for implementation of the NAP at provincial and city levels and (b) an**

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<sup>57</sup> It is expected that MONRE will develop complete AQM plans for some of the 5 largest cities in Vietnam by the end of 2019 (including Hanoi and Ho Chi Minh City with their key satellite cities and likely Hai Phong, Da Nang and Can Tho or similar large cities), which together account for an urban population of around 21-25 million people (around 25 % of Vietnams total population and around 70-75 % of its total urban population). Moreover, within a city cluster context, the AQM plans inclusion of satellite cities (e.g. Bac Ninh and Hung Yen in the case of Hanoi and probably cities in Binh Duong and Dong Nai provinces to the North and East of Ho Chi Minh City) will further enhance the AQM planning outreach to large urban population groups in Vietnam.

**emission permitting system for implementation of the NAP at the industrial sector level.** These policy actions would focus on regional- and city-level AQM plans, systems for emission inventory and registry, and a permitting regime for the identified six main industrial sectors that are significant for controlling air pollution and improving urban air quality. This will be supported by improvements in the collection of data on emissions and air quality, which will be used to determine impacts from contributing sectors through advanced air dispersion modeling. This activity is needed to adequately develop local city-based AQM plans and national sector strategies. The emissions inventory and registry systems are expected to be put in place during the DPF period, but operationalization of local AQM plans and concluding permitting procedures for industries will take longer. It is however planned that pilot initiatives in selected cities will be identified, for the early preparation and adoption of local AQM plans and industrial permitting.

85. **In addition to triggers under DPF 2 and 3 supporting the NAP, the government will develop and adopt (a) a road map for the regulation of exhaust gas emissions from in-use motorcycles, (for example, mopeds in cities and provinces) and (b) a road map for the regulation of exhaust gas emissions from in-use vehicles (for example, cars, trucks, buses).** This will include supporting policies that go beyond the traditional objectives of previous road maps that strictly focused on vehicles emission control and fuel quality. The government is planning to also take into account other approaches to lower emission levels and improve transportation, such as traffic management, mass public transport, and ‘Green Freight’. Indications from the MOT suggest that public rail and metro systems will be developed over the next 10 to 15 years, gradually transferring increased traffic volume from roads to rails, combined with increased use of biofuel and hybrid vehicles.

86. **Expected results.** The AQM policy track will have significant positive impacts in support of greener growth, as it will reduce emissions for a broad range of economic activities including transportation, fuel consumption, and industrial activities. It is expected that five city AQM plans are adopted and are under early implementation by 2019 [Baseline: 0; Target: 3] and that 60 percent of enterprises in six sectors/industries are part of and report to the emission registry (in conformance with the reporting criteria defined in the DPF 2 Circular on Emissions Inventories) [Baseline: 0; Target: 60%]. It is also expected that there would be a 6.85 percent NO<sub>x</sub> emission reduction in light-duty road transport in target year as compared to a business-as-usual (BAU) case [Baseline: Projected trend under BAU case in target year, Target: 6.85 percent reduction].<sup>58</sup>

**Box 6. Prior Actions For Policy Track 3.1: Engaging in AQM with an Initial Focus on Planning, Inventory, Industrial Permitting, and Cleaner Transport**

**Prior Action (DPF 1):** The government has developed and adopted the NAP on AQM (*Evidence: The Recipient, through its Prime Minister, has issued Decision Number 985a/QD-TTg dated June 1, 2016 adopting the National Air Quality Management Plan*).

**Prior Action (DPF 1):** The government has adopted regulations on vehicle emissions standards and on fuel quality (*Evidence: The Recipient, through its Ministry of Transport, has issued Circular Number 33/2015/TT-BGTVT dated July 24, 2015 promulgating the national technical regulation on Euro 4 standard for new assembled, manufactured, and imported vehicles, and, through its Ministry of Science and Technology, has issued Circular Number 22/2015/TT-BKHCN dated November 11, 2015 on the issuance and implementation of national, technical regulations on gasolines, diesel fuel oils, and biofuels*).

<sup>58</sup> To be reviewed to confirm the assumption on total average travelling mileage of light-duty road transport vehicles in target year as compared to a BAU case

*Policy Track 3.2. Engaging in Low GHG Emissions Energy Production*

87. **Current consumption and production patterns, accompanied by urbanization, are placing enormous pressure on domestic energy supply that has the potential to undermine human productivity and limit the country's future growth potential while resulting in further environmental deterioration.** Vietnam has achieved a 98 percent electricity access rate, connecting more than 20 million households, industry, and commercial customers, including most of Vietnam's poorest. The largest energy challenge Vietnam now faces is to provide customers with reliable and efficient electricity services and meet future demand in a sustainable manner. While the government projects the economy to grow by 6.5–7 percent per year until 2030,<sup>59</sup> the 2011 Power Development Plan (PDP) VII projects energy demand to grow by between 8.8 and 9.6 percent.<sup>60</sup> It is also anticipated that electricity demand will grow by 7–10 percent annually through 2030. This will require the installation of 25 GW of new generation capacity by 2020 and an additional 50 GW by 2030. Given that the vast majority of Vietnam's large-scale hydropower potential has been exploited, meeting future demand while also complying with Vietnam's (i)NDC commitment to reduce GHG emissions by 8-25 percent below a BAU scenario by 2030 and emissions intensity (of GDP) by 20-30 percent compared to 2010 levels remains a significant challenge<sup>61</sup>. Under the current PDP VII, most of that additional capacity will come from plants fueled by domestic and imported coal. Further, only 0.1 percent (60 MW) of currently installed generation capacity comes from wind generation, which has targets of 1 GW of wind generation by 2020 and 6 GW by 2030. While Vietnam's current GHG emission per capita is comparatively low, emissions are forecast to triple by 2030, as the country continues to grow and develop. As the economy continues to show robust growth, it is critical to use this opportunity to promote efficiency gains to attempt to delink demand trends, noting that a significant portion of future demand is very likely to be met by coal, while facilitating the uptake of lower-carbon energy sources to support a reduction of energy intensity and a diversification of the energy mix.

88. **To address this challenge, Vietnam has recognized the need to make aggressive efforts to improve demand-side energy efficiency across sectors.** In 2006, the government rolled out the Vietnam Energy Efficiency Program to promote energy efficiency and reduce overall energy consumption by three percent over the period 2006–2010. However, these goals fall short of Vietnam's overall energy efficiency potential and its economic and green growth imperatives. Vietnam is the most energy intensive economy in South East Asia. For every one percent increase in GDP, energy demand in Vietnam grows by 2 percent. This indicates a large energy savings potential and highlights that Vietnam's economy could become more competitive if it can reduce its energy intensity closer to 1. Demand side energy efficiency investments could eliminate 11GW on new generation capacity up to 2030. To set the legal foundation for promoting energy efficiency, the National Assembly approved the Law on Energy Saving and Efficiency in 2010. With support from the Bank and other DPs, the government is getting ready to introduce mechanisms to implement energy efficiency measures across various sectors of the economy, with a particular focus on industries with high energy intensity and on household appliances, as industrial and residential consumer groups are responsible for 52.8 and 36.3 percent of the electricity consumed in Vietnam in 2013, respectively.<sup>62</sup>

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<sup>59</sup> Prime Minister Report to National Assembly on SEDP 2016–2020 (dated October 20, 2015).

<sup>60</sup> Decision 1208/QĐ-TTĐ “Decision on approval of National Power Development Plan between 2010 and 2020, with orientation towards 2030.”

<sup>61</sup> Range indicates variability between commitments unconditional and conditional of international support within the (i)NDC.

<sup>62</sup> Asian Development Bank. 2015. “Assessment of Power Sector Reforms in Vietnam.”

89. **However, even with the active promotion of energy efficiency in the industrial and residential sectors, capacity requirements are expected to increase by 4.8 times and energy requirements by 5.7 times by 2030.**<sup>63</sup> To help address this requirement in a sustainable manner, the 2011 Power Development Plan VII stipulates that the share of renewable energy from sources other than large hydropower should increase to 6 percent of total electricity generation by 2030. The newly adopted Renewable Energy Development Strategy sets an ambitious target that 44 percent of primary energy consumption is to come from renewable energy by 2050. The government’s first policy support mechanism to promote renewable energy development in Vietnam was the avoided cost tariff mechanism (Decision 18/2008/QD-BCT) for small-scale renewables with an installed capacity less than 30 MW that successfully attracted an increasing number of private investments into small hydro power<sup>64</sup> due to their relatively lower capital cost and use of an established technology familiar to investors and lenders. It was not sufficient, however, to incentivize investments in the other relatively more expensive renewable energy technologies. Vietnam introduced a Feed-in Tariff (FIT) for wind in 2011 and detailed regulations on wind power development including a standard power purchase agreement (PPA) in 2012. FITs for combined heat and power and waste-to-energy followed in 2014. The introduction of these mechanisms has provided an initial positive signal from the Government to non-hydro renewable energy investors and developers, though the complex legal requirements has hindered uptake of biomass and waste-to-energy and the low initial FIT level for wind has not been attractive enough to entice investment.

90. **Through the newly adopted VGGs (2012) and the submission of its (i)NDC (2015), the government has set the stage for a stronger promotion of lower carbon and energy intensive development.** Both the VGGs and (i)NDC have set achievable targets for reductions in energy and carbon intensity that will require early action and significant policy commitment, design, and implementation across key sectors.<sup>65</sup> To meet these targets, both the VGGs and (i)NDC include measures to improve the effectiveness and efficiency of energy use and reduce energy consumption as well as increase the proportion of renewable energy sources. A recent Bank study illustrates that many of these are cost-effective measures to yield both CO<sub>2</sub> emission reductions and net economic gains through lower energy and input costs. These include (a) energy-efficiency improvements in electrical appliances in the residential sector, (b) electricity savings from industrial energy-efficiency measures, and (c) fuel switching in electricity generation, from coal to natural gas, nuclear, and renewable energy sources including hydropower, wind, solar, and biomass. These are not expected to adversely affect economic growth in Vietnam, building on the evidence that growth and a clean environment can be realized simultaneously and can be mutually reinforcing. In addition to the direct benefits, implementation of these measures will bring additional co-benefits to the economy by improving local air quality and thus reducing the health impacts of air pollution, which disproportionately impact the poor.

91. **Vietnam faces several implementation, policy, market, and financing barriers in addressing its increasing energy demand and projected increased reliance on coal.** Improving the

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<sup>63</sup> World Bank. 2015. “Exploring a Low Carbon Development Path for Vietnam.” World Bank, Energy Sector Management Assistance Programme, and U.K. Department for International Development.

<sup>64</sup> MOIT Decision 18/2008/QD-BCT Promulgating the Regulation on Avoided Cost Tariff and Standardized Power Purchase Agreement Applicable to Small Renewable Energy Plants. July 2008.

<sup>65</sup> The VGGs sets targets for both carbon intensity (8–10 percent reduction in 2020 compared to 2010) and energy intensity (1–1.5 percent per year through 2020). The latter target is consistent with an indicator contained in the latest available draft of Vietnam’s SEDP 2016–2020. More recently, Vietnam’s Intended Nationally Determined Contribution (INDC) includes a target for 2030 of reducing energy intensity by 20 percent compared to 2010 levels (with a reduction of 30 percent conditional on international support).

financial sustainability of the power sector is a key challenge as the low electricity tariff is an underlying impediment to improving the economic viability of renewable energy for power generation and the incentives for energy efficiency measures across sectors. Since the tariff level also negatively affects the financial position of Vietnam Electricity (EVN), the Bank has supported the introduction of market principles in the generation subsector under the first Power Sector Reform DPF series. A planned second series would support the introduction of the wholesale market to send price signals on the true cost of electricity supply, which would be reflected in the determination of the tariff. Further, the Bank is engaging with MOIT to help identify and quantify energy subsidies in the power sector, which could then potentially lead to their subsequent removal. Scaling up sustainable energy would require the Government to create an attractive regulatory framework and financial incentives combined with substantial commercial, concessional and blended financing. Further, promoting demand-side energy efficiency is the least cost option for avoiding new coal fired power generation in Vietnam. The DPF series has therefore positioned its support to the scaling up of interconnected non-hydro renewable energy from its still-nascent stage and foundational reforms to promote energy efficiency in the industrial and residential sectors, which have been proven to be successful first steps towards reducing overall energy consumption.

**92. DPF 1 prior action. The government has developed and adopted new energy efficiency labeling standards for non-ducted air conditioners<sup>66</sup>** (*Evidence: The Recipient, through its Minister of Ministry of Industry and Trade, has issued Ministerial Decision Number 13550/QD-BCT dated December 10, 2015 announcing the minimum energy performance and labelling standards for non-ducted air conditioners*). The operation supports the development and issuance of updated energy performance standards and labeling rules for non-ducted air conditioners, whose sales have grown rapidly in recent years (20 percent annually from 2007 to 2012)<sup>67</sup> and are expected to further increase as household incomes also increase.<sup>68</sup> The MOIT legislation applies updated standards jointly developed with the MOST to new imported and domestically manufactured air conditioner units at their respective points of sale. The policy eliminates the lowest efficiency air conditioner units from the market and requires labeling on levels of energy performance for all other air conditioners, facilitating customers to make more informed decisions. The new standard is expected to increase electricity savings per household by 7–11 percent depending on the type of air conditioner.<sup>69</sup> The government, through its (i)NDC, has highlighted the need to apply energy savings and efficiency in the residential sector as well as labeling and national standards of energy saving equipment. Further, improved energy efficiency of household air conditioners has been identified in the Bank’s 2015 Exploring a Low Carbon Development Path Study in Vietnam as a mitigation option with significant emission reduction potential and a negative marginal abatement cost. Standards and labelling policies are often the cornerstone of a country’s portfolio of energy efficiency policies and programs, particularly in the residential sector. “Voluntary targets” (i.e., higher star ratings) have proved to be effective as they induce change in behavior of a manageable number of manufacturers. The improved standards and labeling will encourage changes in unsustainable consumption patterns.

**93. DPF 1 prior action: The government has developed and adopted a) procedures for the development of projects, for setting an avoided-cost tariff, and a standard PPA for biomass; and**

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<sup>66</sup> Non-ducted, or duct-less, air conditioners are used in household or commercial settings and are a solution for areas that are not connected to central heating or cooling. They provide cooling for a specific area with one unit.

<sup>67</sup> Estimates from Hanoi University of Technology and Vietnam Society of Refrigeration and Air Conditioning

<sup>68</sup> Surveys in Vietnam conducted by the Department of Climate Change and Energy Efficiency of the Australian Government and the Japan External Trade Organization indicate a positive correlation between AC ownership rate in urban areas in Vietnam and level of household income.

<sup>69</sup> MOST estimate.

**b) procedures for the development of projects and a standard PPA for waste-to-energy** (*Evidence: The Recipient, through its Ministry of Industry and Trade, has issued: (a) Circular Number 29/2015/TT-BCT dated August 31, 2015 governing contents, sequence and procedures for preparing, appraising and approving biomass energy development and utilization plans; (b) Circular Number 32/2015/TT-BCT dated October 08, 2015 governing project development and standard power purchase agreements for power generation projects using solid wastes; and (c) Circular Number 44/2015/TT-BCT dated December 9, 2015 governing project development, setting an avoided cost tariff, and standardized power purchase agreements for biomass power projects*). Vietnam has significant potential for generating energy from agricultural residues and solid waste. Annually, about 8 million tons of rice husks are produced from rice processing and only about 3 million of the 40 million tons of rice straw produced are utilized.<sup>70</sup> Solid waste volumes, comprising municipal, industrial, construction, and agricultural solid wastes have increased by 150–200 percent from 2003 to 2008 and it is anticipated that Vietnam will produce 68 megatonnes by 2020 and 91 megatonnes by 2025.<sup>71</sup> Recognizing this potential, and in support of the approved PDPVII plan, which calls for development of 2,000 MW of power generation fueled by crop residues by 2030, these reforms provide a simplified procedure for the development of waste-to-energy projects as well as a legal corridor for the development of biomass power projects, which did not exist earlier. In particular, the reforms were prepared to provide (a) procedures for the development of and contents to be included in national and provincial biomass power master plans; (b) procedures for incorporation of waste-to-energy into the national development plan for power sources using waste-to-energy; (c) a legal basis and procedures for the Electricity Regulatory Authority of Vietnam and the General Directorate of Energy within the MOIT to calculate and set an avoided cost tariff for biomass (the calculation of the tariff is expected to be finalized in the first quarter of 2016); and (d) the standard PPA for biomass and waste-to-energy projects. By providing standard PPAs, the reforms alleviate a key constraint in attracting investors. For biomass, it provides investors with a clear procedure for the preparation, appraisal and approval of biomass power development and master plans at both national and provincial levels. For both biomass and waste-to-energy, it simplifies PPA negotiations with the electricity buyer, EVN, and adds predictability by providing adequate upfront information on the expected terms and conditions of the agreement. With the introduction of both reforms, coupled with the avoided-cost tariff for biomass power, and the existing FITs for combined heat and power (CHP) and waste-to-energy, investors will now have responded to investor requests of significantly reducing transaction costs with EVN to develop biomass CHP and power and waste-to-energy projects.

94. **Indicative DPF 2 and 3 triggers. To further scale up residential and industrial energy efficiency measures, the government will develop and adopt two additional sets of policies: (a) new energy efficiency labeling standards for household refrigerators and (b) energy savings and efficiency benchmarks in the steel, beverage, plastics, and pulp and paper industries.** DPF 2 supports the development and issuance of updated energy performance standards and labeling rules for household refrigerators, which has been highlighted in the aforementioned Bank study as the most cost-effective option with the greatest mitigation potential in the household sector. This measure will bring about benefits that will continue for a few decades as efficient units added will continue to produce savings for another 15–20 years. Further, a key impediment to reducing electricity elasticity in Vietnam is the low awareness of energy efficiency opportunities and their benefits, particularly among energy intensive industries in which state-owned enterprises have a large share. While the industrial sector plays a critical role in Vietnam’s economy, it is more energy intensive than the global

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<sup>70</sup> German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit. “Support for the Development of Renewable Energy in Vietnam Project” (2012–2015).

