ASIAN INFRASTRUCTURE INVESTMENT BANK

Project Completion Note

Prepared on 09/15/25

SBF Project Completion Note

Lao PDR: National Road 13 Improvement and Maintenance Project

1. Project Information

Project ID:	P000066
Responsible department:	PSC1
Borrower:	Lao People's Democratic Republic
Implementing Agency:	Department of Road, Ministry of Public Works and Transport, Lao PDR
Financing type:	Sovereign-Backed Financing
Instrument type:	Loan
Member:	Lao PDR
Sector:	Transport
E&S category:	A

Overall rating:	Successful
Effectiveness Assessment:	Effective
Relevance Assessment:	Relevant
Efficiency Assessment:	Efficient
Sustainability Assessment:	Likely sustainable

2. Project Development Objectives

To improve road conditions, safety and climate resilience on critical sections of National Road 13 using an innovative contracting model (OPBRC). The road design will also be strengthened to meet ASEAN standards

3. Key Dates

Approval:	04/04/19	Signing:	06/06/19
Effective:	07/31/19	Restructured (if any):	03/15/23
Orig. Closing:	05/31/23	More Restructured dates (if any)	
Rev. Closing:	03/31/25		

4. Financial Summary (US Dollar million)

Currency:	US Dollar		
Committed:	40.00	Cancelled:	3.07
Disbursed:	36.93	Undisbursed:	3.07

5. Overall rating

Overall rating:	Successful

Executive summary of the completion note:

Context. On April 4, 2019, the AIIB Board of Directors approved the Lao PDR National Road 13 Improvement and Maintenance Project (NR13 North), a USD 40 million sovereign-backed financing (the Loan) to the Lao People's Democratic Republic (the Borrower). The Loan Agreement and Project Agreement were signed on June 6, 2019, and declared effective on July 31, 2019. The Project was co-financed with the World Bank (WB).

Project Change during Implementation. A Project Change was approved in March 2023 to expand the project scope to cover an additional 6 km of critical, flood-prone section of NR13 North from Sikhai to Sikeut (i.e. Kilometers 6-12). Accordingly, the Results Framework, Disbursement estimates, implementation timeline, and allocation of funds between Disbursement Categories were introduced. The project's closing date was extended by 22 months, from May 31, 2023, to March 31, 2025.

Executive Summary. The Project is the **first AIIB's transport operation in Lao PDR** (cofinancing with WB). The Project has achieved its overall objective, and accomplished its objectives indicators. In addition to the achievement of its core development objectives, the Project generated several important outcomes and impacts that contributed to broader development goals in Lao PDR.

- **Financing.** The Project successfully leveraged a combination of International Development Association (IDA), AIIB, Nordic Development Fund (NDF) and government counterpart funding to deliver a more integrated and resilient infrastructure solution. Close cooperation between the World Bank, AIIB, and NDF demonstrated how coordinated development finance can amplify impact beyond tangible physical outputs.
- **OPBRC.** The Project introduced the Output and Performance-Based Road Contract (OPBRC) model for **the first time in the country,** which was also the Bank's first OPBRC project, to ensure that road condition standards are maintained throughout implementation and will continue to be upheld during the 7-year maintenance phase which goes well beyond the project closing date. The OPBRC model piloted under the Project has been endorsed by the Government and is now being scaled up for application on other national roads. Moreover, lessons from the Project have been shared regionally with peers in Cambodia, Mongolia, and other countries, positioning Lao PDR as an early adopter of performance-based contracting in the region.
- **Climate Resilience.** The project delivered important environmental and climate co-benefits. Climate resilience was embedded in the road design, including improved drainage systems and elevated road sections in flood-prone areas. These measures reduced the risk of road closures and asset damage during extreme weather events, thereby contributing to Lao PDR's broader climate adaptation goals.
- **Social Inclusion and Gender.** The project delivered strong social benefits, particularly for women and local communities. Out of the 605,000 direct beneficiaries, 56 percent were women.

Based on Effectiveness of the Project, relevance of the Project Objective, and Efficiency and Sustainability of the Project, the Project's overall rating is Successful.

Section I. Effectiveness

Effectiveness Assessment:	Effective

Overall assessment of effectiveness:

The Project objective is to improve road conditions, safety and climate resilience on critical sections of National Road 13 using an innovative contracting model (OPBRC). Project achievements at the outcome level are evaluated in three aspects: mobility, safety and climate resilience. Mobility is measured by vehicle operating cost (VOC) reduction. Safety is measured by iRAP star rating. Climate resilience is measured by climate resilient measures taken on the project road. The Project fully achieved its project objectives. Causal links between project activities and observed outcomes are well established by clear evidence. The effectiveness is evaluated based on the extent to which the Project achieved each of the three outcomes of improving road conditions, safety, and climate resilience on critical sections of National Road 13 North.

