

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: PIDA54370

Project Name	Vinh Phuc Flood Risk and Water Management Project (P152460)
Region	EAST ASIA AND PACIFIC
Country	Vietnam
Sector(s)	Flood protection (60%), General water, sanitation and flood protection sector (40%)
Theme(s)	Water resource management (40%), Natural disaster management (25%), Climate change (25%), City-wide Infrastructure and Service Delivery (10%)
Lending Instrument	Investment Project Financing
Project ID	P152460
Borrower(s)	SOCIALIST REPUBLIC OF VIETNAM
Implementing Agency	Vinh Phuc Provincial Department of Planning and Investment
Environmental Category	A-Full Assessment
Date PID Prepared/Updated	29-Feb-2016
Date PID Approved/Disclosed	02-Mar-2016
Estimated Date of Appraisal Completion	26-Feb-2016
Estimated Date of Board Approval	29-Apr-2016
Appraisal Review Decision (from Decision Note)	The meeting endorsed a decision to move forward with Project preparation. The preparation process should take into consideration the points raised during the meeting and these should be reflected in the documentation going forward.

I. Project Context

Country Context

1. Vietnam has recorded a remarkable economic growth and poverty reduction in the last two decades, with a GDP growth recently averaging six percent per annum. This growth has been accompanied by pronounced structural changes at the aggregate (macro) level. The changes in the structure of the economy are largely mirrored in the composition of employment in country. Two decades ago, agriculture was the primary source of employment for three-quarters of the population while only 10 and 15 percent, respectively, in industry and services. Today, the share of the labor force working in agriculture has fallen below 50 percent, while the share in both industry and services has doubled.

2. Poverty reduction in Vietnam has been impressive. Using a “basic needs” poverty line initially agreed in the early 1990s, the poverty headcount fell from 58 percent in the early 1990s to

below six percent by 2014. Using the poverty line as defined in 2010, the overall poverty rate fell from 20.7 percent to 17.2 percent between 2010 and 2012. The drop was most pronounced in rural areas - where it fell from 26 percent to 22.2 percent. Poverty also fell in urban areas, from 6.0 percent to 5.4 percent. Similar progress with steadily rising incomes is evident when assessed by “international” poverty thresholds of USD1.25 and USD2.00 person/day (2005 PPP). Progress has also been substantial in other dimensions of the human development index, ranging from high primary and secondary enrollment to improvements in health status and reduced morbidity and mortality. Vietnam achieved, and in some cases surpassed, many of the Millennium Development Goals (MDG).

3. Long-term growth in Vietnam has been fairly equitable. Inequality measured using the Gini coefficient, rose modestly from the early 1990s through 2004 and then stabilized before dropping slightly in the most recent data. In 2012, Vietnam’s income Gini coefficient was 39.4, placing it at the middle of the global Gini distribution. The World Bank has used the growth rate of the mean income of the bottom 40 percent as a measure of shared prosperity. By this metric, Vietnam has done extremely well. Between 1993 and 2012, income of the bottom 40 percent grew at an annual rate of 8.9 percent, exceeding the seven percent growth rate of the top 60 percent of the population.

Sectoral and institutional Context

Profile of Vinh Phuc Province:

4. Vinh Phuc province, located adjacent to the capital Hanoi, is home to 1.04 million people with 77 percent residing in rural areas. Agriculture constitutes the primary sector (seven percent) engaging more than half of the provincial population, while industry, spurred mainly by Foreign Direct Investment (FDI) is attracting migrant workers from poorer provinces, mostly the northern mountains and the Red River delta. Growing urbanization (and related services) is the third major economic driver in the province. Vinh Phuc has become the main economic engine and growth hub for northern Vietnam. In 2014, GDP per capita in the province was VND61 million, higher than the national level of VND43 million. Vinh Phuc is one of 12 provinces which at present makes net contributions to the central budget. During the course of Vietnam’s economic transition, Vinh Phuc has generated tens of thousands of jobs. In the period of 2012-2015 alone, about 90,000 jobs were created and the province is playing a major role in reducing poverty through job creation.