<sup>71</sup> MONRE estimate.

intensity benchmark.<sup>72</sup> Investing in energy efficiency in this sector will not only reduce CO<sub>2</sub> emissions, but improve its competitiveness as well. To help address the policy barriers in the industrial sector, the DPF series will support the development and adoption of energy savings and efficiency benchmarks in the steel and beverage industries (indicative trigger for DPF 2) as well as the plastics and pulp and paper industries (indicative trigger for DPF 3). These build upon a reform supported by the previous DPF series that targeted the chemical industry and signified the issuance of a first set of energy savings and efficiency benchmarks in Vietnam. These measures include a mandatory benchmark for new and expanded facilities as well as a road map for existing facilities to apply the higher benchmark. The measures supported will be mandated for all subsectors within each industry and mandatory energy consumption reports will be subject to regular energy audits from certified auditors. Vietnam's (i)NDC further highlights the industrial sector as a key element of its emission reduction strategy moving forward to 2030.

95. **Indicative DPF 2 and 3 triggers. Additionally, renewable energy reforms under DPF 2 and 3 will continue to promote the incremental introduction of support mechanisms. Specifically, the government will develop and adopt (a) a support mechanism (including FIT) and a standard PPA for grid-connected solar energy and a master plan for the development of waste-to-energy (DPF 2) and (b) a support mechanism (including FIT) and a master plan for the development of grid-connected wind energy (DPF 3).** Solar irradiance maps indicate resources in southern Vietnam are as strong as those in most of the southwest United States and far superior to resources in Germany. Despite this, there has been only limited installed capacity of solar power to date in Vietnam. Therefore, the indicative trigger for DPF 2 will support the issuance and adoption of a FIT for grid-connected and standard PPA for solar PV. Further, the renewable energy development master plans will include specific potential project sites, with site-specific details of renewable energy potential and possible capacity. Indicative triggers under DPF 2 and 3 will therefore include the development and adoption of a master-plan for the development of waste-to-energy and wind power, respectively. Since projects identified and listed in the master plans will not require additional project development approvals, they are thus considered a final policy step and will attract private investment by removing cumbersome approval procedures and investors will already have the basis for negotiation with electricity buyers. Although the total installed capacity for wind remains low, PDP VII anticipates aggressive pursuit of wind power reaching installed capacity of 6,200 MW by 2030. Given that FITs are still relatively new in Vietnam, the government has established the enabling environment in increments to minimize the financial burden on the state budget, EVN, and end users. This has offered the opportunity to fine-tune the legal and regulatory framework to support renewable energy initiatives based on dialogue with stakeholders, particularly private investors. To build on this progress, the indicative trigger for DPF 3 will contain a revision of the wind energy FIT to increase the tariff level (with different levels for onshore, nearshore, and offshore, as they have different development costs)

96. **Expected results.** While the government has opted for a gradual introduction of energy efficiency measures and the promulgation of support mechanisms and related regulations for renewable energy development, the prior actions and the indicative triggers collectively contribute to setting the stage for promoting low-carbon development. It is expected that the reforms supported under this DPF series will lead to 3.2 percent energy saved in selected end-use sectors<sup>73</sup> [Baseline: Projected trend of

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<sup>72</sup> For example, Vietnam's iron and steel plants use twice as much energy as similar plants around the world to produce the same amount of steel. This is because this and many other sectors, such as cement and textiles, use relatively old technologies.

<sup>73</sup> At present time, the target includes the cumulative target of steel, beverage, and pulp and paper sectors. This will be updated once the study for plastics is completed (prior to DPF 2)

annual energy use of selected end-use sectors to 2019, under BAU scenario, Target: 3.2 percent energy saved for selected industrial segments, cumulated to the target year] and a 250 percent increase of installed capacity of grid-connected non-hydro renewable energy (from 270 MW to 960 MW) [Baseline: 0 percent; Target: 250 percent]. Further, it is also expected that the collective policies under this policy track will contribute expected GHG emissions reduction associated with electricity generation and consumption to 2030 as compared to the baseline emissions pathway in Vietnam's (intended) Nationally Determined Contribution<sup>74</sup> [Baseline: 0; Target: to be finalized by end of 2016]<sup>75</sup>.

#### **Box 7. Prior Actions for Policy Track 3.2: Engaging in Low GHG Emissions Energy Production**

**Prior Action (DPF 1):** The government has developed and adopted new energy efficiency labeling standards for non-ducted air conditioners (*Evidence: The Recipient, through its Minister of Ministry of Industry and Trade, has issued Ministerial Decision Number 13550/QD-BCT dated December 10, 2015 announcing the minimum energy performance and labelling standards for non-ducted air conditioners*).

**Prior Action (DPF 1):** The government has developed and adopted procedures for the development of projects, for setting an avoided cost tariff, and a standard PPA for biomass and procedures for the development of projects and a standard PPA for waste-to-energy (*Evidence: The Recipient, through its Ministry of Industry and Trade, has issued: (a) Circular Number 29/2015/TT-BCT dated August 31, 2015 governing contents, sequence and procedures for preparing, appraising and approving biomass energy development and utilization plans; (b) Circular Number 32/2015/TT-BCT dated October 08, 2015 governing project development and standard power purchase agreements for power generation projects using solid wastes; and (c) Circular Number 44/2015/TT-BCT dated December 9, 2015 governing project development, setting an avoided cost tariff, and standardized power purchase agreements for biomass power projects*).

### **4.3 LINK TO CPF, OTHER BANK OPERATIONS, AND THE BANK GROUP STRATEGY**

97. **Green growth and climate change mitigation and adaptation actions in Vietnam contribute to achieving poverty eradication and shared prosperity in a sustainable manner by 2030.** The poverty headcount has declined both over the long term and in recent years, falling sharply from 20.7 percent to 13.5 percent (using the national poverty line) between 2010 and 2014. Ninety-one percent of the poor live in rural areas, and poverty is increasingly concentrated among ethnic minorities, who make up 14 percent of the population but 60 percent of the poor. These groups still derive most of their income from ecosystem-based activities, including agriculture.<sup>76</sup> Hence the actions also protect the resources poor and vulnerable people depend on. Moreover, by 2030 climate shocks could push an additional 0.25-1.2 million people into extreme poverty, while reducing the income of the bottom 40 percent by 0.52-4.3 percent and reducing overall GDP by 0.61-2.4 percent.<sup>77</sup> Rapid, inclusive and climate-informed development could significantly reduce these impact, thereby tackling

<sup>74</sup> This is composed of both the expected GHG emissions reduction associated with 1) electricity generation from grid-connected non-hydro renewable energy and 2) electricity consumption from energy efficiency measures in the selected end-user sectors covered in the DPF series

<sup>75</sup> The target is expected to be set by the end of 2016. This target will be expressed as a range (upper and lower bounds) of expected reductions in GHG emissions based on the emission reduction potential of low-carbon projects/investments enabled by the policy package included in the policy track. The target will be evaluated in 2019 adjusting for factors such as market penetration hurdles for specific technologies.

<sup>76</sup> World Bank Climate Change and Poverty in Vietnam report, forthcoming.

<sup>77</sup> World Bank Climate Change and Poverty in Vietnam report, forthcoming.

the treats to poverty reduction and income growth. Additionally, green growth actions, such as investing in resource efficiency, are means to increase productivity and to diversify the current economy away from carbon intensive activities, which can be an important risk management strategy.

98. **By strengthening Vietnam’s climate resilience and promoting a low-carbon and green growth development path, the DPF series contributes directly to Pillar II (sustainability) of the WBG FY2012–16 CPS<sup>78</sup>.** The CPS supports the government’s 2011–2020 SEDS (2011–2020) and the 2011–2015 SEDP and is organized around three pillars: (a) *competitiveness*; (b) *sustainability*, including climate change adaptation and mitigation and disaster risk management; and (c) *opportunity*. The DPF series supports each of the three outcomes under the sustainability pillar. Three cross-cutting themes complement the pillars of the CPS: governance, gender, and resilience. The DPF policy actions on coastal zone management, water resources services, and forests directly support the resilience theme. The DPF series will flesh out concrete actions that need to be taken at the local level, particularly to those who are poor and vulnerable, to ensure they are not adversely affected by the policy at the macro level. Also, concrete policy actions, for example, through the promulgation of decrees/guidance (at central level), and regulations/guidance (at provincial/local level) will provide opportunities to promote the participation of men and women), and to promote gender equality at both household and community levels.

**Table 4. Vietnam Climate Change and Green Growth DPF Support for CPS Objectives**

<b>CPS Pillar II: Sustainability</b>		
<b>SEDS Goal 11: Protect and Improve Quality of the Environment, Proactively and Effectively Respond to Climate Change, as well as Prevent and Fend off Natural Disasters.</b>		
<b>CPS Outcome and Bank Environment Strategy Pillars</b>	<b>Relevant CPS Outcomes Indicators</b>	<b>Selected CPS Milestone Contributed by CC-GG DPF</b>
<b>2.1 Improved natural resources management “Green”</b>	<p><b>Water resources management:</b> Increased water productivity in pilot areas</p> <p><b>Forest and biodiversity conservation:</b> Targeted smallholder plantation area certifiable according to international standards for sustainable forestry</p>	<p>DPF supports more sustainable water resources management towards the improvement of water protection and efficiency.</p> <p>DPF supports moving to scale in resilience through policy priorities on coastal forests and ecosystem-based solutions as well as developing systems that value forest ecosystems services in the context of REDD policies for the delivery of CC &amp; GG benefits</p>
<b>2.2 Strengthened environmental protection and management “Clean”</b>	<b>Climate Change Mitigation:</b> CO <sub>2</sub> emissions reductions compared to business as usual scenarios associated with investments	DPF supports enhancing energy efficiency in households and the industrial sector and removing barriers for renewable energy investment in Vietnam. The DPF also supports integrated AQM policies that generate climate change mitigation co-benefits.

<sup>78</sup> Country Partnership Strategy for FY2012-2016 with Vietnam (Report number 85986-VN), approved by the Board on December 15, 2011

<b>CPS Pillar II: Sustainability</b> <b>SEDS Goal 11: Protect and Improve Quality of the Environment, Proactively and Effectively Respond to Climate Change, as well as Prevent and Fend off Natural Disasters.</b>		
<b>CPS Outcome and Bank Environment Strategy Pillars</b>	<b>Relevant CPS Outcomes Indicators</b>	<b>Selected CPS Milestone Contributed by CC-GG DPF</b>
<b>2.3 Enhanced preparedness for natural hazards and climate change “Resilient”</b>	<b>Climate Change Adaptation:</b> Coherent framework for prioritization of climate change adaptation action in key sectors available	DPF supports area-based adaptation through strengthened integrated coastal zone management; improved water resources management to respond to climate challenges; and coastal forest policies that promote resilience. The DPF also supports policies that aim to set the stage for better mobilization of financing towards adaptation and resilience objectives.

99. **The series is a significant component of the Bank Group’s broader climate change engagement strategy in Vietnam.** The DPF series will help the government provide leadership on a transformative climate change and green growth agenda that needs to address increasingly complicated trade-offs across sectors, institutions, and administrative and geographic boundaries. The DPF aims to strategically engage senior government leadership on the reform of policies. It leverages actions supported by the World Bank Group and other DPs’ investment programs that are focused on a low carbon, climate resilient economy and that explicitly aim to deliver climate co-benefits at a larger scale. This includes investment programs such as support to energy efficiency financing in the industrial sector and promotion of climate resilience in the Mekong Delta Region. The policies promoted under this DPF leverage the evidence-based analytical policy dialogue, capacity strengthening, and climate-relevant information that the Bank has supported over the past years. The Bank has moved towards a stronger mainstreaming of climate action in project development with increasing prioritization of projects that promote resilience in highly vulnerable areas as well as those that promote strategic lower carbon options. Table 5 summarizes related Bank lending and ASA in Vietnam.

**Table 5. CC-GG DPF Series in the Context of the Vietnam Bank Group Lending and Non-Lending**

<b>DPF Pillar</b>	<b>Bank Lending</b>	<b>Bank Non-Lending</b>
<b>1. Improving inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action</b>	<ul style="list-style-type: none"> <li>• IPF/GEF - Coastal Resources for Sustainable Development (P118979 and P124702)</li> <li>• IPF - Managing Natural Hazards Project (P118783)</li> <li>• IPF - Ho Chi Minh City Flood Risk Management Project (P149696)</li> <li>• IPF - Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods (P153544)</li> <li>• IPF - Can Tho Urban Development and Resilience (P152851)</li> </ul>	<ul style="list-style-type: none"> <li>• Bank Executed TA Scaling up Implementation of Vietnam’s Green Growth Priorities (TF0A0985) <i>under Programmatic AAA on Climate Resilience and Green Growth (P148188)</i></li> <li>• BE TA for Support for Climate Change/Green Growth Resource Mobilization (P149247) <i>under Programmatic AAA on Climate Resilience and Green Growth (P148188)</i></li> <li>• BE TA for Building Resilience in the Mekong Delta P149017 <i>under Programmatic AAA on Climate Resilience and Green Growth (P148188)</i></li> </ul>

DPF Pillar	Bank Lending	Bank Non-Lending
<p><b>2. Developing and safeguarding selected natural resources services</b></p>	<ul style="list-style-type: none"> <li>• IPF - Mekong Integrated Water Resources Management Project Phase II (P124942)</li> <li>• IPF - Irrigated Agriculture Improvement Project (P130014)</li> </ul>	<ul style="list-style-type: none"> <li>• FCPF REDD+ Readiness (P124584)</li> <li>• BE TA for Climate Change and Poverty (P152574) <i>under Programmatic AAA on Climate Resilience and Green Growth (P148188)</i></li> <li>• BE TA Scaling up Implementation of Vietnam’s Green Growth Priorities (TF0A0985) <i>under Programmatic AAA on Climate Resilience and Green Growth (P148188)</i></li> </ul>
<p><b>3. Promoting selected cleaner production systems</b></p>	<ul style="list-style-type: none"> <li>• IPF/Carbon Finance - Renewable Energy Development Project (P103238 and P110477)</li> <li>• IPF/Montreal Protocol - HCFC Phase-Out Project (Phase I and II) (P115762 and P152232)</li> <li>• DPF - Power Sector Reform Series (P157722)</li> <li>• IPF - Vietnam Industry Energy Efficiency Financing (VIEEF) (P151086)</li> <li>• IPF - Ho Chi Minh City Green Transport Development (P126507)</li> <li>• IPF - Hanoi Urban Transport Development Project (P083581)</li> </ul>	<ul style="list-style-type: none"> <li>• Recipient Executed TA for Partnership for Market Readiness (PMR) (P152797)</li> <li>• BE TA for Policy Planning for GHG Mitigation Actions and Climate Change Negotiations (Supported by the Partnership for Market Readiness Upstream Analytical Policy Support and GCCPT)</li> <li>• GEF Clean Production &amp; Energy Efficiency (P116846)</li> <li>• TA for Renewable Energy Resource Mapping and Geospatial Planning (P145513)</li> <li>• Programmatic AAA for Clean and Sustainable Energy (P147685)</li> <li>• TA for Energy Subsidy Reform (P157852)</li> <li>• BE TA Scaling up Implementation of Vietnam’s Green Growth Priorities (TF0A0985) <i>under Programmatic AAA on Climate Resilience and Green Growth (P148188)</i></li> </ul>

Note: FCPF = Forest Carbon Partnership Facility; IPF = Investment Project Financing.

100. **A targeted package of technical assistance has been developed to support the formulation and implementation of policies adopted under the DPF series.** This includes a 2-year TA program that is provided in support of each of the policy tracks. The TA program provides: (a) a technical expertise support package linked to prioritized policy tracks and policy actions and (b) support toward the policy, convergence, monitoring, and reporting dialogue including through the financing of annual events by policy tracks that support convergence and cross-sectoral engagements, a consolidated high-level event organized with the NCCC and the wider DP community in Vietnam and through the development of a comprehensive outreach and communication strategy for the government. The second component of TA support will serve as a platform for monitoring and reporting the development and implementation of the policies.

## 4.4 CONSULTATIONS, COLLABORATION WITH DEVELOPMENT PARTNERS

### Consultations

101. **The government has organized and conducted a series of consultations with both public and private stakeholders involved in the specific sectors relevant to the policy tracks of the DPF series.** Through the platform developed under the SP-RCC and continued under the new phase, an established mechanism exists for stakeholder and DP coordination (for example, consultation meetings and annual forum that invites DPs, ministries, provinces, civil society organizations, research institutions, academia, and the media). A NCCC meeting held on October 2014, which included representation from a large number of relevant ministries, institutes, and DPs, reviewed lessons learned from the previous phase of the SP-RCC and led to the recommendation from the deputy prime minister to initiate the process to develop the Post-2015 phase of the SP-RCC with an identified set of guiding principles. Noteworthy consultations have been held for the identification and preparation of this operation, including a number of formal meetings organized by the government and by DPs between April and September 2015 for identification and through February 2016 for preparation. A joint appraisal is scheduled in late February 2016 with another round of participatory meetings with line ministries and DPs and a NCCC meeting at its conclusion. Specific consultations have also been organized in support of the finalization of prior actions with DPs and relevant stakeholders. As required by the national regulation, draft legal documents are available for public consultation in the line ministries' official websites. The plenary meetings of the joint DP SP-RCC missions are open to and have benefited from the active participation of non-SP-RCC DPs and nongovernmental organizations.