During the implementation, Project Change was justified by the need to expand the project to cover an additional 6 km of critical, flood-prone road from Sikeut to Sikhai. This extension would allow the GoL to complete a key missing link between central Vientiane and the project section of NR13 North, using cost savings from the original project scope. As a result, the project was able to improve a contiguous 64km section of NR13 North beginning at Sikhai, despite fiscal constraints prevented the GoL from undertaking these additional works using their own resources, as

originally planned. The original project scope and PDO outcomes were achieved prior to the original project closing date of May 31, 2023, and the 6 km Sikhai–Sikeut section were completed by the revised closing date of March 31, 2025.

1. The Project fully achieved the outcome of improving road conditions, meeting the outcome target of a 20 percent reduction in vehicle operating costs (VOC). The Project funded the rehabilitation of the 64 km road section through a ten-year Output and Performance-Based Road Contract (OPBRC), which included upgrades in surface condition, drainage and safety features. The Project completed the original 58 km of road construction by the original closing date of May 31, 2023. This included: (i) rehabilitating and widening of 19 km from Sikeut-Songpeuay, expanding the road from 2 to 4 lanes, (ii) fully rehabilitating the 39 km two-lane road section from Songpeuay- Phonhong, and (iii) initiating the O&M phase. Rehabilitation and widening of the 6 km Sikhai–Sikeut section from 2 to 4 lanes was completed, and the O&M phase was initiated, before the revised closing date of March 31, 2025.

1.1 The project road works have resulted in lasting improvement to the condition of the road pavement. Prior to rehabilitation, the average International Roughness Index (IRI) was 7.0 m/km along the original 58 km section and 6.5 m/km along the additional 6 km. At project closing, the IRI had improved to 3.2 m/km and 2.7 m/km, respectively. Upon closing of the project, as a result of the improved pavement, VOC along the project corridor (64 km) fell from US$0.36 per vehicle-kilometer, in the business-as-usual scenario, to US$0.29 per vehicle-kilometer, under the project scenario, according to fuel consumption (survey) data collected during implementation.

1.2 Travel time improved significantly, although it was not measured and tracked as a separate indicator in the Results Framework (RF) or accounted in the estimated reduction in VOC. On the original 58 km section, average travel time decreased from 120 minutes (~29 km/h), before the project, to less than 60 minutes (~58 km/h), at project closing. On the additional 6 km Sikhai–Sikeut section, travel time was reduced from 25 minutes to less than 10 minutes. These improvements reflect the impact of lower road roughness, better road geometry, reduced flooding and closures, and improved traffic management.

1.3 Road user feedback can offer a more user-centric and holistic view of road condition improvement. A road user satisfaction survey conducted at project closing found that 91 percent of respondents expressed satisfaction with the improved road condition, mentioning smoother travel, reduced travel time, and fewer vehicle breakdowns as key benefits.

1.4 The OPBRC model used for these road works ensured that road condition standards were maintained throughout implementation and will continue to be upheld during the seven-year maintenance phase, which goes well beyond the project closing date.

2. The Project achieved the objective of improving safety along the NR13 North corridor and met the target for the PDO indicator “Increase in average iRAP star rating of the project road”. The average iRAP star rating rose from 1 Star at baseline to 3 Stars at closing, meeting the end target for both vehicle occupants and motorcyclists. A 2023 iRAP survey of the original 58 km section showed that 100 percent of the corridor was rated above 3 Stars for vehicle occupant and motorcyclist safety, compared to only 32 percent and 5 percent, respectively, before the project. Road safety interventions implemented under the project were adopted following a detailed road safety audit to identify optimal interventions. The iRAP results reflect substantial safety gains from a comprehensive package of interventions, including road widening, improved alignment, guardrails, reflective markers, rumble strips, delineators, pedestrian facilities (crossings, sidewalks, speed-calming in high-risk areas), and upgraded signage and markings -- as well as long-term maintenance of safety improvements.

2.1 Although pedestrian ratings were largely unmeasured due to minimal pedestrian activity at the time of iRAP surveys, a post-construction beneficiary survey found 92 percent of respondents believed that the road was safer for

pedestrians—higher than for vehicle occupants (82 percent) and motorcyclists (77 percent). Star rating for bicycles was not reported in project documents. Road safety interventions carried out on the additional 6 km road section were similar to the original 58 km road section, although the iRAP survey was limited to the original road.