5. At the aggregate level, all economic indicators in the province are impressive but the figures mask important socio-economic differences. About 82.1 percent of the households in the province earn VND 5 million per month or less (equivalent to USD230). While the official provincial level statistics reported a per capita average of VND52 million per year for the Vinh Phuc province, the socio-economic survey conducted in the project area as part of the Environment and Social Impact Assessment (ESIA) revealed a much lower provincial average of VND13.7 million per annum. The income distribution among the sample households from the project area is as follows: (i) 3.3 percent of the sample households obtain less than a million VND per month and are considered poor and vulnerable; (ii) 42.9 percent of the sample households earn between 1 and 3 million VND a month; (iii) 35.9 percent receive between 3 to 5 million VND a month; and (iv) 17.9 percent obtain more than 5 million VND a month. Therefore, assuming an average household size of 4 and taking into consideration the revised poverty line of USD1.9 per capita per day, a substantial proportion of the sample households from the project area are considered to be poor. Despite the favorable economic indicators at the provincial level, a significant segment of the

population, particularly in the rural communities, is facing economic challenges, further compounded by high exposure to flood hazards and general environmental pollution.

Vinh Phuc's Exposure to Flood Hazard:

6. Vinh Phuc is a land-locked province located in the upper reaches of the Red River Delta. The provincial city, Vinh Yen, is about 60 km from Hanoi. Vinh Phuc is positioned in three main development regions of Vietnam: Red River Delta Region, Hanoi Metropolitan Region, and Northern Key Economic Region. Vinh Phuc is hydraulically divided into three drainage basins: (i) Northwest Basin (Basin A); (ii) Central and South Basin (Basin B); and (iii) Northeast and East Basin (Basin C). These sub basins are illustrated on the map in Annex 2. Basin B is the central part of the province where most of the economic and administrative activities are located. Basin B drains to the Phan River and from there to the Ca Lo River. The confluence of the Phan River with Ca Lo River is in Nam Vien Commune, Phuc Yen Town.

7. Due to Vinh Phuc's low elevation in the Red River floodplain, two thirds of the province is prone to frequent flooding while at the same time experiencing water shortages during the dry season. There is an especially high risk of flooding in the areas of the Phan River basin (Basin B) where the provincial capital city of Vinh Yen and most of the FDI zones are located. Damages caused by floods in the period 2006 - 2013 amounted to USD150 million, including the loss of agricultural production (about 30 percent of the harvest over the years) damages to infrastructure in both rural and urban areas and disruption to businesses and production, as well as health related costs. In addition to flooding during the rainy season (May to October), Vinh Phuc is also facing water shortages for agricultural activities during the dry season from November to April. In order to compensate for the water shortage, water needs to be abstracted from the Red River and the Ca Lo River to meet water demand. With impacts of climate change and development of hydropower stations upstream of these rivers, it is becoming more and more costly to obtain water from the two main rivers.

8. Accelerated deterioration of water quality has been observed in Phan River catchment, including rivers and lakes around Vinh Yen City. Due to high density rural population and numerous industrial zones, the main water pollution sources are domestic and industrial wastewater. While all the wastewater from industrial zones and part of Vinh Yen city is treated before discharge, wastewater generated from the towns, villages and small industrial clusters along the Phan River is discharged directly into the river without treatment. Surface water quality no longer meets the required Category A standard and, in the dry season, is well below Category B. Concentration of BOD and COD exceed limits regulated by the Government's national code for surface water (category B per QCVN 08-2008/BTNMT). Analysis conducted by Department of Natural Resources and Environment (DONRE) shows that domestic wastewater is the main pollution source. According to 2013 monitoring data, concentration of BOD varied from 29mg/l to 136mg/l, which is 1.16 to 5.44 times greater than the allowed limit. Similarly, concentration of COD varied from 98.7mg/l to 345mg/l; 2.82 to 9.86 times the allowed limit. Water pollution has caused significant impacts on public health and is also affecting Vinh Phuc's ambition to become one of the main industrial, service and tourism centers in the Metropolitan Hanoi Area as laid out in the Province's Strategic Urban Master Plan 2030.