### Collaboration with Other DPs

102. **DP collaboration and coordination continue to be strong and include regular consultations to discuss progress on the climate change and green growth policy agenda.** The Post-2015 SP-RCC is supported by Japan International Cooperation Agency (JICA), Agence Francaise de Development (AFD), and the Bank. The program also guides other DPs in developing their support to the government for climate change and green growth. This continues the cooperative effort during the last phase of the SP-RCC. The total DP contribution through budget support parallel to DPF 1 is expected to reach about US\$210 million.<sup>79</sup> The Bank holds discussions with DPs on alignment of climate change and green growth initiatives, funding, and TA in particular within the framework of the SP-RCC. SP-RCC DPs and others meet regularly to discuss and coordinate policy dialogue and assistance. Meetings usually include JICA, AFD, and the Bank with a broader group joining for the plenary meetings.

103. **Policy actions of the DPF series are a subset of the policy actions under the Post-2015 SP-RCC.** Any updates to the policy reform program are discussed and agreed during formal joint GoV-DP consultations organized at least twice a year by the government. The policy matrix is reviewed and endorsed annually by formal decisions of the prime minister. Policy actions supported by each DP in their development policy financing are also endorsed by the prime minister as part of the MONRE's Project Detailed Outline (PDO), which is required by the government and specified in Decree 38 on official development assistance management and utilization.

104. **DPs have provided coordinated advisory services, capacity building, and TA to the**

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<sup>79</sup> JICA is expected to provide parallel financing to this operation and as such this amount contains an initial projection of JICA financing. AFD is likely to also provide parallel financing.

**government in support of the policy actions under this DPF series.** TA support has been leveraged to (a) provide a targeted technical expertise support package linked to policy tracks and actions prioritized in the policy matrix and (b) support program management including high-level policy dialogue with the NCCC and other DPs, as well as implementation of a fleshed out outreach strategy.

## **5. OTHER DESIGN AND APPRAISAL ISSUES**

### **5.1 POVERTY AND SOCIAL ASPECTS**

105. **The Bank has prepared a Poverty and Social Impact Analysis (PSIA) to assess the distributional impacts of the supported policy development and reforms.** The PSIA has assessed whether the policy actions under the first DPF operation have significant social effects (either positive or negative) on stakeholders, particularly on the poor and vulnerable groups (including ethnic minority peoples). The PSIA also looked into the potential effects from a gender perspective. This analysis was conducted through (a) consultation with peoples at community level with a view to understand the potential effects on such groups and (b) desk review of past case studies and anecdotal evidence. Overall, the proposed prior actions under DPF 1 are expected to lead to positive social and poverty reduction outcomes, or potential adverse effects can be managed by the existing policies and management systems of Vietnam.

106. **Most of the policies analyzed in the PSIA will have an overall positive impact on the target groups, including the poor and vulnerable groups.** There are no significant negative effects on the poor and vulnerable populations albeit there are some minor effects that might happen if no interventions are devised to address them beforehand. For example, coastal communities including poor and vulnerable people, whom often depend on natural resources, are expected to benefit from the maintenance of ecological functions and services of coastal forests, particularly in the context of climate change. The policy on higher vehicle emissions standards and cleaner fuels is expected to help improve health standards and quality of life in urban areas. The policies on AQM are aimed at pollution control that contribute to ensure clean air quality and community health, including benefits for the poor, the disadvantaged, and other vulnerable groups. The labelling of energy efficiency products can help people reduce monthly energy costs if they have more efficient appliances. Better control of river banks to avoid erosion and protect farmland close to the rivers should enable farmers, including the poor and vulnerable peoples, to protect their crops from annual and unexpected flooding, which should enhance their livelihoods resilience. With the policy to provide support for efficient irrigation, farmers will be supported for implementing dripping or sprinkler irrigation for their crops, which is important especially in the Central Highland and areas of water shortage.

107. **There are no significant potential negative effects expected from the DPF's prior actions at the policy and law levels although some policy actions may have potential negative consequences on the poor during the local implementation of these policies.** These potentially include particularly resettlement of poor households in coastal zones as part of coastal protection corridors or ICZM, or expansion of coastal forests, and loss of land or resettlement of the poor in water protection corridors. Where potential social adverse effects are envisaged, such as involuntary resettlement, as a result of the implementation of policies included under the DPF, such as policies supporting protection of coastal zones, catchments and waterways and reforestation, the GoV regulations require to do environmental and social assessments of such potential effects so as to propose mitigation measures. The Land Law 2013 and relevant decrees provided guidance to avoid, or to minimize, mitigate, or compensate for the adverse effect, and includes extensive consultation with the affected groups during the policy implementation process. To support the relocation of people, the GoV

has policies in place to guide the compensation and allowance support for resettlement. The GoV has policies to provide poor people with access to loans for their livelihoods development and access to job training to sustain and improve local livelihoods.

108. **To address potential small adverse effects, the government has in place key policies that serve as both mitigations measures and development opportunities for poor peoples.** With regard to potential adverse effects related to land acquisition and resettlement, Land Law 2013<sup>80</sup> (and its Decrees) was designed to support the resettlement of peoples. Affected people are expected to be compensated for the loss of their land, assets, and business opportunities to ensure the livelihoods are not worsened off compared to the current living standards. For potential adverse effects related to prices and opportunities, recent Decrees<sup>81</sup> are already in place to support poor peoples in need. These policies provide poor people with access to loans for their livelihoods development and access to job training to sustain and improve local livelihoods. During policy implementation, local governments are required to follow the GoV mechanisms to avoid and mitigate potential adverse effects and ensure compensation and schemes should be worked out in consultation with the potential affected groups to ensure their livelihoods are not worsened as a result of the implementation of the new policies as per the GoV regulations.

109. **The PSIA also attempted to look into the identified potential effects from a gender perspective.** Where potential adverse effects are identified, the PSIA suggests related approaches and measures as guided by the National Strategy for Gender Equality - 2011-2020 (Decision 2351/QĐ-TTg dated 24 December 2010) to promote gender equality in various development sectors. The Ministry of Labor, Invalid and Social Affairs has been tasked by the GoV to coordinate with other Line Ministries and Central Women's Union to provide guidance for gender mainstreaming at central and local level. Thus, all policies under this DPF series will benefit from the gender mainstreaming support from the central and provincial levels.

## 5.2 ENVIRONMENTAL ASPECTS

110. **In line with OP 8.60, the Bank has conducted a policy strategic environmental analysis to evaluate the effects of the supported policy reforms on Vietnam's environment, forests and other natural resources.** Overall, the majority of prior actions will likely lead to positive environmental outcomes, or potential adverse effects can be managed by the existing environmental policies and management systems of Vietnam. The net effect of the DPF reforms is expected to be positive. Implementing these policy reforms would translate into enhanced natural disasters risk management in the coastal zone; enabling conditions for climate change and green growth investments; improved

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<sup>80</sup> Decree No.43/2014/ND-CP guiding in detail some articles of Land Law 2013, Decree No.44/2014/ND-CP providing methods for land pricing; adjustment to land price brackets, land price lists; specific land pricing and land price consultancy activities. Decree No. 47/2014/ND-CP providing compensation, support, resettlement when land is acquired by the State. Decree No. 38/2013/ND-CP of 23 April 2013, on management and use of official development assistance (ODA) and concessional loans of donors. Circular No. 36/2014 / TT-BTNMT dated 30 June 2014, regulating method of valuation of land; construction, land price adjustment; specific land valuation and land valuation advisory. Circular No. 37/2014/TT-BTNMT dated 30 June 2014, regulating compensation, assistance and resettlement when the State acquires land, etc.

<sup>81</sup> Decree 55/2015/NĐ-CP on credit for agricultural and rural development, issued August 1, 2015. Decision No. 1956/2009/QĐ-TTg, dated November 17 2009, by the Prime Minister approving the Master Plan on vocational training for rural labors by 2020; Decision No. 52/2012/QĐ-TTg, dated November 16 2012, on the support policies on employment and vocational training to farmers whose agricultural land has been acquired by the State

protection of water source corridors; more efficient use of water for upland agriculture; better planning of forest carbon sequestration; cleaner urban air; improved energy efficiency in appliances; and, purchase agreements for energy generated from biomass and waste. Moreover, the DPF should play an important role in continuing to mainstream environmental considerations in key sectors such as agriculture, waste management, land use planning and energy.

111. **An assessment of Vietnam’s country systems was undertaken to determine whether there is appropriate environmental management capacity to address potential adverse environmental effects or enhance positive environmental effects.** The assessment confirms that the GoV has monitoring and enforcement system in place to manage likely potential environmental adverse effects of the prior actions supported under this DPF. With regard to the possible environmental consequences of the Action Plans emanating from DPF 1 Prior Actions, the majority will not be subject to Strategic Environmental Assessment (SEA), as they are not prescribed in Annexes to Decree 18 (*on Environmental Protection Planning, Strategic Environmental Assessment, Environmental Impact Assessment, and Environmental Protection Plans (No. 18/2015/ND-CP)*). However, they will likely be included in higher-level sectoral strategies that are subject to SEA. In addition, it is likely that one of the Action Plans (the National Biomass Energy and Development Plan), which will be an outcome of the prior action ‘*the Government has developed and adopted procedures for the development of projects and a standard PPA for biomass and waste-to-energy*’ will be considered a Master Plan of a sub-sector, and so subject to SEA under Decree 18. Accordingly, potentially significant adverse environmental effects from this policy action would be identified, prevented and mitigated by the GoV.

112. **Vietnam has had a regulatory requirement for SEA since the 2005 Law on Environmental Protection.** It requires that specified categories of strategies and plans (SPPs) should undergo SEA before approval. However, the Ministry of Planning and Investment, which is responsible for overseeing most of the national and provincial socio-economic development plans, has a separate process for appraisal. Until now, SPPs have often completed and appraised before SEA studies are appraised. This sequencing problem meant that SEA could not always properly influence the design of a SPP. Fortunately, this problem is being dealt with in the government’s proposed new Planning Law which is expected to require that the appraisal of SEA reports be carried out before the plan appraisal. The proposed Planning Law would be a commendable attempt to streamline what is an overly complicated planning system.

113. **There are two additional constraints associated with SEA implementation.** One is limited systematic documentation of environmental data. In theory, virtually all environmental data produced by public agencies as part of research, monitoring, or project environmental assessment should be freely available in the public domain. Limited access to good data impairs the quality of SEA studies which should inform the design of the Action Plans mentioned earlier. Another shortcoming is the limited capacity of proponent agencies to formulate and evaluate SEAs, as much development partner attention over the last 10 years has focused on building the SEA capacities of the regulatory agency (MONRE and a selection of DONREs), rather than with proponent agencies. While these problems require a long-term solution that is beyond the remit of the DPF series, they are being addressed through Bank continued support to the GOV for institutional capacity improvement through new Vietnam Learning Center for Environmental and Social Sustainability, established in 2015

114. **The strategic analysis undertaken also found that the following ‘drivers’ will likely eventuate from reforms, and might have a consequent influence on projects:** conversion of agricultural land to biomass plantation; collection and transfer of solid waste; and construction and operation of electricity generating stations. Although in most respects, Vietnam’s legal and regulatory

system is of international standard, and leads the way as a model for the region, capacity gaps still remain in central, provincial, and district line agencies. Recent studies have also indicated that there are capacity constraints in the private consulting sector. It is well known that consultants do not necessarily collaborate closely enough with project proponents during preparation of the project investment report. This can result in an inaccurate project description, including of technologies and equipment proposed for waste treatment. In addition, experience suggests that environmental management plans within construction contracts are difficult to enforce. These capacity gaps are, to some extent, being dealt with by the new Vietnam Learning Center for Environmental and Social Sustainability. The primary targets for training in the initial phase of this Learning Center operation are the project management units (PMUs) and Local People's Committees (LPCs). Addressing other constraints on Vietnam's capacity for environmental monitoring, supervision and enforcement (i.e., environmental quality monitoring networks) requires sustained capacity building efforts over the medium and long term that the Bank would continue supporting as part of its dialogue and engagement with the GoV.

### **5.3 PFM, DISBURSEMENT AND AUDITING ASPECTS**

115. **Public financial management.** Vietnam's public financial management (PFM) environment is considered satisfactory to support this operation. This is confirmed by the Bank-led Fiscal Transparency Review in Vietnam, the government-led Public Expenditure and Financial Accountability Assessment, and the ongoing Vietnam Public Expenditure Review 2015. The main recommendations of those reports focused on (a) preparation of the government financial statements prepared in accordance with International Public Sector Accounting Standards (IPSASs)—central level and country wide level; (b) audits of public sector financial statements in accordance with International Organization of Supreme Audit Institutions (INTOSAI) standards; (c) enhancement of the budget system including introduction of medium-term budget framework and integration of budget information into financial reporting information system; and (d) strengthening the debt and contingent liability management system.

116. **The government has maintained strong ownership of the PFM reform agenda and continues to lead a coordinated reform program in consultation with the DPs.** Issuance of accounting standards for public sector in accordance with IPSASs and piloting the preparation of central government financial statements is among the top priorities for the MOF to work with donors in the coming years. The government is also working with donors in strengthening the country budget system, with the launch of medium-term budget framework for the fiscal year 2016. The state audit of Vietnam, with support from the Bank, has issued a couple of auditing standards and guidance based on INTOSAI principles and will continue to complete the remaining standards in the next 2 years with assistance from donors.

117. **Dedicated foreign currency bank account.** Because of the unavailability of IMF Safeguard Assessment and the annual audited financial statements of SBV, to address the potential residual fiduciary risks related to the foreign exchange control environment, the recipient will open and maintain a dedicated account (DA) at the SBV in U.S. dollars for the recipient's use once the credit is approved by the Board. The DA will form part of the country's official foreign reserves. However the recipient uses the credit proceeds, the proceeds should always become a part of the country's budget resources. Therefore, the recipient shall ensure that upon each deposit of an amount of the credit into the DA, an equivalent amount is accounted for in the recipient's budget management system, in a manner acceptable to IDA. If, after deposit in the DA, the proceeds of the credit or any part thereof are used for ineligible purposes, as defined in the Financing Agreement, IDA will request the recipient to

refund the amount directly to IDA. Amounts refunded shall be cancelled.

118. **Reporting and auditing.** Through SBV, the recipient will report the exact sum received into the DA, ensure that all withdrawals are for ‘eligible’ expenditures, indicate to IDA the details of the treasury account to which the Vietnamese dong equivalent of the credit proceeds will be credited, confirm that the credit proceeds were received into an account of the government that is part of the country’s foreign exchange reserves and that an equivalent amount has been accounted for in the country’s budget management system (normally within 30 days after disbursement), and submit a report on receipts and disbursements for the DA. The government will, if considered necessary by IDA, allow an independent external audit of the dedicated foreign currency DA. A financial management review of the CC&GG DPF1 will be undertaken one year after disbursement. As part of this review, IDA will seek confirmation from State Bank of Vietnam or from Ministry of Finance of the following:

- (a) the exact sum received by the Recipient into the Foreign Currency Deposit Account: this information should be in the confirmation letter that the Recipient sends back to IDA in response to the letter from IDA advising of the deposit;
- (b) details of the Treasury account to which the Vietnamese Dong equivalent of the proceeds of the Financing has been credited, namely the account name and number, and the relevant budget revenue classification for these proceeds; and
- (c) reports on receipts and disbursements from the Foreign Currency Deposit Account, with information on the amount, date and account to which the funds were transferred and the amount of Vietnamese Dong equivalent.

119. **Disbursement.** The operation will follow IBRD/IDA disbursement procedures for DPFs, and the credit proceeds will be disbursed in compliance with the stipulated release conditions (i.e., satisfactory carrying-out of the Program and adequacy of macroeconomic policy framework). Disbursement will not be linked to any specific purchases and no procurement requirements will have to be satisfied.

#### **5.4 MONITORING, EVALUATION, AND ACCOUNTABILITY**

120. **The management of the DPF is fully aligned with the management structure for policy reform of the program and is planned to be common to JICA and AFD, expected parallel financiers of this operation.** Implementing the policy framework and therefore the DPF is under the supervision of the NCCC, the highest-level institutional body that oversees Vietnam’s climate change and green growth agendas. With this management structure, the policy and institutional reform program under the DPF series is subject to a broader scope of coordination with more strategic directions for cross-sector and regional response to climate change. As initiated in the first phase of the SP-RCC, the oversight of the NCCC should ensure increased synergy of outcomes and impacts of the policy program at the end of the DPF series.

121. **The MONRE leads the Post-2015 SP-RCC and collaborates with line ministries to coordinate the policy dialogue and provide overall accountability under the DPF series, including the M&E of quality and progress of the policy development and reforms.** Building upon the lessons learned under the SP-RCC, the MONRE coordinates with other line ministries and stakeholders in formulating and confirming the policy matrix for each annual cycle, based on the goals, objectives, and expected results as stated in the NCCS and VGGS. The MONRE undertakes regular reviews of

the achievements of the program, proposes improvements in consultation with line ministries, and reports to the prime minister and the NCCC on behalf of participating ministries on implementation progress and results achieved. As the program owner, the MONRE advocates for and facilitates coordination of technical assistance that relates to the policy actions supported under the government program. Recognizing the challenges of monitoring a multisector policy development agenda under the first phase of the SP-RCC, DPs have mobilized capacity-building support and advisory services into the formation of the Post-2015 SP-RCC that places an emphasis on a strengthened M&E system for the program. This includes TA financed by JICA that supports the MONRE to develop a reporting framework on the objectives of the NCCS. The Bank is also providing TA that will support a monitoring and reporting mechanism that will facilitate dialogue on policy development, implementation, effectiveness, and cross-sector and cross-stakeholder convergence that will include annual events by policy tracks and a consolidated high-level annual event organized with the NCCC and DPs. Bank TA support will also include ‘Policy Planning for GHG Mitigation Actions and Climate Change Negotiations’ that will focus on estimating emissions impacts and resource requirements of the policy actions considered by the government in the context of its climate change mitigation efforts.