2.2 Beyond infrastructure improvements, the Project contributed to safer road user behavior through extensive awareness and enforcement measures led by a dedicated Road Safety Taskforce. While not tracked in the results framework, these efforts included 63 school campaigns reaching over 9,800 students (45 percent girls), 31 enforcement campaigns with local police, and additional initiatives such as social media outreach, village loudspeaker announcements, radio messages, roadside billboards, portable warning signage, motorcycle safety training delivered to students in the schools along the roads, and strengthened road safety enforcement along the corridor.

3. The Project achieved the intended outcome of improving climate resilience of the project road and fully achieved the target for the PDO indicator “Project road upgraded and improved, with climate resilient measures”. Climate-resilient design elements identified during the preparation phase primarily focused on addressing flooding in low-lying areas including raising the road profile and improving drainage so that traffic is less likely to be interrupted during flood events and installing pavements which can withstand overtopping. Additional measures included enhancing water-crossing structures and side drainage, strengthening bridge approaches, slope protection, and reinforcing culvert inlets and outlets throughout the entire road corridor. The project responded dynamically to evolving climate risks, particularly the increased flooding caused by the parallel Lao-China Railway and Vientiane–Vang Vieng Expressway. Design adjustments were made to accommodate these changes, including additional culverts and raised profiles. These measures were integrated into engineering design and implemented as per specifications.

3.1 An independent compliance assessment was conducted to verify that climate resilience elements of the design were implemented according to specifications and of sufficient quality. The technical audit findings confirmed that roads were designed and constructed to climate-resilient standards, which incorporate engineered solutions, with approximately 33.7 percent of total construction costs directly attributable to those measures.

In summary, the Project has fully achieved its objectives. As the Project Road (NR13) is an important backbone road network of the country, it plays a key role in serving the growing domestic and international transport demand. Fatalities from road accidents are of national concern, especially on the project road. And the project is located in the central part of the country which is flood prone. Results of the study before the project indicated that the deteriorated road condition of the roads would limit vehicle speeds, leading to higher fuel consumption, and the capacity will be fully used if no measures are undertaken. The safety will stand at high risk, and the section will be damaged by severe flooding events under the “without project” scenario. And all project outcomes will not be achieved.

Project Objective Indicators

Monitoring end year：2025

Indicator Name	Unit of Measure	Baseline	Actual (Current)	End Target
Reduction in vehicle operating costs on the project road	Percentage	0	20	20
Increase in average IRAP star rating of the project road	Number	1	3	3

Project road sections upgraded and improved, with climate resilient measures	Yes/No	No	Yes	Yes

Comments:

Intermediate Result Indicators

Monitoring end year：2025

Component:

Road Improvement, Maintenance and Operation

Indicator Name	Unit of Measure	Baseline	Actual (Current)	End Target
Roads constructed, rehabilitated, or maintained (km)	Kilometers	0	64	58
Reduction in average International Roughness Index (IRI) for finished sections	Number	7	3.2	3
Kilometers of road upgraded from 2 to 4 lanes, with climate resilient measures	Kilometers	0	19	19
Kilometers of road improved on 2 lanes, with climate resilient measures	Kilometers	0	45	39
Kilometers of roads transferred to performance-based O&M phase under OPBRC	Kilometers	0	64	58

Comments:

Component:

Technical Assistance and Supervision

Indicator Name	Unit of Measure	Baseline	Actual (Current)	End Target
Grievances registered related to delivery of the project addressed, with disaggregated data by gender	Percentage	0	100	90
Total number of MPWT staff received training on OPBRC and related topics	Number	0	98	40

Comments:

Achievement of Project Results - Component {x}:

The project achieved its indicators. The Project Team's engagement (the team provided timely and consistent supervision) contributed significantly to the project's timely completion and achievement of its development outcomes.