9. Lack of a coordinated mechanism to respond to flood and environmental pollution leaves the provincial population vulnerable. The Provincial People's Committee (PPC) is the decision

making authority at the provincial level supported by the line departments. Responsibilities for managing the water sector are shared across departments. The Department of Agriculture and Rural Development (DARD) is responsible for flooding and irrigation, the Department of Natural Resources and Environment (DONRE) for water resource and water quality management, and the Department of Construction (DOC) for urban water supply, wastewater and drainage. The designated district and city governments also have duties within their territory. In addition, water related sector practitioners, such as the irrigation company, water supply and wastewater companies and environmental monitoring institutions have specific roles in water management. The few existing flood risk management infrastructures date back to the French colonial time and no longer function. In addition, there is currently no mechanism for coordination and communication to respond comprehensively to the water sector challenges.

10. The Government and Development Partners (DP) have been working with Vinh Phuc to address the challenges related to water resources but on a small scale and in a scattered manner. With the support of the central government and Development Partners (DP), Vinh Phuc PPC has invested in water related works in the project area, including dredging (in small scale) Phan river and Dam Vac lake in Vinh Yen city, building a small pumping station to pump out water from fields to Phan river and piloting water pollution control in some villages surrounding the Phan river. However, the works are scattered and do not comprehensively address the issues of flooding and water pollution in the province. Japan International Cooperation Agency (JICA) and Asian Development Bank (ADB) are actively engaged in the Vinh Yen City area, building a wastewater treatment plant and sewers, as well as limited small-scale support to household connections and lake rehabilitation to address water pollution.

11. Both the central government and the Vinh Phuc Province are strongly committed to flood risk and water management, as reflected in the Government's National Strategy for Prevention and Mitigation of Natural Disasters to 2020. The main objectives of the strategy include: (i) enhancing early warning systems for floods, storms, droughts, sea water intrusion, earthquakes and tsunamis; (ii) ensuring that development plans and building codes for buildings and residential areas are consistent with the regional standards of flood protection; (iii) training for staff on disaster risk management at all levels to develop the capacity to prevent, respond to and mitigate natural disasters; and (iv) ensuring safety for the dike and embankment systems in order to improve resilience against storms for all the northern provinces. The proposed project fits these national objectives and is aligned with the strategies and priorities identified by the Government in its Urban Master Plan, with vision to 2050 as well as Vinh Phuc's provincial Socio-economic Development and 2030 Urban Master Plan detailed henceforth.

II. Proposed Development Objectives

The development objective of the project (PDO) is to strengthen flood risk management capacity and improve wastewater management in the central catchment of Vinh Phuc Province.

III. Project Description

Component Name

Component 1 - Flood Risk Management

Comments (optional)

This component improves flood risk management through structural measures in Basin B (including sub-basins B-1, B-2 and B-3) and Basin C. The measures include (i) construction and rehabilitation

of three retention lakes with a total area of 260 hectare to increase regulation capacity; (ii) construction of three drainage pumping stations with total capacity of 145 m³ per second and related canals to divert excessive storm water from basin B to Pho Day and Red River; (iii) dredging key sections along 31.62 km of the Phan River to increase the discharge capacity; and (iv) construction of two flood control gates with associated embankments to prevent storm water entering Basin B from Basin C.

Component Name

Component 2 - Water Environmental Management

Comments (optional)

This component improves the environmental conditions in densely populated small towns and rural communities as well as the water quality in the Phan River by providing wastewater and drainage services. The measures include the construction and rehabilitation of wastewater collection and treatment facilities in four district towns and 33 rural villages along the Phan River. Given that the source of pollution is mostly from domestic households, this component will focus on intercepting and treating wastewater. Simple and low cost technologies that will not require sophisticated mechanical equipment, high power consumption and complicated operation & maintenance will be applied.