**122. The National Program Coordination Unit (PCU) of the Post-2015 SP-RCC serves as the key entity to conduct monitoring and supervision and assists the line ministries in synthesizing and reporting on results.** The PCU within the MONRE is assigned as the focal point for coordinating the implementation of the policy program and, as a result, the Bank DPF series. The PCU is directed by the deputy director general of the MONRE Department of Meteorology, Hydrology, and Climate Change and staffed with officials from the department, the International Cooperation Department, and other relevant departments within the MONRE and contracted experts. The MONRE chairs the technical meetings with line ministries and DPs at least two times a year. The M&E reports of the program are prepared by the PCU in coordination with participating line ministries and submitted to MONRE management, who then reports to the NCCC. These reports mainly focus on progress toward delivery of the policy actions as per the agreed upon indicators. The PCU also shares the reports with DPs (in advance of the joint missions) to keep them informed of the implementation progress of the policy program. The government has established a network of climate change focal points in the line ministries that follow, coordinate, and report on the status of sector-specific climate change policy actions and benchmarks. Official communication related to policy actions between the MONRE and participating ministries is made at vice minister level via normal internal reporting lines.

**123. Line ministries are responsible for the delivery of selected policy actions under the DPF.** The Line ministries lead sector technical discussions and take part in discussions during joint technical and evaluation mission carried out between the government and DPs. They will propose the selection of and report progress on achievement of their respective sector policy actions. Reporting will be made to the MONRE as owner of the program for consolidation and further reporting to the NCCC. The Bank has fulfilled its supervisory and monitoring role to review progress, as well as needed adjustments of policy actions. The Bank will continue to participate in supervision and monitoring of the delivery of indicative triggers proposed for the second and the third operations as well as the progress toward achievement of the end-of-program indicators until the closing date of the last operation.

**124. Grievance redress.** Communities and individuals who believe that they are adversely affected by specific country policies supported as prior actions or tranche release conditions under a Bank DPF may submit complaints to the responsible country authorities, appropriate local/national grievance redress mechanisms, or the Bank’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address pertinent concerns.

125. **Affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel that determines whether harm occurred, or could occur, as a result of the Bank's noncompliance with its policies and procedures.** Complaints may be submitted at any time after concerns have been brought directly to the Bank's attention and Bank management has been given an opportunity to respond. For information on how to submit complaints to the Bank's corporate GRS, visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank Inspection Panel, visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

126. **Governance mainstreaming.** The DPF series have strong elements for governance mainstreaming as laid out in the CPF. Building on the extensive cross-agency consultations in the earlier series, this series will contribute to strengthen institutional capacity at the central and provincial levels including MONRE, MARD, MPI, MOIT, and MOT and their provincial Departments for better governance and management of forest resources. Through the policy actions of the DPF series, transparency in integrated coastal zone management, resource mobilization for climate change and green growth, coastal forest and forest carbon actions, water resources protection and use efficiency, air quality management, and energy efficiency and renewable energy and better engagement with stakeholders will be enhanced. The DPF series will also help address systemic governance weakness in climate change and green growth agenda through better coordination, planning and policy coordination among concerned agencies.

## 6. SUMMARY OF RISKS AND MITIGATION

127. **The overall risk to PDO achievement is assessed as substantial.** The key risks are highlighted below:

- **Sector strategies and policies risks are substantial.** Implementation of policies in a number of reform areas including air pollution, ICZM, IWRM, mainstreaming climate change, and green growth in budget allocation planning and monitoring may be slow given their complex nature. Further, comparatively low electricity tariffs and potential producer and consumer subsidies in the power sector may influence the effectiveness of implementing a competitive power market and the sector reforms on promoting supply- and demand-side energy efficiency and renewable energy, creating barriers for investment in energy-efficient technologies and renewable energy. Solidifying attractive incentives for renewable energy may also require iterations and confidence building among investors, thus delaying the effectiveness of some of the supported policy measures. These risks will be mitigated through (a) close implementation monitoring with the government and engagement with line ministries' senior management; (b) selection of reforms that balance the policy complexity and realism in achieving the PDOs; (c) capacity building, close monitoring, and enforcing existing laws and regulations on energy efficiency in industrial, commercial, and residential sectors; (d) continuous support to creating a competitive power market through a new Power Sector Reform DPF series; (e) support to the government and EVN to progressively move towards efficient and cost reflective tariffs to ensure long-term financial viability of the power sector; and (f) support to the government to gradually phase out direct and indirect energy subsidies.
- **Technical design of program risks are substantial.** The multi-sectoral complex nature of climate change and green growth program poses a substantial risk to policy implementation. Further, there is a risk that the strategy the series of operations takes to

ramp up ambition of the Government’s reform agenda will falter as it may take a substantial amount of time for reform agenda to move through the different steps of Government endorsement and response processes. This risk is being addressed by (a) ensuring that the selected prior actions and indicative triggers are fully owned by the government and are based on a strong analytical basis; (b) the facilitation of an enhanced quality of policy dialogue under the Post-2015 SP-RCC that addresses sector knowledge gaps and ensures that there is a focus on a strategic and limited number of policy areas and actions that have been pre-identified as having readiness for implementing reforms that are expected to deliver changes; and (c) the flexibility of the operation’s design under the three pillars and six policy tracks that make it possible to respond to external political priority changes without compromising the objectives of the series.

- **Institutional capacity for implementation and sustainability risks are substantial.** There is a risk that uneven implementation of policy reforms across a number of line ministries may delay the achievement of reform targets. This risk will be mitigated through (a) the accountability framework of the Post-2015 SP-RCC that requires close monitoring of policy implementation by the responsible line ministry and the MONRE as coordinator of the program with regular (biannual) reporting to the NCCC (and the prime minister); (b) the parallel investment project financing and analytical assistance being implemented by the Bank to support policy implementation in the selected reform areas; and (c) support to be provided from targeted technical assistance towards the policy, convergence, monitoring, and reporting dialogue to support consensus building, cross-sectoral dialogue, and the monitoring of progress.

**Table 7. Systematic Operations Risk-Rating Tool**

<b>Risk Categories</b>	<b>Rating (H, S, M or L)</b>
1. Political and governance	Moderate
2. Macroeconomic	Moderate
3. Sector strategies and policies	Substantial
4. Technical design of project or program	Substantial
5. Institutional capacity for implementation and sustainability	Substantial
6. Fiduciary	Moderate
7. Environment and social	Moderate
8. Stakeholders	Moderate
9. Other	
Overall	Substantial

## ANNEX 1: POLICY AND RESULTS MATRIX

Policy Actions			End of Program Results Indicators
DPF 1	DPF 2	DPF 3	
Prior Actions	Indicative Triggers	Indicative Triggers	
<b>Pillar 1: Improving Inter-Sectoral Coastal Planning and Public Investment Finance Programming across Selected Key Sectors in Support of Climate Change and Green Growth Action</b>			
<i>Policy Track 1.1: Enabling Area-Based Adaptation and Resilience in Coastal Areas</i>			
<p>The government has developed and adopted the National Action Plan setting priorities for the integrated management of coastal zones</p> <p><b>Evidence:</b> The Recipient, through its Prime Minister, has issued Decision Number 914/QĐ-TTg dated 27th May 2016, adopting the National Coastal Zone Action Plan setting priorities for the integrated management of coastal zones.</p> <p>(MONRE)</p>	<p>The government has developed and adopted specific guidance directing provinces in the development of provincial integrated coastal zone management programs</p> <p><b>Evidence:</b> MONRE Decision X on provincial integrated coastal zone management guidelines</p> <p>(MONRE)</p>	<p>The government has developed and adopted the coastal functional zoning to guide provinces in the development of functional zoning under provincial integrated coastal zone management programs</p> <p><b>Evidence:</b> MONRE Minister Decision X on the Coastal Functional Zoning</p> <p>(MONRE)</p>	<p><b>Result Indicator:</b> Number of coastal provinces that have adopted their provincial integrated coastal zone management programs and are under early implementation</p> <p><b>Baseline:</b> 0</p> <p><b>Targets:</b> 5 coastal provinces (20% of coastal provinces)</p>
<i>Policy Track 1.2: Improving Mobilization of Resources for Climate Change and Green Growth</i>			
<p>The government has established CC and GG as a priority direction for implementation under the SEDP 2016–2020</p> <p><b>Evidence:</b> The Recipient, through its Prime Minister, has issued Decision Number 40/2015/QĐ-TTg dated September 14, 2015 governing the principles, criteria and norms for allocation of state budget funds for development investment during the period of 2016 to 2020, and has submitted Socio-Economic Development Plan 2016-2020 to the National Assembly to establish</p>	<p>The government has established a CC and GG investment projects and program identification and tracking framework</p> <p><b>Evidence:</b> MPI Minister Decision X on CC-GG projects and program typology and tracking protocols</p> <p>(MPI)</p>	<p>The government has completed the review of the design of a selected number of major CC and GG projects and programs against adaptation and resilience objectives</p> <p><b>Evidence:</b> MPI Minister submission X to the prime minister and the NCCC on the assessment review</p>	<p><b>Result Indicator:</b> Number of priority sectors and provinces for which climate change and green growth investment programs are identified, reported to, and information used by the NCCC to review progress in implementing priorities and to develop recommendations<sup>82</sup></p> <p><b>Baseline:</b> 0 sectors; 0 provinces</p> <p><b>Targets:</b> 3 sectors, 8 provinces</p> <p><b>Result Indicator:</b> Percentage increase in the number of projects and programs meeting</p>

<sup>82</sup> Recommendations could in particular be used for the preparation of the midterm review of the 2016–2020 SEDP and 2021–2025 SEDP.

<p>climate change and green growth as a priority under this plan. (MPI)</p>		(MPI)	<p>climate change and green growth policy objectives in selected sectors and provinces<sup>83</sup> <b>Baseline:</b> 0% <b>Target:</b> 15% increase</p>
<p><b>Pillar 2: Developing and Safeguarding Selected Natural Resources Services</b></p>			
<p><i>Policy Track 2.1: Improving Water Protection and Use Efficiency</i></p>			
<p>The government has developed and adopted a policy guiding the establishment and management of water source protection corridors <b>Evidence:</b> The Recipient, through its Prime Minister, has issued Decree Number 43/2015/ND-CP dated May 06, 2015 regulating identification and management of water source protection corridors. (MONRE)</p> <p>The government has developed and adopted a policy on advanced and efficient upland irrigation <b>Evidence:</b> The Recipient, through its Minister of Ministry of Agriculture and Rural Development, has issued Ministerial Decision Number 1788/QD-BNN-TCTL dated May 19, 2015 adopting an action plan to develop advanced irrigation and water saving for upland crops in support of the restructuring of water resources sector. (MARD)</p>	<p>The government has developed and adopted guidelines for protecting the quality and function of water sources, including drinking water intakes <b>Evidence:</b> MONRE minister circular regulating the identification of sanitary protection zones for sources of water supply and MONRE circular guiding the protection of river banks, river beds, and alluvial (shallow) ground protection (MONRE)</p> <p>The government has developed and adopted a policy on incentive to encourage the development of small irrigation systems, infield irrigation systems, and more advanced and efficient irrigation systems <b>Evidence:</b> Prime Minister Decision on water efficient irrigation (MARD)</p>	<p>The government, working closely with provinces, has established and reported on the list of all priority water source protection corridors identified and adopted at provincial level <b>Evidence:</b> MONRE submission to the prime minister of the list of provincial decisions on water source corridors issued (MONRE)</p> <p>The government, working closely with provinces, has developed and adopted guidelines for encouraging efficient irrigation for selected priority crops <b>Evidence:</b> MARD Minister Circular X on efficient irrigation for selected crops (MARD)</p>	<p><b>Result Indicator:</b> Number of provinces with water source protection corridors delineated on maps and with an action plan to address threats to the integrity of these protection corridors (in conformance with Decree 43 and the DPF 2 circulars) <b>Baseline:</b> 0 <b>Target:</b> 6 provinces (10% of provinces)</p> <p><b>Result Indicator:</b> Number of hectares of farms utilizing more advanced and efficient irrigation practices for selected crops <b>Baseline:</b> 50,000 ha <b>Target:</b> 400,000 ha</p>

<sup>83</sup> This refers to the same sectors and provinces for which the government has used the CC-GG identification and tracking framework (DPF 2 indicative trigger).

*Policy Track 2.2: Enabling the Development of Forest Resources Services*

<p>The government has developed and adopted a policy on the development of coastal forests</p> <p><b>Evidence:</b> The Recipient, through its Ministry of Agriculture and Rural Development, has submitted to the Prime Minister, a draft decree governing the management, protection, restoration and development of coastal forests to address climate change.</p> <p>(MARD)</p> <p>The government has developed and adopted guidance for the preparation of provincial forest carbon action plans</p> <p><b>Evidence:</b> The Recipient, through its Minister of Ministry of Agriculture and Rural Development, has issued Ministerial Decision Number 5414/QD-BNN-TCLN dated December 25, 2015 approving the guidelines for Provincial REDD+ Action Plan (PRAP) preparation to govern the preparation of provincial forest carbon action plans.</p> <p>(MARD)</p>	<p>The government has developed and adopted technical guidance for the development of coastal forests in coastal provinces</p> <p><b>Evidence:</b> MARD Circular XX on Technical Guidelines including Cost Norms for the development of coastal forests to address climate change</p> <p>(MARD)</p> <p>The government, working closely with provinces, has reported on the development and adoption by at least three provinces of forest carbon action plans</p> <p><b>Evidence:</b> MARD submission X to the government on PPC Decisions Y on PRAPs</p> <p>(MARD)</p>	<p>The government has developed and adopted guidelines for review forest types in coastal provinces including appropriate system serving the monitoring and reporting on coastal forests</p> <p><b>Evidence:</b> MARD Minister Decision for review and adjustment of provincial forest masterplan including coastal forest system</p> <p>(MARD)</p> <p>The government has developed and adopted the updated National forest carbon action plan</p> <p><b>Evidence:</b> Prime Minister Decision X on National REDD+ Action Plan (MARD)</p>	<p><b>Result Indicator:</b> Percentage increase of coastal forest area</p> <p><b>Baseline:</b> 0%</p> <p><b>Target:</b> 10%<sup>84</sup> increase</p> <p><b>Result Indicator:</b> Percentage reduction of the annual rate of net emissions (accounting for reduction in emissions and increase in sequestration as a result of changes in forest cover and forest quality) in selected priority provinces (measured in tons of CO<sub>2</sub>e/year)</p> <p><b>Baseline:</b> 0 [reference is the average annual rate of net emission (forest reference level) based on a 2000-2012 reference period]<sup>85</sup></p> <p><b>Target:</b> 7% of reduction of annual rate of net emission in the selected priority provinces relative to forest reference level</p>
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**Pillar 3: Promoting Selected Cleaner Production Systems**

*Policy Track 3.1: Engaging in AQM with an Initial Focus on Planning, Inventory, Industrial permitting, and Cleaner Transport*

<p>The government has developed and adopted the NAP on AQM</p> <p><b>Evidence:</b> The Recipient, through its Prime Minister, has issued Decision Number 985a/QD-TTg dated June 1, 2016 adopting the National Air Quality Management Plan.</p> <p>(MONRE)</p> <p>The government has adopted regulations on vehicle emissions standards and on fuel quality</p>	<p>The government has developed and adopted guidance on complete AQM planning and on emission inventories for implementation of the NAP at provincial/ city level</p> <p><b>Evidence:</b> MONRE Minister Circular X on provincial/city AQM planning and MONRE Minister Circular Y on emission inventory including related registry</p>	<p>The government has developed and adopted an emission permitting system for implementation of the NAP at industrial sector level</p> <p><b>Evidence:</b> MONRE Minister Circular X on permit on emissions for 6 major emitting industrial sectors</p> <p>(MONRE)</p>	<p><b>Result Indicator:</b> Number of city AQM plans adopted</p> <p><b>Baseline:</b> 0</p> <p><b>Target:</b> 3</p> <p><b>Result Indicator:</b> Percentage of enterprises in 6 sectors/industries that are part of and report to the emission registry (in conformance with the reporting criteria defined in the DPF 2 Circular on emissions inventories)</p>
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<sup>84</sup> The target is set based on the condition that the GoV guarantees sufficient domestic finance to implement Decision 120 on Coastal Forest Protection and Development Plan.

<sup>85</sup> The target is set based on the condition that Vietnam's Emissions Reductions Program is implemented as planned.