Section II. Relevance

Relevance Assessment:	Relevant

Alignment with AIIB's Strategic Priorities:

At the time of project preparation in 2019, the project was aligned with AIIB's key thematic priority on sustainable infrastructure. During implementation (2018-2025), Lao PDR experienced significant macroeconomic and fiscal deterioration, exacerbated by the COVID-19 pandemic, rising debt service obligations, and inflationary pressures. These developments constrained public investment and shifted the country's development priorities toward fiscal sustainability, resilience, and efficiency. Despite these shifts, the project remained highly relevant and well aligned with AIIB's strategies, including cross-border connectivity, green infrastructure, technology-enabled infrastructure, trunk linkages, and upgrading of existing infrastructure, especially through its focus on upgrading a critical national trunk corridor using a life-cycle, performance-based approach that strengthened resilience, safety, and operational efficiency. By rehabilitating and maintaining a contiguous 64 km section of National Road 13, Lao PDR's principal north–south backbone, the Project directly supported the Strategy's emphasis on climate-resilient connectivity, upgrading of existing assets, and safer road networks. The introduction and successful implementation of the Output and Performance-Based Road Contract (OPBRC) promoted efficiency-enabled infrastructure, shifting road management toward service-level outcomes and long-term asset preservation. Climate-resilient design measures, including enhanced drainage, raised road profiles, and flood-proofed structures, operationalized the Strategy's resilience-by-design principle, while road safety interventions—reflected in the improvement of average iRAP ratings from 1-star to 3-star has contributed to safer and more inclusive mobility. Through co-financing and close coordination with development partners, the Project also reinforced AIIB's strategic priority on partnership-driven delivery of high-quality transport infrastructure, demonstrating a scalable model for sustainable road asset management.

Alignment with Member policies, subnational planning and stakeholder needs, including changes to project objective and design:

The project is listed as one of the high-priority projects in the Five-Year Development Plan 2021-2025 of the Ministry of Public Works and Transport (MPWT). The project's climate-resilient design and safeguards aligned with, and supported, the government's National Green Growth Strategy (which emphasizes addressing climate resilience and road safety) and the 9th National Socio-Economic Development Plan (NSEDP) 2021–2025. The NSEDP called for "Improving public governance and administration to be more modern, transparent and agile" (outputs 3.5) and developing "National infrastructure for regional and international integration and connectivity" (output 3.6). The project's relevance was further reinforced during the 2023 Project Change, which expanded the project scope to include the Sikeut–Sikhai section—a known bottleneck with high exposure to flooding and traffic hazards, which aligned with NESDP. Further, the project supports the development of the North-South Economic Corridor, which is highlighted as a key priority in the Greater Mekong Subregion (GMS) Transport Sector Strategy 2030.

In addition, the project introduced an innovative contracting model (OPBRC), which is highly relevant to the Lao Government's Strategic Priorities of operationalizing a life-cycle asset management approach by creating incentives for contractors to deliver efficient and high-quality construction and preventive maintenance. OPBRC transfers construction and maintenance risks to the contractor which is paid for most – but not all – rehabilitation and improvement costs during a rehabilitation phase. Payment of the remainder is made contingent upon independent verification that contractually defined level of service standards are met over a long-term maintenance period. This

model satisfied MPWT's priorities of operationalizing a life-cycle asset management approach by creating incentives for contractors to deliver efficient and high-quality construction and preventive maintenance. OPBRC also strengthened fiscal discipline by enabling the Government to shift from short-term, ad-hoc budgeting to a multi-year, performance-driven maintenance regime with predictable costs.

Section III. Efficiency

Efficiency Assessment:	Efficient

Achievement of efficiency, including implementation delays, cost overruns and savings:

The Project is rated Efficient considering the high economic benefits, cost-effective resources, and successful adaptation to implementation challenges.

Economic efficiency and use of resources exceeded norms in the road sector in Lao PDR. Project management and implementation were efficient, with no major delays or cost overruns despite numerous challenges such as the COVID-19 pandemic, high inflation, and adoption of a new and complex road works contracting approach (OPBRC). The original project scope and PDO outcomes were achieved prior to the original project closing date of May 31, 2023, and significantly below budget. Extension of the project closing date was undertaken solely to complete the expanded 6 km road works with no additional financing. Strong market interest generated cost savings of 23 percent for the original scope of civil works. Civil works bid prices were approximately 30% lower than the engineer's cost estimates, resulting in savings of around US$12 million. These savings enabled the inclusion of an additional 6 km of road improvement works (Sikhai–Sikeut section), which was widened from two to four lanes. Despite the expanded scope, the original component remained below its originally allocated budget. As a result, the EIRR increased from 26% to 39% as the road rehabilitation length increased from 58 km to 64 km.