Component Name

Component 3 - Implementation Support, Technical Assistance and Institutional Strengthening

Comments (optional)

This component supports (i) project implementation including detailed engineering designs, construction supervision, safeguard monitoring, PMO support and other related activities; (ii) water resource and flood information and early warning system, including consulting services, works, equipment and other related activities; (iii) operation and maintenance (O&M) for assets to be built under the project, including trainings, development of operation manuals, and provision of necessary equipment; and (iv) institutional development for river basin management and water related sectors in an integrated manner.

IV. Financing (in USD Million)

Total Project Cost:	220.00	Total Bank Financing:	150.00
Financing Gap:	0.00		
For Loans/Credits/Others			Amount
Borrower			70.00
International Bank for Reconstruction and Development			150.00
Total			220.00

V. Implementation

A. Institutional and Implementation Arrangements

30. The Project is multi-sectoral, cutting across flood risk management, water resource management, agriculture development, environmental pollution management, and infrastructure development. Both the planning and implementation of investments will therefore require working across departmental boundaries and close coordination at the various levels. The institutional and implementation arrangement is built on existing mechanisms that include the lessons learnt from

other World Bank-financed projects in Vietnam, as well as international best practices. These arrangements will ensure effective implementation and quality assurance of the project, as detailed in the structures, roles and responsibilities below.

31. The project will be implemented by Vinh Phuc Official Development Assistance (ODA) Project Management Office (PMO), under the direction of Vinh Phuc PPC. For the purpose of expediting project implementation, Vinh Phuc has established a Project Steering Committee (PSC), chaired by a vice chairman of PPC with leaders of key provincial departments, concerned provincial agencies, and participating cities and districts as members. The PMO plays the role of project owner and is responsible for the overall project administration, implementation and management including: procurement, financial and safeguards management, project monitoring, reviewing and approving designs, cost estimations, bidding documents etc. The PMO will also be responsible for payment processing and handing-over the completed works to the operators. For the purpose of proper implementation, a Project Operational Manual (POM) is prepared and approved by the Vinh Phuc PPC. The approved POM which include technical aspect, financial management, procurement and contract management, safeguards compliance, and progress monitor will provide detailed guidance on project implementation.

32. The PMO is supported by relevant technical and operational departments, with expertise mobilized from the existing Project Management Units (PMU) of the Government and donor financed projects and functional departments in the province. The PMO will be seconded by staff from the respective O&M entities who will be involved in the project design, implementation and will be responsible for O&M after project completion and hand-over.

33. The State Bank of Vietnam (SBV), representing the Government of Vietnam, will sign a Loan Agreement with the Bank. There will be a Subsidiary Loan Agreement between the Ministry of Finance (MOF) and Vinh Phuc PPC, through which the funds and the responsibility to implement the project will be passed on to Vinh Phuc. It is expected that the final draft Subsidiary Loan Agreement (SLA) will be available prior to negotiations and to be signed within two months after the signing of the Loan Agreement.

B. Result Monitoring

34. The PMO will be in charge of implementing and running monitoring and evaluation (M&E) system to track the progress and results. An M&E consultant will be recruited by the PMO and work closely with the staff to monitor the progress during project implementation in terms of meeting the project's objectives as outlined in the results framework.

35. The results framework described in Annex 1, which also forms a part of the Project Operation Manual (POM), provides the key indicators, targets, and data collection arrangements. The M&E activities will provide continuous feedback to the PMO on project performance and its impact on the various components so that corrective actions can be undertaken in a timely manner. The frequency of these monitoring tables will be determined and modified as needed. The PMO will set up a website for the project monitoring and reporting on project progress, as well as collecting feedback from beneficiaries and citizens on project related activities.

C. Sustainability

36. Vinh Phuc PPC has strong commitment to and ownership of this project. With the support

of the central government, Vinh Phuc PPC initiated the project idea approaching the Bank for help to address its longstanding challenge of flooding due to its location in the Red River Delta floodplain. This initiative is fully in line with the province's social and economic development plan and its flood and water resource management plan. During the project identification and preparation, all the water related departments including DARD, DONRE, DOC, the local cities and district governments in the Phan River basin, and water supply, wastewater, irrigation companies participated in the discussions, consultations, and decision making.

