

### RISK ASSESSMENT AND RISK MANAGEMENT PLAN

<b>Risk Description</b>	<b>Rating</b>	<b>Mitigation Measures</b>	<b>Responsibility</b>
<b>TECHNICAL</b>			
1. The standard Vietnamese traffic forecasting system may underestimate the actual future traffic demands and the associated required standards of road design.	S	Additional project feasibility studies to include traffic counts, traffic forecasts and PCU ratings by traffic class, and estimates of ESA for each year of the asset design life. The feasibility studies and DED documentation will include a reconciliation of PCU and ESA forecasts with proposed design category guidelines for ADB approval.	DPIs, PMUs
2. Climate change impacts lead to extreme weather events, even beyond current predictions, that delay subproject implementation and damage productive infrastructure.	S	Climate resilient measures from the PRI-supported climate change guidelines are included in all infrastructure DED. Appropriate sized contracts awarded to contractors with demonstrated ability to complete works on time to reduce exposure to damage during the stormy season.	PMUs
3. Government construction standards and poor construction practices result in low-quality assets with high O&M costs.	M	Road design standards will be linked to PCU and ESA forecasts to ensure appropriate design. All DED will use the climate resilient guidelines prepared during PPTA. Construction supervision and contract terms of reference will emphasize capacity and quality of supervision.	DPIs, PMUs
4. Additional subproject feasibility studies indicate some are not feasible and government procedures complicate the removal of the subproject from implementation.	M	Thorough screening process and the preparation of additional feasibility studies prior to loan effectiveness has removed subprojects that are potentially not feasible and flagged issues that need to be examined carefully in others.	PPCs, DPIs, PMUs, ADB
<b>ECONOMIC AND FINANCE</b>			
5. RDWS schemes are financially unable to support service standards and asset management.	S	RDWS scheme management will be assigned to established and functioning provincial or municipal water supply service providers, increasing capacity	PPCs, DPIs

		to cover all operational aspects. This is an emerging successful practice for RDWS management.	
6. Low rates of returns from flood and drainage subprojects and salt farm restructuring into aquaculture development.	M	Enterprise feasibility and viability will be assessed as part of the business plan and feasibility studies will be required to qualify for project support. Additional subproject feasibility studies prepared prior to loan effectiveness with PPTA support to confirm viability.	DPI, PMU, ADB
7. Beach tourism demand for infrastructure declines due to industrial pollution and environmental disaster resulting in non-viable infrastructure for docking and tourism access.	M	The additional subproject feasibility studies will consider carefully the potential impacts of environmental pollution and disaster on the demand for infrastructure.	PPC, DPI, PMU, ADB
8. Road infrastructure in the four NCPs has been developed incrementally as funds become available. To extend the road network, roads are built to lower standards and cost, accelerating degradation, and requiring constant repair; this is inefficient and expensive in terms of vehicle operating costs. As O&M nationwide is under-resourced the economic life of roads declines. Deterioration in one road link can lead to traffic diversion and heavy loading of an alternative link.	M	The project will focus on achieving appropriate design standards to enable normal O&M implementation and minimize lifecycle costs. Inputs to the DED will include strong considerations of traffic loading and climate resilience. Whole-life cost estimates and ability for PPC to meet O&M costs will be presented in the subproject feasibility studies as a condition for approval. Output 3 will put in place systems that support prudent asset management decision making that enhances sustainability.	PPCs, DOTs, DPis
<b>GOVERNANCE</b>			
<b>(i) Financial Management</b>			
9. Weak public financial management.	S	ADB's Viet Nam CPS, 2016–2020 identifies weak public financial management as a major challenge. The project will address this problem through a financial management action plan that will include robust accounting and financial management systems in line with the recommendations of the financial management	DPIs, PMUs, ADB

		assessment. These measures are described in the PAM.	
10. Financial systems are weakly linked to the quality of work done, leading to payments for inferior work.	L	LIC to include an experienced financial management role.	PMUs
11. Price escalation due to delayed implementation, unit price inflation, and exchange rate movement inconsistent with constant purchasing parity assumption place additional demand on counterpart funds that may not be available.	M	Additional subproject feasibility studies will include updated costing with technically defined price escalation factors. ADB subproject approval process will be staged into three phases to ensure financial resources are confirmed prior to final design and works approvals.	PMUs, ADB
12. Counterpart funds are not available as committed to and required for project implementation.	S	Loan assurances and annual financial planning should enhance the availability and timely flow of adequate counterpart funds.	MOF, PPCs, DPs
13. Inaccurate financial management reporting due to unclear boundaries between DPI and PMU.	M	The financial management systems and flow of funds is described in the PAM; the DPs and the PMUs will separate bank and project accounts and carry out independent audits.	DPs
14. Weak internal audit capacity within agencies.	M	Accounts under the loan will be audited by external auditors in addition to internal ongoing reviews.	DPs, ADB
<b>(ii) Procurement</b>			
15. Weak procurement practices and capacity.	S	The CPS identifies weak procurement as a major challenge. The procurement plan has been designed based on the recommendations of the procurement risk assessment and management plan prepared during the PPTA. It minimizes the number of consulting service and civil works packages and provides start-up assistance through the ADB-financed PPTA to mobilize the LIC early in the project.	PMUs, ADB
16. Current practice favors small local contractors with inadequate skills	M	Procurement plan specifies only NCB and fewer, larger	DPs, PMUs