The efficiency analysis for the project is based on a cost-benefit analysis (CBA) approach, which follows the same methodology at appraisal stage. The efficiency analysis covers the time horizon of 30 years (2018-2047), based on the life cycle of actual sub-projects implemented which are road improvement. The project supported the rehabilitation of 64 km of National Road 13 North. The key assumptions include: (i) the discount rate of 12 percent; (ii) the Standard Conversion Factor (SCF) of 0.92 for investment and 0.87 for maintenance; (iii) the project could help avoid some of the emergency maintenance due to the climate resiliency improvement; (iv) the speed improvement from 30 km/h to 60 km/h; and, (v) traffic growth of 3 percent (until 2025), and 2 percent afterward.

The ex post economic evaluation found the project's economic efficiency exceeded estimates at appraisal due to the lower actual investment cost and the high benefits from improving the additional 6 km high-traffic road section. Ex-post economic analysis found that the scaled-up project comprising the 64 km from Sikhai to Phonhong produced a Net Present Value (NPV) of US$180 million with Economic Internal Rate of Return (EIRR) was estimated at 39.2 percent, higher than the appraisal estimates of US$121.97 million with EIRR at 26.3 percent, respectively. Key economic benefits of the project are from lower vehicle operating costs (VOC) due to the improved road conditions, reduced travel time, lower emergency repair and maintenance costs, value of timesaving for freight, and reduced road collision costs.

A value for money analysis found that use of the OPBRC modality itself contributed to efficiency above norms for road works of similar scope and scale in Lao PDR. The analysis shows that the EIRR of OPBRC (39.2 percent) is 5.6 percent higher than the estimated counterfactual scenario in which traditional road contracting was used (with estimated EIRR of 33.7 percent). The Benefit-Cost (B/C) ratio is 4.5 and 2.2 for OPBRC and conventional contract, respectively.

Section IV. Sustainability

Sustainability Assessment:	Likely sustainable

Implementation of project-specific Environmental and Social (E&S) instruments, such as the Environmental and Social Action Plan (ESAP), including the establishment and operation of a project-level Grievance Redress Mechanism:

Environment and Social (E&S) Compliance. Classified as Category A under the World Bank's Environmental Assessment policy. An Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) were prepared, disclosed, and implemented, with contractor-specific Environmental and Social Management Plans (C-ESMPs) further detailing site-specific measures such as traffic management, occupational health and safety, and waste management. These instruments were updated during the 2023 Project Change to include the additional 6 km section (Sikeut–Sikhai), which traverses a densely populated peri-urban area. Environmental risks such as dust, noise, erosion, and construction waste were mitigated through standard measures, with compliance monitored by the supervision consultant and MPWT's Environment and Social Division (ESD). No major environmental incidents were reported.

Environmental Safeguards. Environmental safeguards were generally well managed. The CESMP provided detailed site-specific measures to manage construction impacts, including traffic management, occupational health and safety, dust suppression, waste handling, and wastewater management. Regular monitoring by the supervision consultant and the Ministry of Public Works and Transport's (MPWT) Environment and Social Division (ESD) supported effective compliance with these plans. Construction impacts such as dust, noise, site cleanliness, and waste discharge were promptly addressed through corrective actions. Traffic and community safety issues, particularly in the additional 6-km section, were managed through strengthened work-zone controls, signage, and detour planning.

Completion of Resettlement Plan (RP). The Resettlement Plan (RP) was successfully implemented across the full 64 km corridor, covering both the original 58 km and the additional 6 km added during 2023 Project Change. Despite affecting over 5,200 households and facing COVID-19-related disruptions, compensation and relocation activities were completed in a timely and policy-compliant manner. The engineering designs were prepared in a way to minimize land acquisition impacts. A shortcoming was noted in the delayed finalization of land titling for project-affected households, which required a post-completion action plan. While compensation was completed, the modification of land titles lagged due to internal government processes and is expected to be completed by the second quarter of 2026. The Project team will closely follow up with the Government on this matter.

E&S Monitoring Implementation. The M&E system also supported safeguards compliance by tracking grievances and contractors' workforce being trained in Environmental, Social, Health and Safety (ESHS), Occupational Health and Safety (OHS), and Gender-Based Violence (GBV) Code of Conducts. While the project did not commission a third-party impact evaluation, the combination of accurate results monitoring, safeguards reporting, and field supervision provided a robust evidence base for assessing outcomes.

Implementation of environmental instruments strengthened MPWT's capacity in safeguards oversight and contractor management. Best practices from supervision and the CESMPs contributed to improved environmental management across construction sites and helped embed environmental awareness into contractor operations. These measures also reinforced social safeguards, including community engagement, grievance handling, and occupational health and safety.