37. Strong financial capacity in the province and cost recovery arrangement will ensure the project's long term operation and maintenance. Due to its location, Vinh Phuc Province has established a strong industrial base and an associated strong financial capacity for provincial development and management. The project is in fact expected to strengthen the provincial government's financial position due to increased revenues from taxes related to emerging economic activities resulting from reduction of flood risks and the general improvement in environmental quality in the project areas. The financial analysis showed that the project is not expected to negatively affect the fiscal sustainability (debt service capacity) of the Vinh Phuc province. Its current level of public debt is insignificant as the average value borrowed is only about one percent of the provincial revenues. The projected revenues and expenditure pattern for the province shows that the debt service as percentage of the provincial expenditure is lower than 1.5 percent and declines over time.

38. The technical sustainability of the project is supported by the selection of simple designs and technologies for each component to achieve O&M efficiency. From the technical sustainability perspective, the project will support capacity and skill building of the agencies that will operate the infrastructure. With the support of consultants, technical designs and quality of project activities are expected to be in line with international good practice. This will include the preparation of pumping station operational manuals to effectively operate these in future. The project will support the use of asset management systems to establish specific needs-based O&M systems that aim to ensure that sufficient funds are available for the dedicated use by operators of the infrastructure. Asset management systems determine in a systematic way the maintenance and related budget needs, both annually and longer-term, and monitor in a transparent manner the actual versus planned maintenance expenditures. The results can easily be publicly disclosed.

39. O&M responsibilities for the assets to be built. The O&M of the flooding control structures under Component 1 will be carried out by the provincial irrigation company (Lien Son). The O&M of the small town WWTPs under Component 2 will be carried out by the company which is to be responsible for managing the JICA financed Vinh Yen City WWTP, either the Vinh Yen Water Supply Company (VYWSC) or the Vinh Yen URENCO (Urban and Environment Management Company) which are in selection process by the PPC. The village level wastewater treatment facilities will be managed by respective communes and communities. The three companies are either wholly state owned enterprises (Lien Son and URENCO) or joint stock (VYWSC) with about 90 percent of the total shareholding capital belonging to the Government. As no revenues are expected from flood risk mitigation services, the government will allocate O&M budget of about 2-4 percent of the initial capital investment. For the wastewater collection and treatment, the VYWSC currently charge an environment fee of 10 percent added to water bills for the purpose of wastewater services. This fee is occasionally revised as part of water supply tariffs according to government regulation. URENCO is a full government funded company and if selected, the Government will provide O&M budget together with its drainage services as currently is the

practice.

40. An assessment of the financial performance of the three companies showed that their financial performance has been relatively stable during the last three years (2012 to 2014), showing that the provincial government has fulfilled its obligations. The companies are in fact profitable. With the project, the O&M costs of these companies are expected to increase by about US\$4 million, which requires a guaranteed budget allocation from the provincial government and sustainable fee collection from the beneficiaries. The affordability of instituting water and sewerage tariff at full O&M cost would only be an issue for about three percent of households in the project area, who earn a million VND or less a month.

41. The potential reward from better cooperation and improved communication among water related stakeholders is substantial. The project will establish a coordination mechanism for river basin management through designating DARD as a secretariat where the flood information and early warning system will be located. This secretariat, under the umbrella leadership of the PPC, will serve as a common platform for the various departments and local governments to address water related challenges, such as flooding, water resource management, water quality control, irrigation, water supply and sanitation in the Phan river basin in an integrated manner. The next five years' implementation of the project will enable these water related parties and project owners to work together such that by project completion, momentum has been created and mechanism established to ensure the sustainability of integrated water management in the river basin.

VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	x	
Natural Habitats OP/BP 4.04	x	
Forests OP/BP 4.36		x
Pest Management OP 4.09		x
Physical Cultural Resources OP/BP 4.11	x	
Indigenous Peoples OP/BP 4.10	x	
Involuntary Resettlement OP/BP 4.12	x	
Safety of Dams OP/BP 4.37	x	
Projects on International Waterways OP/BP 7.50	x	
Projects in Disputed Areas OP/BP 7.60		x

Comments (optional)

VII. Contact point

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