<p><b>Evidence:</b> The Recipient, through its Ministry of Transport, has issued Circular Number 33/2015/TT-BGTVT dated July 24, 2015 promulgating the national technical regulation on Euro 4 standard for new assembled, manufactured, and imported vehicles, and, through its Ministry of Science and Technology, has issued Circular Number 22/2015/TT-BKHCH dated November 11, 2015 on the issuance and implementation of national, technical regulations on gasolines, diesel fuel oils, and biofuels.</p> <p>(MOT)</p>	<p>(MONRE)</p> <p>The government has developed and adopted the road map for the regulation of exhaust gas emissions from in-used motorcycles, mopeds in cities and provinces</p> <p><b>Evidence:</b> Prime Minister Decision X on the road map on motorcycles</p>	<p>The government has developed and adopted the road map for the regulation of exhaust gas emissions from in-used vehicles (cars, trucks, bus)</p> <p><b>Evidence:</b> Prime Minister Decision X on the road map updating Prime Minister Decision 249/2005 on automobiles</p> <p>(MOT)</p>	<p><b>Baseline:</b> 0%</p> <p><b>Target:</b> 60%</p> <p><b>Result Indicator:</b> Percentage of NO<sub>x</sub> emission reductions in light-duty road transport in target year as compared to a business-as-usual (BAU) case <b>Baseline:</b> Projected trend under BAU case in target year <b>Target:</b> 6.85% reduction<sup>86</sup></p>
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*Policy Track 3.2: Engaging in Low GHG Emissions Energy Production*

<p>The government has developed and adopted new energy efficiency labeling standards for non-ducted air conditioners</p> <p><b>Evidence:</b> The Recipient, through its Minister of Ministry of Industry and Trade, has issued Ministerial Decision Number 13550/QD-BCT dated December 10, 2015 announcing the minimum energy performance and labelling standards for non-ducted air conditioners.</p> <p>The government has developed and adopted procedures for the development of projects, for setting an avoided cost tariff, and a standard PPA for biomass and procedures for the development of projects and a standard PPA for waste-to-energy</p> <p><b>Evidence:</b> The Recipient, through its Ministry of Industry and Trade, has issued: (a) Circular Number 29/2015/TT-BCT dated August 31, 2015 governing contents, sequence and procedures for preparing, appraising and approving biomass energy development and utilization plans; (b) Circular Number 32/2015/TT-BCT dated October 08, 2015 governing project development and standard power purchase agreements for power generation projects using solid wastes; and (c) Circular Number 44/2015/TT-BCT dated December</p>	<p>The government has developed and adopted new energy efficiency labeling standards for household refrigerators</p> <p><b>Evidence:</b> MOIT Decision X on new minimum energy performance standards and labeling for household refrigerators</p> <p>The government has developed and adopted energy savings and efficiency benchmarks in the steel and beverage sectors</p> <p><b>Evidence:</b> MOIT Minister Circulars X and Y</p> <p>The government has developed and adopted a support mechanism (including FIT) and a standard PPA for solar energy, and a master plan for the development of waste-to-energy</p> <p><b>Evidence:</b> Prime Minister Decision X, MOIT Minister Circular Y, and Prime Minister Decision Z</p>	<p>The government has developed and adopted energy savings and efficiency benchmarks in plastics and pulp and paper sectors</p> <p><b>Evidence:</b> MOIT Minister Circulars X, Y, and Z</p> <p>The government has developed and adopted a support mechanism (including FIT) for grid-connected wind power and a master plan for the development of wind power.</p> <p><b>Evidence:</b> Prime Minister Decisions X and Y</p>	<p><b>Result Indicator:</b> Percentage energy saved in selected end-use sectors as compared with BAU case</p> <p><b>Baseline:</b> Projected trend of annual energy use of selected end-use sectors to 2019, under BAU scenario</p> <p><b>Target:</b> 3.2% energy saved for selected industrial segments, cumulated to the target year<sup>87</sup></p> <p><b>Result Indicator:</b> Percentage increase in installed capacity of grid-connected non-hydro renewable energy</p> <p><b>Baseline:</b> 0% (270 MW)</p> <p><b>Target:</b> 250% (960 MW)</p> <p><b>Result Indicator:</b> Expected GHG emissions reduction associated with electricity generation and consumption to 2030 as compared to the baseline emissions pathway</p>
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<sup>86</sup> To be reviewed to confirm the assumption on total average travelling mileage of light-duty road transport vehicles in target year as compared to a BAU case

<sup>87</sup> At present time, the target includes the cumulative target of steel, beverage, and pulp and paper sectors. This will be updated once the study for plastics is completed (prior to DPF 2)

<p>9, 2015 governing project development, setting an avoided cost tariff, and standardized power purchase agreements for biomass power projects.</p>			<p>in Vietnam's (intended) Nationally Determined Contribution<sup>88</sup></p> <p><b>Baseline:</b> 0<sup>89</sup></p> <p><b>Target:</b> To be finalized by end of 2016<sup>90</sup></p>
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<sup>88</sup> This is composed of both the expected GHG emissions reduction associated with 1) electricity generation from grid-connected non-hydro renewable energy and 2) electricity consumption from energy efficiency measures in the selected end-user sectors covered in the DPF series

<sup>89</sup> Vietnam's BAU scenario, as specified in its (i)NDC, indicates that emissions from the energy, agriculture, waste, and LULUCF sectors are expected to reach 474.1 million tCO<sub>2</sub>e in 2020 and 787.4 million tCO<sub>2</sub>e in 2030.

<sup>90</sup> The target is expected to be set by the end of 2016. This target will be expressed as a range (upper and lower bounds) of expected reductions in GHG emissions based on the emission reduction potential of low-carbon projects/investments enabled by the policy package included in the policy track. The target will be evaluated in 2019 adjusting for factors such as market penetration hurdles for specific technologies.

## ANNEX 2: LETTER OF DEVELOPMENT POLICY



SOCIALIST REPUBLIC OF VIET NAM  
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT

Ha Noi, 09 May 2016  
Ref. No: 657 /ICD-2016

To: **Dr. Jim Yong Kim**  
President  
The World Bank  
Washington, DC

*Subject: Contribution of the World Bank to the Support Program to Respond to Climate Change in Viet Nam*

Dear Dr. Jim Yong Kim,

I would like to take this opportunity to express our sincere thanks to the World Bank and to you personally for your continuous and effective support to Viet Nam in addressing climate change challenges.

Viet Nam has been active in responding to climate change as part of the international efforts to keep the global average atmospheric temperature rise below 2°C. As one of the “extreme risk”<sup>1</sup> countries according to the Climate Change Vulnerability Index, the Government of Viet Nam has been making significant efforts to address the threats and impacts caused by climate change since nearly a decade ago while also contributing to reducing emissions. Recognizing the need to shift our economy toward lower carbon one, we have developed a wide range of national policies and greenhouse gas (GHG) mitigation measures for implementation, which is primarily funded by domestic financial resources.

Building on the foundation laid out in the National Target Program to Respond to Climate Change, we issued the National Climate Change Strategy (NCCS) in 2011 outlining the objectives for the period up to 2050 including priority projects implemented in the 2011-2015 period. The strategy identifies climate change responses which must be associated with sustainable development and a transition towards a lower-carbon economy. In 2012, the Viet Nam Green Growth Strategy (VGGs) was adopted to provide a re-enforcing framework of actions, specifying mitigation targets, measures and regulations, including those linking with international carbon markets. In 2013, the Law on Natural Disaster Prevention and Control, which is significantly climate change related, was enacted aiming at addressing diverse natural hazards that affect the country. In 2014, Law on Environment including a full chapter on climate change was adopted.

<sup>1</sup> 2014 Climate Change Vulnerability Index of Maplecroft

With support from the World Bank, we carried out a Viet Nam Climate Change Public Expenditure and Investment Review in 2014 to review the country's climate financing architecture and fiscal policy framework as well as budget allocation alignment to address climate change and green growth. The Review has provided a basis to help improve our existing capacity and strengthen climate change response policies, including resource mobilization. Findings of the Review showed that the share of total spending on climate change related responses during 2010 - 2013 period from the key Line Ministries of: Natural Resources and Environment, Agriculture and Rural Development, Industry and Trade, Transport, and Construction, which represent the main governmental climate response bodies at the central level, is significant mainly through investment projects having climate change adaptation and mitigation co-benefits.

It is important to note that while implementation of climate change and green growth related policies and activities relies mainly on domestic human and financial resources, support from the international communities is key and will enhance Viet Nam's contribution to the target of maintaining the global average atmospheric temperature rise below 2°C.

Regarding GHG emission mitigation, through the NCCS (2011), the VGGS (2012) and the Intended Nationally Determined Contributions (INDC) (2015), the Government has set the stage for a stronger promotion of lower carbon and energy intensive development. The INDC has set achievable targets for reductions in energy and carbon intensity that will require early actions and significant policy commitment, design, and implementation across key sectors. To meet these targets, both the strategies and the INDC include measures to improve the effectiveness and efficiency of energy use and reduce energy consumption as well as increase the proportion of renewable energy sources. Renewable energy development has been identified as a high priority policy area, which is consistent with Vietnam's mitigation potential and conditions.

Viet Nam has made significant efforts in forest protection, afforestation and reforestation, and is one of the countries participating in Reducing Emissions from Deforestation and Forest Degradation, sustainable management of forests, conservation of forest carbon stocks and enhancement of forest carbon stocks and enhancement of forest carbon stocks (REDD+). This is an important component of the Viet Nam INDC which also emphasizes the reduction of GHG emission through development of sustainable agriculture, and efficient use of input materials including water saving. Viet Nam is also preparing for the implementation of Nationally Appropriate Mitigation Actions (NAMAs), as well as the registration and implementation of carbon credit projects according to the Verified Carbon Standard and the Gold Standard.

On the adaptation side, numerous climate risk management activities have been carried out at national scale following the NCCS, VGGs and sectoral and provincial strategies (in particular in the Mekong Delta) and policies. However, national investment resources for climate change adaptation are limited. Meanwhile, the expenses for remedying damage caused by climate hazards are expected to increase significantly under impacts of climate change, sea level rise and saltwater intrusion. The cost of adaptation has been estimated to exceed 3-5% of GDP by 2030. Thus, it is necessary to diversify sources of investment in climate change adaptation from the public and private sectors, and from international support. Despite great efforts and initiatives in implementing climate change adaptation activities, the shortage of capacities and resources for climate change adaptation measures are major challenges for Viet Nam.

In this context, we are very happy that the World Bank plans to continue the support to our Support Program to Respond to Climate Change (SP-RCC) for the 2016-2020 period and highly appreciate the identified sectors and areas, on which the World Bank proposed operation will focus and which are important for the implementation of the country INDC.

We suggest moving forward with the structuring of the World Bank policy actions around three pillars: (i) improving inter-sectoral planning and programming; (ii) developing and safeguarding selected natural resources services; and (iii) promoting selected cleaner consumption and production patterns. Again we would like to reconfirm that those actions are in line with our strategic priorities.

As the results of the policy reform organized under SP-RCC which the NCCC sees as a key component of our action for the next 5 years, I would like to inform you of the status of the following prior actions as specified in the policy matrix:

- The Government will develop and adopt the National Action Plan setting priorities for the Integrated Management of Coastal Zones (not yet adopted by the Government);
- The Government has established CC and GG as a priority under the Socio-Economic Development Plan 2016-2020;
- The Government has developed and adopted a policy guiding the establishment and management of water source protection corridors;
- The Government has developed and adopted a policy on incentives for water savings and efficiency improvements;
- The Government has developed and adopted a policy on the development of coastal forests (not yet adopted by the Government);

- The Government has developed and adopted guidance for the preparation of provincial forest carbon action plans;

- The Government has developed and adopted the National Action Plan (NAP) on Air Quality Management (AQM) (not yet adopted by the Government);

The Government has adopted regulations on vehicle emissions standards and on fuel quality;

- The Government has developed and adopted new energy efficiency labeling standards for household air conditioners;

- The Government has developed and adopted procedures for the development of projects and a standard PPA for biomass and waste-to energy;

We look forward to the technical and financial support from the World Bank for the Government's Program. We very much appreciate the World Bank contributions to the SP-RCC via this World Bank Development Policy Financing Operation and related technical assistances. *z*

Sincerely yours,



*Ma*  
**Tran Hong Ha**  
Minister of Natural Resources and Environment of Viet Nam

## ANNEX 3: FUND RELATIONS ANNEX

### VIETNAM—ASSESSMENT LETTER FOR THE WORLD BANK

February 4, 2016

**The economic recovery gathered pace last year and the near-term outlook is broadly favorable.** Real GDP growth reached 6¾ percent in 2015, underpinned by robust foreign direct investment related manufacturing and an increased contribution from domestic demand. Headline inflation fell to around ½ percent owing to lower food and energy prices and declining core inflation. The external current account surplus declined as imports picked up, particularly investment goods, while export growth moderated. Heightened global financial market volatility spilled over into domestic markets, and capital account pressures intensified in the second half of the year. Consequently, gross international reserves have fallen to around 2 months of imports of goods and services, low by international comparison. The outlook is broadly favorable, and growth is projected around 6¼ percent this year on the back of continued improvements in domestic demand and robust FDI, and some continued moderation in exports. Inflation is projected to remain low with a continued small output gap. Downside risks to the outlook arise from delayed fiscal consolidation and rising public debt, slower external demand and global financial volatility, and incomplete banking and state-owned-enterprise (SOE) reforms. On the upside, more rapid reform implementation would support productivity and facilitate gains from the Trans-Pacific Partnership agreement.

**A growth-friendly fiscal consolidation is needed to ensure public debt sustainability and restore fiscal space for potential costs of bank and SOE reforms.** Persistent large fiscal deficits over recent years have supported the economy, but at the cost of rapidly rising public debt. In 2015, the budget deficit rose to 6½ percent of GDP, due mainly to lower oil revenues and higher current spending, while capital spending was reduced. The 2016 budget indicates a deficit of 5¾ percent of GDP, with the reduction coming primarily through planned across-the-board cuts in current and capital expenditure. Revenues are budgeted to continue their trend decline. As a consequence of high deficits, the debt ratio is expected to rise to around 62 percent of GDP this year.

**Reducing the debt ratio over the medium term remains an appropriate fiscal anchor,** with a reduction in the primary deficit of about one percentage point per year. The 2016 budget plans an appropriate amount of fiscal consolidation, however the composition of adjustment could be improved. Measures to strengthen revenue by broadening the tax base, reducing exemptions and introducing a property tax would help reduce the deficit while enhancing space for essential social and investment expenditures. Civil service reform would also help rationalize the large public wage bill.

**The authorities changed the monetary policy framework at the start of the year to allow greater exchange rate flexibility.** The State Bank of Vietnam's (SBV) official dong exchange rate against the U.S. dollar will now be allowed to change daily. Previously the rate was

adjusted only 2–3 times per year. The SBV also tightened domestic monetary conditions to support the exchange rate.

**Moving toward greater exchange rate flexibility is welcome, and the tightening of monetary conditions was appropriate.** Making use of enhanced flexibility would help support economic activity, facilitate the accumulation of reserves and provide a buffer against external shocks, in particular heightened global financial market volatility. To better guide market expectations, the authorities should enhance their public communications by explaining more clearly their monetary policy framework, including their goal of maintaining low and stable inflation, the new exchange rate regime, and reforms to facilitate the policy framework transition toward using inflation as the nominal anchor.

**Continued effort to strengthen the banking system is important.** The authorities have taken welcome steps, including phasing out explicit regulatory forbearance, increasing capital for the Vietnam Asset Management Company (VAMC), and allowing it to buy nonperforming loans (NPLs) at market rather than book value. Nevertheless, provisioning for NPLs transferred to the VAMC has been lengthened to 10 years; only a small fraction of these has been restructured or sold, largely because NPL resolution is undermined by legal requirements for borrowers to agree to the sale and transfer of collateral; and banks' profitability remains low. Continued reform, including: legal reforms to facilitate the recognition and resolution of NPLs; stricter provisioning; and injection of fresh capital for systemically important viable banks and an orderly exit of small non-viable banks, is key to reduce the risk of distress. With more solid domestic demand, the recent acceleration of credit growth to around 19 percent (y/y) raises concerns about the possible buildup of macro-financial risks. The loosening of macroprudential regulations in 2015 should be reversed to prevent a build-up of new vulnerabilities.

**SOE reform is progressing slowly, and more robust reform implementation is important for a successful restructuring of the corporate sector to improve economic performance.** Enhanced corporate governance, wider disclosure of management and financial information of SOEs, operational and management reforms, and better coordination of reform efforts among different agencies and ministries would bolster the reform effort. The dominant position of SOEs in many sectors and their preferential access to resources weigh on private sector growth. The creation of a level playing field for the domestic private sector is essential to reverse the trend decline in productivity growth and to achieve a higher and sustainable growth plane.

## Vietnam: Selected Economic Indicators

Population: 90.7 million  
 Quota (current): SDR 460.70 millions/ 100 percent of quota  
 Main products and exports: electronics, garment, crude oil, rice, coffee, and rubber  
 Key export markets: United States, Euro Area, Japan, Developing Asia

Per capita GDP 2015 (US\$): 2,088  
 Poverty rate (as of 2014): 13.5%

	2012	2013	2014 Est.	2015 Proj.	2016 Proj.
<b>Output</b>					
Real GDP growth (%)	5.2	5.4	6.0	6.7	6.3
<b>Employment</b>					
Unemployment (%)	2.7	2.8	2.5	2.5	2.5
<b>Prices</b>					
Inflation (% end of period)	6.8	6.0	1.8	0.6	2.0
<b>General government finances</b>					
Revenue and grants (% GDP)	22.6	23.1	21.9	22.1	21.9
Expenditure (% GDP)	29.4	30.5	28.0	28.7	27.5
Net lending (+)/borrowing (-) (% GDP)	-6.8	-7.4	-6.1	-6.5	-5.7
Public debt (% GDP)	48.5	52.4	57.2	60.7	62.1
<b>Money and credit</b>					
Broad money (% change)	18.5	18.8	17.7	16.1	15.4
Credit to the private sector (% change)	8.7	12.7	13.8	19.2	16.4
Nominal short-term lending rate (% less than one year)	12.4	9.7	8.5	...	...
<b>Balance of payments</b>					
Current account (% GDP)	6.0	4.6	5.0	1.4	0.5
FDI (% GDP)	4.6	4.1	4.3	5.2	6.2
Reserves (months imports)	2.2	2.0	2.4	1.9	1.8
External debt (% GDP)	37.4	37.3	38.3	43.1	44.0
<b>Exchange rate</b>					
REER (% change)	4.1	6.8	6.2	...	...

Source: Vietnamese authorities and IMF staff estimates.