and technology to deliver on time quality assets.		contracts to reduce the number of transactions.	
17. Corruption during contract process.	M	Training of PMU in procurement systems and ADB review reduces the likelihood of inappropriate contract practices.	DPIs, PMUs
<b>(iii) Capacity</b>			
18. Lack of adequate, competent staffing of PMUs.	M	Key PMU staff will be reviewed by ADB and each PMU will be supported by an LIC for key technical functions.	PPCs, DPIs, ADB
19. Inability of PMUs to handle implementation.	M	LIC to be engaged for key technical functions. Issues regarding ADB procurement procedures have been addressed with additional procurement technical support	DPIs, PMUs
20. PMU secondees from DPI continue in existing posts.	M	Operational staff of PMU to be 100% allocated to PMU responsibilities with prior review by ADB.	DPIs, PMUs
21. Inadequate accounting records retained at PMU.	L	Separate accounts will be maintained for each PMU with independent auditing.	PPCs, DPIs
<b>(iv) Institutional</b>			
22. Executing agencies inexperience with ADB procedures and requirements, and conflicting regular government procedures cause implementation difficulties and delays.	S	The PAM provides clear guidance on the required procedures. ADB project officers will need to monitor implementation closely, especially within the first 19 months. PPTA is providing readiness support through to loan negotiations with a target to having 80% of all subprojects ready for detailed design.	ADB, EAs, DPIs, PMUs
23. Lack of capacity to manage RDWS schemes.	M	Use of established and functioning provincial municipal water supply management operators to provide management of RDWS schemes.	PPCs and DPIs
24. Productive infrastructure benefits are captured by commercial or powerful interests reducing the inclusiveness and benefits to poorer households.	M	Subproject feasibility studies to clearly define ownership, participation, and benefit arrangements to enhance equity and participation of	PPC, DPI and PMU

		poorer segments of the population. Public disclosure of the subproject proposals will need commune-level <sup>a</sup> evidence of poor households obtaining direct benefits from the investments.	
<b>(v) Poverty, Social, and Gender</b>			
25. Inadequate female participation in decision making relating to project design and implementation and asset management.	M	A loan covenant has been prepared covering the GAP implementation. Participation and gender targets in project DMF and inclusion of Commune Supervision Board in subproject implementation are required.	PMUs
26. Exclusion of poorer households in RDWS connections.	M	All households within target communities will be eligible for connection during the project implementation period.	PPCs
<b>(vi) Safeguards</b>			
27. Additional subproject feasibility reports do not have safeguard inputs that meet ADB requirements.	M	Processing approval requires prior review by ADB, provision of safeguard staff in PMU supported by safeguard LIC staff member.	DPI, PMU and ADB
28. Additional subprojects differ significantly in terms of terrain, risk factors, or location from representative subproject such that safeguard framework is less likely to be considered relevant.	M	Initial screening of long lists of subprojects during PPTA and agreed subproject processing procedures. Provision of safeguard expertise in PMU and LIC.	DPIs and ADB

ADB = Asian Development Bank, CPS = ADB's Viet Nam country partnership strategy (2016–2020), DED = detailed engineering design, DMF = design and monitoring framework, DOT = department of transport (provincial), DPI = Department of Planning and Investment, EA = executing agency, ESA = equivalent standard axle, GAP = gender action plan, L = low risk, LIC = loan implementation consultant, M = moderate risk, MOF = Ministry of Finance, NCPs = north central provinces, O&M = operation and maintenance, PAM = project administration manual, PCU = passenger car unit, PMU = project management unit, PPC = Provincial People's Committee, PPTA = project preparatory technical assistance, PRI = project readiness improvement trust fund, RDWS = rural domestic water supply, S = substantial risk.

<sup>a</sup>The commune is an administrative level in Viet Nam, consisting of a group of villages and hamlets, and is one level below the district.

Source: Asian Development Bank.