## ANNEX 4: DPF PRIOR ACTIONS AND ANALYTICAL UNDERPINNINGS

Prior Actions	Analytical Underpinnings
<b>Pillar 1: Improving Inter-Sectoral Coastal Planning and Public Investment Finance Programming across Selected Key Sectors in Support of Climate Change and Green Growth Action</b>	
<p>Policy Track 1.1 Prior Action.</p> <p>The government has developed and adopted the NAP setting priorities for the integrated management of coastal zones</p>	<p>The reform supported by this operation in this policy track is rooted in over twenty years of knowledge generation, capacity building, and good practices on integrated coastal zone management in Vietnam supported by DPs (including the Bank, Asian Development Bank, Partnerships in the Environmental Management for the Seas of East Asia [PEMSEA], GIZ, the Dutch Government, the U.S. National Oceanic and Atmospheric Administration [NOAA], and the International Union for Conservation of Nature (IUCN), among others). This reform builds on the work conducted by <i>PEMSEA in their support to Da Nang, Quang Nam, Thua Thien-Hue, Quang Ninh, Hai Phong, and other coastal provinces to establish good ICZM models</i>. Experiences from these models have been critical in informing and guiding the MONRE to develop the preparation of the NAP. The methodology and solutions to cope with coastal erosion developed by the Integrated Coastal Management Program (through GIZ and supported by the governments of Australia and Germany)—by creating mudflats for rehabilitation of mangroves and engaging across forest, agriculture, aquaculture, planning, and budgeting—provide good lessons for an effective ICZM model to be considered in the development of the NAP by using low-cost nonstructural measures instead of structural measures to improve protection of the coast. PEMSEA’s knowledge products have been instrumental in support of this prior action. This includes <i>Socio-Economic Assessment Framework and Guidelines for Integrated Coastal Management, (Manila, 1999)</i>; <i>Manual of Practice: Contingent Valuation Survey for Integrated Coastal Management (ICM) Applications, (December 1997)</i>, <i>Manual on Economic Instruments for Coastal and Marine Resource Management, (January 1999)</i> and <i>Integrated Coastal Management Code, (2007)</i>. Co-management models support by different DPs, including the Bank’s <i>Coastal Resources for Sustainable Development project</i> set up in more than 100 coastal communes in 8 provinces from the North, Central and the MKD, serve as a good basis to be scaled up at the national level. Other studies leveraged in support of this PA are <i>Coastal zone management and climate policy in Vietnam (Kelly, 2015)</i>; <i>Guidelines for Integrated Coastal Zone Management (J.C. Post and C.G. Lundin, World Bank, 1996)</i>, <i>Perspectives on Integrated Coastal Zone Management (Solomons et al. 1999)</i>, the 2012 Bank report <i>Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience</i>, the 2013 <i>Operational Framework for Ecosystem-Based Adaptation to Climate Change for Vietnam</i>, the 2011 <i>Joint Development Partners Vietnam Development Report 2011: Natural Resources Management</i>, and the 2011 <i>The Economics of Adaptation to Climate Change Study in Vietnam</i>.</p>
<p>Policy Track 1.2 Prior Action. The government has established CC and GG as a priority direction for implementation under the SEDP 2016–2020</p>	<p>This action has been supported by a solid set of analytical works from the government and the Bank. This includes the <i>Financing Vietnam’s Response to Climate Change: Smart Investment for a Sustainable Future</i> Report, which served as a CPEIR and was supported by the Bank and UNDP and provides short- and long-term recommendations to further mainstream climate change into Vietnam’s policy, planning, and budget cycle and better identify priority investments and activities to strengthen the country’s climate change. Further, the Bank’s <i>Vietnam Climate Change and Poverty Analytical Work</i> has emphasized the need for better targeting of financing toward adaptation to highly vulnerable areas. The Bank’s 2012 <i>Inclusive Green Growth: The Pathway to Sustainable Development</i> underscored the case for the implementation of Vietnam’s Green Growth Strategy and Action Plan through the government’s regular planning and budgeting process. The 2015 Bank report <i>Exploring a Low Carbon Development Path in Vietnam</i> has illustrated the need for a shift within the next five-year period towards low-carbon, green growth investments that avoid ‘lock-in’s’ in infrastructure. The <i>Government and World Bank Draft Vietnam 2035 report</i> also contributed to the analytics behind this prior action as it also highlights the</p>

	importance of a shift towards greener, cleaner investment and to promoting climate resilience to ensure that climate impacts that are already likely to be locked in due to past emissions are sufficiently being addressed by the state budget. <i>Vietnam's Nationally Determined Contribution</i> highlights the financing gap that Vietnam faces on adaptation and the specific country-owned priorities through 2030 for adaptation and mitigation.
<b>Pillar 2: Developing and Safeguarding Selected Natural Resources Services</b>	
Policy Track 2.1 Prior Action. The government has developed and adopted a policy guiding the establishment and management of water source protection corridors	The reforms under this policy track build on a number of analytical pieces by DPs and the government. This includes the 2012 Bank report <i>Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience</i> , which analyzes likelihood and impacts of 4° warming globally with some specific consequences for Southeast Asia and Vietnam and highlights the importance of adaptation planning in the water sector; the aforementioned <i>Financing Vietnam's Response to Climate Change: Smart Investment for a Sustainable Future</i> Report, which highlighted the importance of the water sector within the government's budget allocations towards climate change response objectives. Further, the <i>2013 World Bank Irrigated Agriculture Management</i> is an analysis of irrigated agriculture management, water use, and recommendations for ongoing national policy reform and it provides an update since <i>2009 Water Sector Review</i> . The <i>2009 IUCN Overview of Water Governance in Vietnam</i> also provided a good legal overview of water governance in Vietnam. The <i>2013 ADB Vietnam Country Water Assessment</i> provides a rapid assessment of water uses and challenges at a national level. Other studies leveraged in this policy tack include <i>MONRE's Update to Climate Change &amp; Sea Level Rise Scenarios in 2012</i> , the <i>Vietnam 2035 draft report</i> , the <i>2011 Joint Development Partners Vietnam Development Report 2011: Natural Resources Management</i> and the <i>World Bank's 2011 The Economics of Adaptation to Climate Change Study in Vietnam</i> .
Policy Track 2.1 Prior Action. The government has developed and adopted a policy on advanced and efficient upland irrigation	
Policy Track 2.2 Prior Action. The government has developed and adopted a policy on the development of coastal forests	The plethora of knowledge produced by the government, the Bank, and other DPs is informing the formulation of these prior actions. The <i>draft Vietnam 2035 report</i> (particularly the Green Growth chapter) analyzes the environmental issues that Vietnam will face to 2035 and highlights the importance of forests for employment, income generation, and ecosystem services. The report also highlights the importance of investing in and the development of forests as a vehicle for green growth and poverty reduction. The <i>2015 MARD Report on the promulgation of the prime minister's stipulating some policies in the management, protection, restoration, and development of coastal forest to respond to climate change</i> assesses the gaps in the coastal forest policy framework and articulates how the new decision on coastal forest will attempt to fill those gaps. <i>Vietnam's submission of its (i)NDC</i> assesses the GHG mitigation potential in forests to 2030. The <i>2014 MARD Forest Sector Development Report in 2013</i> describes the policy framework that the government has established for promoting and developing forest resources to manage climate change. The <i>Joint Development Partners Vietnam Development Report 2011: Natural Resources Management</i> highlights the various ways (economic and social) that the poor in Vietnam depend on forests. The <i>2014 World Bank Draft Report on The Role of Natural Capital Accounting and Ecosystem Valuation in Forest Policy in Vietnam</i> has demonstrated how NCA can be used to add value to forest policy development. The <i>2012 CIFOR The context of REDD+ in Vietnam</i> analyzes the benefits that REDD+ can bring to Vietnam including economic development, poverty reduction, and improved capacity for forest governance and management. Other studies leveraged include the 2012 Bank report <i>Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience</i> , the <i>2013 Operational Framework for Ecosystem-Based Adaptation to Climate Change for Vietnam</i> , the <i>2009 FSIV Vietnam Forestry Outlook Study</i> , the <i>2007 MARD Vietnam Forestry Development Strategy 2006–2020</i> , and the <i>World Bank's 2011 The Economics of Adaptation to Climate Change Study in Vietnam</i> .
Policy Track 2.2 Prior Action. The government has developed and adopted guidance for the preparation of provincial forest carbon action plans	

**Pillar 3: Promoting Selected Production Systems**

<p>Policy Track 3.1 Prior Action. The government has developed and adopted the NAP on AQM</p>	<p>The 2015 Bank <i>Exploring a Low Carbon Development Path in Vietnam</i> report has highlighted the multiple benefits that come from addressing local air pollution and GHG emissions in concert. It also highlights the transport sector as a key sector for reducing emissions. <i>Vietnam's submission of its INDC</i> prioritizes changing the fuel structure in industry and transportation as a key element of its climate action plan moving towards 2030. The 2015 Bank <i>Clean Air and Healthy Lungs: How to Better Tackle Air Pollution</i> report provides good practices for improved AQM. <i>The 2014 World Bank Urban Green Growth: A Strategic Review</i> provided evidence base to both government priorities and external stakeholder activity with regard to urban green growth. The <i>2013 World Bank Integration of Short-Lived Climate Pollutants in World Bank Activities</i> highlights the potential for reducing SLCPs across sectors. The <i>World Health Organization's Ambient (outdoor) air pollution in cities database 2014</i> contains results of ambient (outdoor) air pollution monitoring in Hanoi, Ho Chi Minh City, and Da Nang. The 2006 book entitled <i>Urban Air Pollution in Asian Cities: Status Challenge and Management</i> presents strategies for managing and improving urban air quality in Asian cities and includes analysis on both Hanoi and Ho Chi Minh City.</p>
<p>Policy Track 3.1 Prior Action. The government has adopted regulations on vehicle emissions standards and on fuel quality</p>	<p>The prior actions and triggers supported in this policy track are supported by both the 2015 Bank <i>Exploring a Low Carbon Development Path in Vietnam</i> report and <i>Vietnam's INDC submission</i>. They both highlight the need for improving energy efficiency in the residential and industrial sectors as well as the role that renewable energy needs to play in low-carbon development. The preparation and TA from the <i>World Bank's proposed Vietnam Industrial Energy Efficiency Financing Project</i> is instrumental in identifying key policy gaps in the industrial sector. The <i>World Bank's Renewable Energy Resource Mapping TA</i> has highlighted renewable energy potential across Vietnam. Reforms in the household sector are based on an analysis and review by JICA. <i>The 2010 Winds of Change: East Asia's Sustainable Energy Future report from the World Bank</i> underpins opportunities in both energy efficiency and renewable energy in the region and in Vietnam. The <i>2015 ADB Assessment of Power Sector Reforms in Vietnam</i> provides underpinning data on the energy sector and has highlighted risks and opportunities for energy efficiency and renewable energy development. The Vietnamese-German cooperation project <i>Support for the Development of Renewable Energy in Viet Nam</i> has been instrumental to provide the analytical bases behind the renewable energy reforms. The <i>USAID Vietnam Clean Energy Program study</i> conducted a review of off-grid opportunities and challenges in Vietnam and the results of this study has informed the development of the reforms.</p>
<p>PT 3.2 Prior Action. The government has developed and adopted new energy efficiency labeling standards for non-ducted air conditioners</p>	<p>The prior actions and triggers supported in this policy track are supported by both the 2015 Bank <i>Exploring a Low Carbon Development Path in Vietnam</i> report and <i>Vietnam's INDC submission</i>. They both highlight the need for improving energy efficiency in the residential and industrial sectors as well as the role that renewable energy needs to play in low-carbon development. The preparation and TA from the <i>World Bank's proposed Vietnam Industrial Energy Efficiency Financing Project</i> is instrumental in identifying key policy gaps in the industrial sector. The <i>World Bank's Renewable Energy Resource Mapping TA</i> has highlighted renewable energy potential across Vietnam. Reforms in the household sector are based on an analysis and review by JICA. <i>The 2010 Winds of Change: East Asia's Sustainable Energy Future report from the World Bank</i> underpins opportunities in both energy efficiency and renewable energy in the region and in Vietnam. The <i>2015 ADB Assessment of Power Sector Reforms in Vietnam</i> provides underpinning data on the energy sector and has highlighted risks and opportunities for energy efficiency and renewable energy development. The Vietnamese-German cooperation project <i>Support for the Development of Renewable Energy in Viet Nam</i> has been instrumental to provide the analytical bases behind the renewable energy reforms. The <i>USAID Vietnam Clean Energy Program study</i> conducted a review of off-grid opportunities and challenges in Vietnam and the results of this study has informed the development of the reforms.</p>
<p>Policy Track 3.2 Prior Action. The government has developed and adopted procedures for the development of projects, for setting an avoided cost tariff, and a standard PPA for biomass and procedures for the development of projects and a standard PPA for waste-to-energy</p>	<p>The prior actions and triggers supported in this policy track are supported by both the 2015 Bank <i>Exploring a Low Carbon Development Path in Vietnam</i> report and <i>Vietnam's INDC submission</i>. They both highlight the need for improving energy efficiency in the residential and industrial sectors as well as the role that renewable energy needs to play in low-carbon development. The preparation and TA from the <i>World Bank's proposed Vietnam Industrial Energy Efficiency Financing Project</i> is instrumental in identifying key policy gaps in the industrial sector. The <i>World Bank's Renewable Energy Resource Mapping TA</i> has highlighted renewable energy potential across Vietnam. Reforms in the household sector are based on an analysis and review by JICA. <i>The 2010 Winds of Change: East Asia's Sustainable Energy Future report from the World Bank</i> underpins opportunities in both energy efficiency and renewable energy in the region and in Vietnam. The <i>2015 ADB Assessment of Power Sector Reforms in Vietnam</i> provides underpinning data on the energy sector and has highlighted risks and opportunities for energy efficiency and renewable energy development. The Vietnamese-German cooperation project <i>Support for the Development of Renewable Energy in Viet Nam</i> has been instrumental to provide the analytical bases behind the renewable energy reforms. The <i>USAID Vietnam Clean Energy Program study</i> conducted a review of off-grid opportunities and challenges in Vietnam and the results of this study has informed the development of the reforms.</p>

## ANNEX 5: ENVIRONMENTAL AND SOCIAL ASPECTS

### PART I - ENVIRONMENT ASPECTS

As part of the preparation of the Vietnam Climate Change and Green Growth Development Policy Financing (DPF), the Bank has conducted a policy strategic environmental analysis (policy SEA). The purpose of the policy SEA was to determine whether specific policy reforms supported by the DPF are likely to have a significant effect on Vietnam's environment, forests, and other natural resources. For those policy reforms with likely significant effects, the policy SEA assessed Vietnam's systems for reducing adverse effects and enhancing positive ones, drawing on relevant country-level or sectoral environmental analysis. It also assessed whether there were significant gaps or shortcomings in these systems, and identified the actions that the government is undertaking or may undertake to address these gaps.

#### Policy Reforms

Prior Actions supported by this DPF1 and associated policy tracks and triggers are grouped into three pillars that collectively aim to unlock key policy barriers to allow for a scaled-up climate change and green growth response: (i) Pillar 1 aims to improve inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action ; (ii) Pillar 2 aims to develop and safeguard selected natural resources services; and (iii) Pillar 3 aims to promote selected cleaner production patterns.

#### Methodological Approach

The methodology used by this SEA was derived from selected World Bank literature including, among others, OP/BP 8.60 on Development Policy Financing, Good Practice Notes for Development Policy Financing, and the World Bank Toolkit titled "Assessing the Environmental, Forest, and other Natural Resource Aspects of Development Policy Lending". It also draws on recent experience of SEA of policy and sector reform at the World Bank.

A two-step approach was applied. In Step 1, DPF 1 Prior Actions were assessed for potential environmental effects. A color code was used to indicate whether the Prior Action might have positive effects on the environment (green), no effects (blue), some adverse effect or uncertainty (yellow), or significant adverse effects (red). In Step 2, where an effect is likely to be uncertain or adverse (red), these effects were traced from primary through to secondary and tertiary effects. This step also helps to identify potential cumulative effects.

The SEA also included an assessment of Vietnam's environmental impact assessment (EIA), monitoring, and enforcement systems, with a focus on the Government's ability to deal with the potential effects that might result from the policy actions included in the climate change and green growth DPF1.

#### Main Findings

Overall, the majority of Prior Actions will likely lead to positive environmental outcomes, and so the net effect of the DPF reforms is expected to be positive. See table below.

**Table 7: Environmental effects analysis of DPF 1**

**Colour Key**

Potential positive impact	Neutral/no impact	Uncertain/potentially some negative impact	Potential negative impact
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**First Cycle (DPF 1)**

PRIOR ACTIONS AND POTENTIAL IMPACT DRIVERS	Comment
Pillar 1: Improving inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action	
PT 1.1 Prior action. The Government has developed and adopted the National Action Plan setting priorities for the Integrated Management of Coastal Zones	
Development and adoption of the National Action Plan	Better integration of coastal zone planning and facilitation of trade-offs between sometimes conflicting sectors and between different levels of government should lead to better management of coastal ecosystems. This conclusion needs to be verified when the NAP is delivered (expected February 2016).
PT 1.2 Prior action. The Government has established CC and GG as a priority direction for implementation under the Socio-Economic Development Plan 2016-2020	
Implementation of the SEDP	Green growth is mentioned several times in the October 2015 draft of the new SEDP, although it is a target sector under Decision 40 (which also includes a Target Program on 'climate change response and green growth'). Until projects are identified within Provincial SEDPs, it is difficult to predict the likely impact of the Prior Action. However, there may be some environmental risk associated with adaptation projects.
Pillar 2: Increasing and safeguarding selected natural resources services	
PT 2.1 Prior action. The Government has developed and adopted a policy guiding the establishment and management of water source protection corridors	
Physical establishment of water source protection corridors and transitional arrangements for polluting establishments operating within new corridors.	Overall, the prior action will result in positive environmental outcomes, as it will provide new physical protection for water sources, and will require developments within corridors to seek prior permission from DONREs and PPCs.  One possible risk is associated with transitional arrangements where polluting establishments operating within corridors may be required to relocate. Relocation may result in displacement of impacts.
PT 2.1 Prior action. The Government has developed and adopted a policy on advanced and efficient upland irrigation	
The Action Plan aims at the expansion of water saving for upland agriculture.	More efficient irrigation may save water and reduce the need for fertilizer use. These are positive environmental outcomes.

PRIOR ACTIONS AND POTENTIAL IMPACT DRIVERS	Comment
<p>PT 2.2 Prior action. The Government has developed and adopted a policy on the development of coastal forests</p> <p>PT 2.2 Prior action. The Government has developed and adopted guidance for the preparation of provincial forest carbon action plans</p>	
<p>The coastal forest Decree aims to protect and develop coastal forest that can support livelihoods and resilience co-benefits through coastal protection.</p>	<p>Overall, the prior action will eventually result in positive environmental outcomes. Unlike REDD+, where there are environmental risks associated with conversion of natural forests to plantations, and displacement of deforestation to other areas, the Decision should result in the development of coastal forests in areas that have been cleared, and were originally forests. The only risk is associated with the promotion of business development and diversification of livelihood opportunities.</p>
<p>Pillar 3: Promoting selected cleaner production systems</p>	
<p>PT 3.1 Prior action. The Government has developed and adopted the National Action Plan (NAP) on Air Quality Management (AQM)</p>	
<p>The NAP AQM encompasses a broad range of activities organized under seven focus areas—regulation, organizational strengthening, emissions reduction and prevention, investments and financial incentives, international cooperation, monitoring and inspection, and dissemination and public awareness. NAP priority programs will include: Institutional Coordination and Strengthening; Cleaner Transport (Fuels); Cleaner Production; Emissions Monitoring; Emissions Registration; AQ Data Dissemination; and Financing of AQM.</p>	<p>The prior action will result in positive environmental outcomes due to the implementation of (i) better monitoring and data collection, (ii) the development of multi-pollutant AQM implementation plans for cities and city/urban clusters, (iii) the development and adoption of regulations on vehicle emissions standards and on fuel quality, (iv) the initiation of industrial permits for control of air emissions from the relevant industrial sectors, and (v) coordination and planning across institutions and sectors.</p>
<p>PT 3.1 Prior action. The Government has adopted regulations on vehicle emissions standards and on fuel quality</p>	
<p>Introduction of a technical regulation (Euro 4) dealing with emissions from newly-manufactured, assembled and imported cars.</p>	<p>The prior action will result in positive environmental outcomes due to the introduction of emissions standards for cars and other vehicles as well as for the regulation of gasoline, diesel fuel and biofuels. Beginning in 2017, it is expected that 100 percent of new assembled, manufactured and imported vehicles will apply Euro 4 emissions standards, and 100 percent of new assembled, manufactured and imported two-wheeled motor vehicles will apply Euro 3 emission standards.</p>
<p>PT 3.2 Prior action The Government has developed and adopted new energy efficiency labelling standards for non-ducted air conditioners</p>	
<p>The MOIT Decision would apply updated standards jointly developed with the Ministry of Science and Technology (MOST) to new imported and domestically manufactured non-ducted air conditioner units at their respective points of sale.</p>	<p>The prior action will result in positive environmental outcomes, as the new labelling standard is expected to increase energy savings by 7-11 percent depending on the type of air conditioner.</p>

PRIOR ACTIONS AND POTENTIAL IMPACT DRIVERS	Comment
PT 3.2 Prior action. The Government has developed and adopted procedures for the development of projects, for setting an avoided cost tariff, and a standard PPA for biomass and procedures for the development of projects and a standard PPA for waste-to energy	
<p>Development of national and provincial biomass energy development and utilization plans.</p> <p>Development of grid-connected power generation projects using solid waste and biomass, and promulgation of Standardized Power Purchase Agreements.</p>	<p>Potentially negative impacts could occur if biomass-to-energy or solid waste-to-energy plants are not properly designed or sited. For biomass-to-energy, there could be impacts associated with the growing and harvesting of biomass. Examples could include threats to biodiversity, and conversion of natural forests to plantations. For both types of energy plant, air pollution could result if emission controls are not properly designed and installed. In addition, there may be water and soil pollution problems if cooling water and residual solid waste is not dealt with.</p>

Implementing these policy reforms should translate into:

- reduced risk of natural disasters in the coastal zone;
- encouragement for climate change and green growth investments;
- better protection of water source corridors;
- more efficient use of water for upland agriculture;
- better planning of forest carbon sequestration;
- cleaner urban air;
- improved energy efficiency in appliances; and,
- purchase agreements for energy generated from biomass and waste.

Moreover, the DPF should play an important role in continuing to mainstream environmental considerations in key sectors such as agriculture, waste management, land use planning, and energy.

#### Assessment of Environmental Effects

The analysis shows that almost all initiatives that would be stimulated by DPF-supported reforms will likely result in either positive or neutral environmental effects. This is because the specific initiatives proposed under the reforms are either benign - such as the ‘development of a National Action Plan’ - or will lead to positive environmental outcomes - such as the promotion and adoption of clean energy technologies, or the establishment of coastal and water protection corridors.

As indicated in Table 7, there are three policy tracks where effects could turn out to be adverse if either the regulatory system is deficient, or if environmental receptors are especially sensitive. The first relates to the implementation of the new national SEDP, the second relates to the development of an action plan that is associated with the expansion of upland agriculture, and the third is driven by procedures that would result in the development of biomass-to-energy and waste-to-energy.

With regard to the new national SEDP, it has not yet been subject to strategic environmental assessment, as is required under the Law on Environmental Protection 2014. As a consequence,

mainstreaming of environmental issues into the SEDP could be limited. An SEA of the SEDP may contribute to better focus the SEDP on green growth.

With regard to the development of an Action Plan associated with the expansion of upland agriculture, it is clear that the Government wishes to make the irrigation of upland agriculture more efficient, and this should save water and reduce fertilizer application. However, an indirect outcome of increasing irrigation efficiency could be the expansion of upland agricultural production. While there are possible negative effects emanating from the expansion of upland irrigation, it needs to be stressed that the Action Plan itself would not drive these effects. The expansion of upland cropping is defined by agriculture sector development plans, and not by the irrigation Action Plan, which should result in water saving. It should also be noted that the significant expansions of cropped area mentioned in the Action Plan will likely be subject to EIA when proponents submit applications for project approval.

The final Prior Action that could result in significant environmental effects is associated with the development and adoption of procedures that would allow for the expansion of biomass-to-energy and waste-to-energy projects. Two components of Circulars implemented as a result of this Prior Action may potentially cause significant environmental effects. They are:

- Development of national and provincial biomass energy development and utilization plans.
- Development of grid-connected power generation projects using solid waste and biomass, and promulgation of Standardized Power Purchase Agreements.

While these fuel sources are renewable, and so preferable to non-renewable fossil fuels, they do have the potential to induce significant negative environmental impacts if consequent projects are not properly designed or sited. The table below traces these potential effects from initial drivers through to tertiary effects.

#### Effect Tracing: Development of Power Generation from Solid Waste and Biomass

Likely potential effect			
Initial Driver	Initial	Secondary	Tertiary
<p><b>Prior action: The Government has developed and adopted procedures for the development of projects and a standard PPA for biomass and waste-to energy</b></p> <p><i>Driver: Conversion of agricultural land or forest to biomass plantation</i></p>	Clearing of forest or agricultural land	Loss of vegetation	Loss of habitat and reduced biodiversity Loss of forest-user income Loss of ecosystem service value
<p><i>Driver: Collection and transfer of solid waste</i></p>	Construction of transfer stations	Water and soil pollution	Human health
<p><i>Driver: Construction and operation of electricity generating stations</i></p>	Clearing of land	Loss of vegetation	Loss of habitat and reduced biodiversity

	Operation of power plant	Air pollution	Respiratory disease
	Disposal of cooling water	Water pollution (cooling water)	Degradation of surface and groundwater sources
	Disposal of ash	Soil pollution	Degradation of surface and groundwater sources

### Assessment of Systems for Managing Likely Significant Environmental Effects

An assessment of country systems was undertaken to determine whether there is appropriate environmental management capacity to address the identified potential significant environmental effects. It is clear that the DPF 1 Prior Actions will require both a strong SEA system to identify the environmental implications of plans such as the National Biomass Energy Development and Utilization Plan, and an environmental compliance and enforcement system that operates effectively post-project EIA.

### Gaps in the SEA System

Vietnam has had a regulatory requirement for strategic environmental assessment since the 2005 Law on Environmental Protection. Approximately 200 to 300 SEAs have been conducted in Vietnam during the 2002 – 2012 period. In addition, the processing of SEA studies has also grown in importance over the last 5 years. Since 2011, 40 SEA studies have been appraised, and 27 have been submitted to the Prime Minister for approval. Many of these SEA studies have been undertaken with financial and technical support from development agencies.

Implementation of SEA capacity building has been led by MONRE’s Department of Environmental Impact Assessment and Appraisal. In around 2003, the Ministry initiated the process of focusing on long-term capacity building for SEA implementation after discussions with a number of donor and technical cooperation organizations. On MONRE’s initiative, a number of bilateral donors (notably, GTZ, SIDA, S DC, and DANIDA) established a Framework for SEA Capacity Building. Significant achievements of the donor coordination meetings included the improved coordination of joint activities, a regular review and update of activities, joint efforts in development and implementation of the National SEA Training Programme, and agreement on using MONRE’s General Technical Guidelines as the basic reference document for the elaboration of technical guidelines for sector SEA.

During the 2005 – 2008 period, upwards of 20 pilot SEAs were undertaken under the auspices of the Framework for SEA Capacity Building. In addition, a series of SEA training courses was delivered, and this targeted provincial DONRE’s, line Ministries working on development planning, research institutions, and consulting firms involved in the environment sector. During this period, approximately 400 people were trained, and 40 participants were involved in a year-long multi-agency training-of-trainers program. During the above-mentioned period, and beyond, multi-lateral donors such as the World Bank, Asian Development Bank, and UNDP have also been involved in supporting SEA, through the financing of a number of SEA studies. The Framework for SEA Capacity Building ceased to exist as a joint Government-donor forum in 2009, when the most significant bilateral donors completed their programs.

Gaps still remain in the implementation of SEA, and these have the potential to constrain the Government’s ability to deal with the environmental consequences of plans agreed to in the DPF 1

reforms. The analysis undertaken for this report points to four main problems. First, the current SEA process is guided by the Law on Environmental Assessment 2014, and is managed by MONRE. It requires that specified categories of strategies and plans (SPPs) should undergo SEA before approval. However, the Ministry of Planning and Investment, which is responsible for overseeing most of the national and provincial socio-economic development plans, has a separate process for appraisal. Up until now, SPPs are often completed and appraised before SEA studies are appraised. This sequencing problem means that SEA cannot properly influence the design of a SPP. This problem is being dealt with in the Government's proposed new Planning Law which requires that the appraisal of SEA reports be carried out before the plan appraisal. The proposed Planning Law appears to be a commendable attempt to streamline what is perhaps an overly complicated planning system. As long as the plans proposed in the DPF series are 'captured' by the new law, then there is a good chance that environmental issues will be considered during compulsory SEA.

A second potential problem relates to Action Plans that are a direct consequence of the DPF 1 Prior Actions. Most of the Action Plans proposed under DPF 1 Prior Actions ('National Action Plan setting priorities for the Integrated Management of Coastal Zones', Action Plan on Upland Plant Irrigation', 'Provincial forest carbon action plans', and the 'National Action Plan on Air Quality Management') are not automatically subject to SEA, as Action Plans are not triggered by the LEP (2014), Decree 18, or the proposed new Planning Law. While higher-level sectoral strategies may well be subject to SEA, there is no guarantee that the DPF 1 related Action Plans will be included in relevant sectoral strategies.

A third problem relates to the lack of systematic documentation of environmental data. This adversely affects the quality of environmental assessments, including SEAs. In theory, virtually all environmental data produced by public agencies as part of research, monitoring, or project environmental assessment should be freely available in the public domain. Good data enhances the ability of SEAs to inform the design of the Plans mentioned in the previous paragraph.

The fourth and final impediment to the efficient functioning of the SEA system relates to the capacity of proponent agencies to formulate and evaluate SEAs. Much donor attention over the last 10 years has focused on building the SEA capacities of the regulatory agency (MONRE and a selection of DPNREs). Line Ministries responsible for formulating SPPs tend not to have staff with SEA expertise. As a consequence there is sometimes little connection between the SEA work and the development of the SPP. This problem requires a long-term solution that is beyond the remit of the DPF.

#### Addressing Gaps in Compliance and Enforcement

All of the DPF policy reforms will eventually influence the design and implementation of development projects. In DPF 1 this influence is indirect, but as the series moves towards its endpoint, project design implications become more direct. An 'effect tracing' table indicates that the following 'drivers' will likely eventuate from reforms, and will have a consequent influence on projects:

- conversion of agricultural land or forest to biomass plantation;
- collection and transfer of solid waste;
- construction and operation of electricity generating stations; and,
- introduction of new irrigation technologies.

The Government has done much over the years in concert with its development partners to build and strengthen its environmental impact assessment procedure. In most respects, Vietnam's legal and regulatory system is of international standard, and leads the way as a model for the region. As is the case with many rapidly developing countries, however, there are constraints with the existing system of compliance and enforcement that could impair the Government's ability to deal with the environmental consequences of projects that may eventually emanate as a consequence of the policy reforms in the DPF series. These problems are specific to Government line agencies and Provincial People's Committees, project proponents, and consultants.

It is clear that the Government has made significant progress in the staffing of MONRE and the DONREs. MONRE's Department of Environmental Impact Assessment and Appraisal currently has 29 staff, managing Environmental Protection Planning, SEA, EIA, Environmental Protection Plans, and EIA follow-up. Nationwide, there are 62 provincial Environmental Protection Agencies, employing a total of 1,126 staff. Since the promulgation of the LEP (2005), 5,623 EIA reports have been produced, and 1,960 projects have been approved after appraisal of EIA documents. Provincial DONREs receive approximately 50 EIA reports per year.

Despite these significant advancements, capacity gaps still remain in central, provincial, and district line agencies. Decentralization of environmental management responsibility has been a major objective of the Government since the Law on Environmental Protection 2005 and as such, Provinces and District-level authorities have a range of duties in relation to EIA, most notably the responsibility of Provincial Peoples' Committees (PPCs) to review and approve a wider range of EIAs, and the responsibility of District Peoples' Committees (DPCs)/Commune Peoples' Committees (CPCs) to review and approve Environmental Protection Commitments (EPCs).

Recent studies have also indicated that there are capacity constraints in the private consulting sector. It is well known that consultants do not necessarily collaborate closely enough with project proponents during preparation of the project investment report. This can result in an inaccurate project description, including of technologies and equipment proposed for waste treatment. To date, donor-funded capacity development activities have tended to focus entirely on the needs of Government agencies. However, if there is a genuine desire to improve the performance of environmental management systems, then some attention must be paid to the consulting sector.

Finally, interviews undertaken with senior MONRE Department of Environmental Impact Assessment and Appraisal (DEIAA) staff also focused on problems that eventuate when project proponents are unfamiliar with the requirements of EIA and SEA procedure. Development partner-supported projects will often contain environmental management plans within construction contracts, but experience suggests that these clauses are difficult to enforce. It is clear that part of the problem lies in the fact that few contractors employ environmental staff, and even fewer feel an obligation to comply with the environmental requirements of contracts. It would appear to be imperative that at least some environmental management capacity building needs to be targeted at construction contractors, their consultants, and the local-level government officials who oversee contract implementation.

To some extent the capacity gaps mentioned here are being dealt with by the new Vietnam Learning Center for Environmental and Social Sustainability. This initiative was finally established in 2015 at the Asian Institute of Technology's Vietnam campus after a substantial two-year feasibility study undertaken by the DFAT-World Bank Partnership on Environmentally and Socially Sustainable Infrastructure in East Asia and the Pacific.

A detailed curriculum has been developed for the CoE. It envisages the following target audiences:

- Project Management Unit Personnel (Working Level)
- Project Management Unit Personnel (Managerial Level)
- Local People’s Committee (LPC)
- Consultants and trainers
- Senior government officials

The primary targets for training in the initial phase of the Learning Center’s operation are the project management units (PMUs) and LPCs. This is apparently due to their number and size. There are currently around 450 PMUs operating in Vietnam and each may typically have 10 to 20 members. There are also a large number of LPCs at different levels involved in the vetting of EIA reports, and they are at the forefront in dealing with the various environmental and social issues arising from infrastructure building. These LPCs also have to handle complaints and grievances lodged by local and affected communities.

### Conclusions

This SEA has shown that the DPF series contains a raft of policy reform actions that will be beneficial to the environment overall. This benefit is likely to be significant, as the DPF series covers a number of important sectors, where development in the past has not necessarily been ‘green’, or sensitive to climate change issues.

While the net effect of the DPF 1 will undoubtedly be positive, there is one Prior Action (*‘the Government has developed and adopted procedures for the development of projects and a standard PPA for biomass and waste-to-energy’*) that may result in significant adverse effects if regulatory systems and capacities are not addressed.

Although gaps do exist in the strategic environmental assessment system, and in the ability of Government agencies to enforce compliance with environmental commitments, the Government intends to address these gaps through promulgation of a new Planning Law, and through support to the Centre of Excellence on Environmentally and Socially Sustainable Infrastructure that will enable environmental management training to be targeted to PMUs and local provincial committees.

A PSIA was undertaken for this climate change and green growth program Development Policy Financing (DPF) series, supporting a package of reforms pursuing three elements to (a) improve inter-sectoral coastal planning and public investment finance programming across selected key sectors in support of climate change and green growth action; (b) develop and safeguard selected natural resources services; and (c) promote selected cleaner production systems. Because these policy reforms have a strong link to poverty and social issues, this PSIA assessed the distributional impact of policy reforms on the well-being of different stakeholder groups, with particular focus on the poor and vulnerable.

The PSIA focuses on assessing the potential effects of the ten policy reforms within the timeframe of the DPF series with a particular focus on DPF 1 Prior Actions. The PSIA team has focused on assessing the state of knowledge in several key crosscutting areas through a desk reviews of literature and validation interviews in one select province (Nam Dinh). Both qualitative and quantitative data were used to support the assessment of the potential impact (positive and negative) of the ten policy actions,

including analysis of VHLSS 2014 data. Attention was paid to assessing the impact of these policies on poor and vulnerable populations through the channels of production; assets; opportunities; and prices, following previous PSIA guidance. The policy actions analyzed for their potential positive and negative effects include the following:

- Developing and adopting the NAP setting priorities for ICZM
- Establishing climate change and green growth as a priority under the SEDP 2016–2020
- Developing and adopting a policy guiding the establishment and management of water source protection corridors
- Developing and adopting an action plan to develop advanced irrigation and water savings for upland crops in support of the restructuring of the water resources sector
- Developing and adopting a policy on the development of coastal forests
- Developing and adopting guidance for the preparation of provincial forest carbon action plans
- Developing and adopting the NAP on AQM
- Adopting regulations on vehicle emissions standards and on fuel quality
- Developing and adopting new energy efficiency labeling standards for household air conditioners
- Developing and adopting procedures for the development of projects and a standard PPA for biomass and waste-to-energy

The analysis of these policies and channels of impact were directed at key vulnerable constituencies in Vietnam. These include the poor (particularly the extreme poor, who make up 8 percent of the population) and the near poor (those at 1.3 times the poverty level, around 18 million households in Vietnam). Other vulnerable groups that were included in the PSIA assessment include ethnic minorities (who comprise around 15 percent of Vietnam’s total population but 47 percent of all poor households); the landless; women- and female-headed households; children and the elderly; the urban poor; and households lacking labor due to illness/disability/other reasons.

### **PSIA Assessment of potential effects**

The PSIA assessment of policy actions across key sectors found that overall these policies are likely to have positive effects on different stakeholder groups, including the poor and vulnerable households, by better management of sources of conflict and degradation (as in policies for sustainable use of littoral zones, ICZM and AQM); reduced exposure to health and other hazards (as in reductions in water and air pollution); and overall more sustainable approaches to growth and development (such as the development of efficient appliances and low carbon energy sources). Further, the PSIA notes that unchecked climate change is likely to hit poor and vulnerable households in Vietnam very hard and therefore policies supported under the DPF series that try to mitigate or adapt to this climate change are likely to be a net positive for poor populations in Vietnam.

The PSIA analysis does not anticipate notable negative effects from the DPF’s prior actions at the policy and law levels although there are some policy actions with potential negative consequences on the poor that may be encountered during the local implementation of these policies. These effects are mainly resettlement as it may be needed to implement coastal protection corridor or water protection corridor. The GoV has policies to ensure people who have to reallocate are fully consulted and supported with compensation and allowance. The

*Effects from Pillar 1: Improving Inter-Sectoral Coastal Planning and Public Investment Finance Programming across Selected Key Sectors in Support of Climate Change and Green Growth Action*

**ICZM.** The coastal community will be involved in and likely benefit from their role in coastal zone resource and environment management and will particularly benefit from clarification on rights and reduction of conflicts in coastal zones. Research has shown that in some local coastal communities, the rate of poor households is disproportionately high. Creating sustainable livelihoods and opportunities to access resources for local communities in the coastal zone and especially the poor will help these groups to have chances to escape from poverty. ICZM is aimed at solving conflicts between resource users and thus can help the poor have chances to access and exploit coastal resources more efficiently. Moreover, the prior actions and triggers under the DPF series focused on the priority of creating sustainable livelihoods and improving lives of local people. ICZM will also benefit coastal communities by providing opportunities to increase resilience to respond to disasters and climate change. At the same time, it is possible that some communities and households may be negatively affected with regard to their commodity production activities due to the changes in coastal zone resource use and exploitation planning, through channels of production (if ICZM plans to restrict unsustainable fishing or other activities result in loss of production sources or land, poor households will be negatively affected); assets (poor households whose house and production land is in the planning area may face difficulties if they are asked to resettle as part of ICZM plans); and opportunities (poor people in the coastal areas in general have low education levels and limited skills and may not be able to take advantage of new opportunities created by ICZM as wealthier households can). Mitigation of these potential effects of reallocation is regulated in the Land Law and its subsequent Decrees.

**Establishing climate change and green growth as a priority under the SEDP 2016–2020.** Green growth and sustainable development strategies in Vietnam aim at supporting the poor and vulnerable people through programs and activities of poverty reduction, food security, and disaster mitigation, as well as achieving harmony among economic growth, environmental protection, and social equality. These policies have a positive effects on disadvantaged populations by supporting residential and facilities development in difficult and natural disaster impacted regions, especially in the context of climate change, or by supporting policies of social welfare and poverty reduction. These policies are not likely to have negative effects since they aim to solve development and social problems and to support the poor, the vulnerable, and ethnic groups. The SEDP emphasizes that consideration of sustainable development, climate change, and green growth be integrated into the preparation, appraisal, and approval of investment programs that are funded by the state budget. It directs industrial production toward using more environmental friendly technology and discourages energy-intensive investment or investments that cause environmental degradation and require excessive use of natural resources and energy. It is noted that the GoV is very cautious on potential social adverse effects on development of policies to promote green production. The GoV has carried out a number of studies to inform the formulation of these policies. When land is acquired by the GoV, farmers are provided compensation and supported with training, priority access to National Fund for Job, or free job consultation.

*Effects from Pillar 2: Developing and Safeguarding Selected Natural Resources Services.*

**Water corridors.** Communities and households near surface waters are likely to benefit from positive and long-term environmental and economic effects when water source protection corridors are set up. Communities can also benefit from reduced risks and impacts of floods, as protection corridors can help control erosion and stabilize riverbanks, once established. People living along the riversides,

including the poor, will benefit directly from river ecological services and functions, and natural assets of the poor and vulnerable groups will be improved. More reliable access to water resources for both agricultural production and domestic purposes will contribute to enabling local people, particularly men and women (the prime person usually responsible for procuring water), to ensure food security and increase livelihoods. However, there are some potential negative impacts of water protection corridors as well, depending on how the protection corridors are established, through the channels of prices and assets. For example, the costs of living and production of the poor might be increased if certain populations whose production in riverine corridors will be impacted or limited, such as households using riverbanks for agricultural activities. Should these activities be curtailed or households asked to process wastewater within corridors, this may result in increased costs for these households. Further, poor people may lose parts of or all land and assets if there are changes in river protection corridors establishment that involve taking of land or resettlement. However, it should be noted that in the law, the maximum width of the riverine corridor is 20 m; thus, the potential adverse effects are spatially limited. Recommendations to reduce these include ensuring that adequate consultation and compensation mechanisms are in place during implementation in specific water basins as required by the GoV mechanism to support resettlement.

**Water efficiency.** Local people will have better chances to apply technologies for water efficiency to help meet the demand for irrigation water in drought-prone or water-scarce areas as a result of DPF action. Many places in Vietnam experience drought and water scarcity at certain times in the year and poor people often suffer the worst effects. It is likely that the long-term impacts of such water-saving measures will be highly positive for poor people, particularly in rural disadvantaged areas and among ethnic minorities, who are priorities in water efficiency support. In general, encouraging water efficiency is not likely to place negative effects on local households, as long as the poor are provided with the same opportunities to access water saving measures as wealthier households.

**Coastal forests.** Coastal communities including poor and vulnerable people can benefit from the maintenance of ecological functions and services of coastal forests, particularly in the context of climate change. Coastal forests provide essential ecological services, such as regulatory services, cultural services, and supporting services. Coastal forests also contribute to mitigation of negative impacts on local communities, production lands, tourism, and structural works, as they provide a buffer against extreme weather events, natural disasters, and the increasing sea level. The poor and vulnerable groups in coastal areas often depend on natural resources harvested in coastal forests; thus, they can benefit from coastal forest ecological services through channels of access to goods and services. Individuals will be able to benefit from exploitation of forest products under expanded coastal forest canopies. However, possible negative effects on households can include those whose assets, such as production land, are to be acquired for forest plantation and those who might lose access to seafood collection areas. Adequate compensation policies will be necessary to avoid/minimize the potential negative impacts, as well as providing priorities to households who lose production land to forest land plantations to have rights to benefit from those plantations as regulated by the GoV. Conflicts may also arise between those contracted for forest protection and investment and the ordinary people who depend on the forest and harvest non-timber forest products from once common forest areas for opportunities for income. The poor, particularly women and children, more often conduct small-scale harvesting activities (fishing, catching crabs, snails, non-timber products, and so on) in the coastal forest canopy. Allocation of forest land to organizations/individual for investment, protection, and exploitation may result in limiting these vulnerable people's access to forest resources. To support livelihood of the poor, the GoV has policies and program (e.g. Program 134) prioritizing provision of forest production land to vulnerable people, especially to ethnic minority groups.

**Forest carbon action plans.** These programs are designed to promise benefits in emission reductions, contributions to biodiversity conservation and sustainable forest management, and improving living conditions for those who are directly engaged in forest protection and development, so that they can live off forest work. Work on REDD in Vietnam has been ongoing between the government and donor partners for over five years. However, on the ground implementation has been rather slow and almost no livelihood activities have been conducted yet; it is not clear how payments/policy support will be targeted at the poorest households to date. It is unlikely that any negative effects will result from forest carbon policy, following standard safeguard issues are addressed as required by the GoV regulations and implementation of REDD be monitored closely to see if additional interventions are needed to ensure equal opportunity for poor households to participate. It is important to note that the Government's policy on forest land is clearly defined following which designated forest land can't be converted into agricultural land and neither protection forest into production forest. Forest plantation is strongly supported. Smallholders taking part in forest protection and development are expected to benefit from the government programs, including recent increase of forest protection fee, payment for forest ecosystem services (PFES), increased level of supports for forest plantation, or longer term land lease.

#### *Effects from Pillar 3: Promoting Selected Cleaner Production Systems*

**AQM.** Policies on AQM are aimed at energy use efficiency and pollution control that contribute to ensure clean air quality and community health, including benefits for the poor, the disadvantaged, and other vulnerable groups. Poor urban households in particular may live in less desirable areas near major roads or intersections, and thus reducing air pollution from transport may have a particularly important impact on their health. However, there are some potential negatives, primarily related to prices, of the AQM policy. This includes the potential for prices of transportation means to be raised (as vehicles that do not meet air quality standards are phased out), or for poor households to not be able to afford emissions testing or improvements to their vehicles. Careful monitoring of the rollout of the policy and the potential use of subsidies and tax incentives for poorer households to meet AQ standards, will be useful to mitigate these problems.

**Vehicle emissions and fuel quality.** Exhaust pollution from automobiles and motorbikes in particular are increasing in seriousness. Given increased traffic congestion in major cities in recent years, the health of motorcycle users in particular (an important means of transport for the urban poor) is likely to be negatively affected because they are not protected from dust and exhaust gas as those who travel by automobiles. Therefore higher vehicle emissions standards and cleaner fuels will help improve health standards and quality of life in urban areas. Residents who are poor are more likely to be using the old and technically unsafe automobiles that do not meet the new emission standards.

**Energy efficiency labeling.** Given rising carbon emissions, policies with a purpose to provide reduced emissions are likely to also contribute to reduced air pollution, improved living environments, and less diseases related to pollution that contribute to better health, resulting in net positive impacts on the residential community, including the poor, the disadvantaged, and the vulnerable. Energy efficiency labeling is likely to be helpful to poor people in particular as it can help them reduce their monthly energy costs if they have more efficient appliances. The only possible negative effects are the price of more energy efficient appliances and equipment will be higher, which will affect the poor. Currently the government subsidizes electricity for the very poorest households.

**Biomass energy and waste-to-energy.** There is a great deal of potential to expand both biomass and waste-to-energy development in Vietnam. Both can convert waste material into electricity to generate

stable power sources and reduce carbon emissions as compared to fossil fuels. There are unlikely to be any significant effects on the poor's use of biomass or waste energy as a result of the policy action due to the scale at which it is directed (national level) and the local level use of energy.

### Summary of Channels of Effects and Impacted Populations

The magnitude of adverse effects of the DPF policy actions (as indicated in table 5.1) depends significantly on how these policies are implemented for specific groups, at specific geographical areas, and if consultation with the potential affected group are timely and appropriately done to adjust the policy implementation process and approaches. But overall the PSIA analysis found that these potential negative effects are likely to be minor and can be mitigated with the GoV systems.

**Table 5.1. Summary of Key DPF Support Areas and Effects**

Sectors	Actions	Effects
<b>Pillar 1: Improving Inter-Sectoral Coastal Planning and Public Investment Finance Programming across Selected Key Sectors in Support of Climate Change and Green Growth Action</b>	<ul style="list-style-type: none"> <li>- ICZM</li> <li>- Integration of climate change and green growth into SEDP 2016–2020</li> </ul>	Possible effects on assets, production, and opportunity channels, that is, loss of land to ICZM plans or poor people being less able to access credit and investments in ICZM or green growth
<b>Pillar 2: Developing and Safeguarding Selected Natural Resources Services</b>	<ul style="list-style-type: none"> <li>- Encouraging water efficiency</li> <li>- Expanding water protection corridors</li> <li>- Expanding the forest services policy for coastal forests</li> <li>- Expanding REDD</li> </ul>	Possible effects on assets and opportunity channels, that is, loss of land to forest plantations and water corridors or loss of opportunities for collection of sea products on common lands if they are converted to private forest plantations
<b>Pillar 3: Promoting Selected Cleaner Production Systems</b>	<ul style="list-style-type: none"> <li>- Policies for AQM</li> <li>- Policies for vehicle emissions</li> <li>- Policies for energy efficiency</li> <li>- Policies for biomass energy and waste-to-energy production</li> </ul>	Possible effects on prices channels, that is, increased costs of low-emission vehicles, higher energy prices and energy efficient appliances.

The channel of greatest concern in the policies analyzed was loss of assets, as was potentially seen in the cases of coastal zone planning and coastal forests, where households might lose land if it is re-planned or other activities restricted in some way, and in water protection corridors policies, where land might be lost to the development of these corridors. In both cases, where policies may require land takings, the GoV regulations require to do environmental and social assessments of such potential effects so as to propose mitigation measures. The regulations also provide guidance to avoid, or to minimize, mitigate, or compensate for the adverse effect, and require full consultation with the affected groups. There is also the potential that several policy actions might result in higher prices of goods or the costs of doing business, which will disproportionately impact poorer households, as was potentially seen in the case of policies on low emission vehicles, emission testing, and energy efficient appliances. It is important to note that the Government has in place key policies that serve as both development opportunities and mitigations measures for poor peoples. With regards to potential adverse effects

related to land acquisition and resettlement, Land Law 2013<sup>91</sup> (and its Decrees) was designed to support the resettlement of peoples with compensation and allowances. For potential adverse effects related to prices and opportunities, recent Decrees<sup>92</sup> are already in place to support poor people in need. These policies provide poor people with access to loans for their livelihoods development and access to job training to sustain and improve local livelihoods. During policy implementation, local governments are required to follow the GoV mechanisms to avoid and mitigate potential adverse effects and ensure compensation and schemes be worked out in consultation with the potential affected groups to ensure livelihoods are not worsened as a result of the implementation of the new policies as per the GoV regulations. In these cases, subsidies and rebates can be considered to diminish the impact on poor households of initial costs (although these efficient appliances and transport will likely save households on electricity and gasoline costs over time), as is currently done with electricity subsidies for the poorest households. In a few cases, policies might result in diminished production or opportunities for the poor, such as in coastal zone planning that prevents access to common lands for aquaculture product collection or poor people being less able to access credit and investments under green growth, and other socioeconomic development plans. In these cases, there is a clear need for better monitoring to assure that poor households are not being harmed and that they are able to take advantage of new programs and opportunities at the same rates as wealthier households.

There were no specific potential negative effects from policy actions foreseen for women and children or for ethnic minorities, two particularly vulnerable populations in Vietnam, and multiple positive benefits, including better health (as a result of cleaner water and air), more prosperous communities (through prioritization of sustainable development investments and green technology), and reduced conflict over resources (though incentivizing water and forest service provision and managing conflicts in coastal zones through ICZM).

The PSIA also emphasizes that the poor are likely to be highly vulnerable to the future effects of climate change, and indeed, some negative effects are already being felt now. Key climate factors affecting the poor are likely to be changes in water regimes (especially drier dry seasons and wetter wet seasons) with, particularly, implications for agriculture and crop yield declines; increased frequency and intensity of storms and floods; and sea level rise and associated impacts such as salinity intrusion. The incomes, livelihoods, housing, health, water availability, and access of the poor to other assets are all likely to be affected by these climate changes in some way. These impacts argue for the implementation of actions consistent with the DPF to reduce carbon emissions from Vietnam (through both forestry and energy use) and to strengthen water, coastal, and forest resources management to ensure more resilience to the impacts of climate change in the future.

## **Conclusion**

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<sup>91</sup> Decree No.43/2014/ND-CP guiding in detail some articles of Land Law 2013, Decree No.44/2014/ND-CP providing methods for land pricing; adjustment to land price brackets, land price lists; specific land pricing and land price consultancy activities. Decree No. 47/2014/ND-CP providing compensation, support, resettlement when land is acquired by the State. Decree No. 38/2013/ND-CP of 23 April 2013, on management and use of official development assistance (ODA) and concessional loans of donors. Circular No. 36/2014 / TT-BTNMT dated 30 June 2014, regulating method of valuation of land; construction, land price adjustment; specific land valuation and land valuation advisory. Circular No. 37/2014/TT-BTNMT dated 30 June 2014, regulating compensation, assistance and resettlement when the State acquires land, etc.

<sup>92</sup> Decree 55/2015/NĐ-CP on credit for agricultural and rural development, issued August 1, 2015. Decision No. 1956/2009/QĐ-TTg, dated November 17 2009, by the Prime Minister approving the Master Plan on vocational training for rural labors by 2020; Decision No. 52/2012/QĐ-TTg, dated November 16 2012, on the support policies on employment and vocational training to farmers whose agricultural land has been acquired by the State

Overall, the proposed prior actions will likely lead to positive social and poverty reduction outcomes, or potential adverse effects, if any, can be managed by the existing policies and management systems of Vietnam. In cases of potential social adverse effects are envisaged, mainly involuntary resettlement or limited access to resources as a result of the establishment of the coastal protection corridor or coastal reforestation, the GoV regulations require to carry out environmental and social assessments of such potential effects so as to propose measures to avoid, minimize, mitigate, or compensate people for the adverse effect. Full consultation with the affected people is compulsory.