Grievance Redress Mechanism (GRM). The project also maintained a functioning GRM, which contributed to monitoring social impacts. The GRM resolved over 890 grievances. Majority of the grievances were related to environmental risks such as dust, noise, erosion, and construction waste were mitigated through standard measures, with compliance monitored by the supervision consultant and MPWT's ESD. The Project hired and mobilized ES consultants that provide technical support to MPWT in the implementation and completion of the RP and ensuring grievances from Project-affected persons were properly documented and resolved in a timely manner.

The project has set up a hotline and WhatsApp to report grievances. The Ethnic Group Engagement Plan (EGEP) ensured culturally appropriate engagement with ethnic communities. No major environmental incidents were reported.

Road Safety. Road safety emerged as a critical concern during implementation. Several traffic collisions occurred, including fatalities in 2020, 2021, and 2022, prompting detailed Root Cause Analyses (RCA) and the development of Safeguards Corrective Action Plans (SCAP). The accidents occurred (2) motorcycle accidents in 2020; (1) motorcycle accident in 2021; and a major accident involving three vehicles in 2022. All cases were investigated and RCAs completed. These investigations revealed contributing factors such as poor road conditions, inadequate signage, insufficient lighting, and driver negligence. In response, the project implemented a range of safety measures including improved signage, lighting, and road maintenance. A dedicated Road Safety Engineer was assigned, and traffic management plans were incorporated into the ESMP and monitored monthly by the supervision consultant.

The project team reinforced environmental and social safeguards throughout the project. By supporting joint monitoring with the World Bank, AIIB helped ensure that safeguard instruments were consistently applied and corrective actions were implemented promptly. AIIB strengthened MPWT's ESD in overseeing contractors and managing site-level environmental and social risks. This support promoted best practices in environmental management and social safeguards compliance, including regular community engagement and consultations, grievance handling, and occupational health and safety.

Investment Sustainability (operational, financial/commercial, institutional):

To promote the long-term sustainability of the road, the OPBRC model was proposed. OPBRC shifts the focus from input-based works to life-cycle performance outcomes, with payments linked to verified compliance with predefined service-level indicators. Payment is made contingent upon independent verification that contractually defined level of service standards are met over a long-term maintenance period. The OPBRC model ensured that road condition standards are maintained throughout implementation and will continue to be upheld during the 7-year maintenance phase which goes well beyond the project closing date. MPWT has developed a comprehensive sustainability plan. This plan includes appropriate budget allocation for the O&M phase and establishes institutional arrangements for OPBRC contract management through the end of the contract. OPBRC strengthened fiscal discipline by enabling the Government to shift from short-term, ad-hoc budgeting to a multi-year, performance-driven maintenance regime with predictable costs.

The project demonstrated sound fiduciary compliance throughout implementation. Financial management systems were consistently maintained, with interim unaudited financial reports (IUFRs) submitted to the Bank in a timely manner and audit reports receiving unqualified (clean) opinions.

Procurement was carried out using World Bank procedures, and the OPBRC was competitively tendered. While the project experienced some delays in contract execution due to market volatility and currency depreciation, these were managed through contract amendments and close supervision.

Any Outstanding issues and Follow-up actions, if applicable:

N/A

Lessons Learned

Lesson 1.

Category	Construction and Preperations

What had AIIB planned would happen?	The project introduced the Output and Performance-Based Road Contract (OPBRC) model for the first time in the country, reflected a forward-looking and innovative approach to road asset management. OPBRC shares construction and maintenance risks with the contractor which is paid for most – but not all – rehabilitation and improvement costs during a rehabilitation phase. Payment of the remainder was made contingent upon independent verification that contractually defined level of service standards are met over a long-term maintenance period.
What happened during implementation?	Strong client commitment, hands-on support, proactive training, strategic market engagement, and robust technical support were critical to the successful roll-out of OPBRC contracting. During the implementation of an OPBRC, Implementing Agency ownership of the demonstration OPBRC at the Ministerial level was a critical factor contributing to rapid institutionalization through training, acquisition of monitoring equipment, and establishment of a monitoring unit. Timely market outreach and training of contractors increased their understanding of the OPBRC model and collected feedback on key contract parameters – such as the proportion of contract costs to be paid during the maintenance period – leading to a stronger market response. The project not only piloted OPBRC but also institutionalized its use by developing a standardized tender document, embedding performance standards and service-level requirements in the contract, preparing an operations and maintenance (O&M) plan, and delivering extensive training to MPWT staff and the contracting industry. These experiences highlighted the need for tailored capacity-building, iterative contract refinement, and sustained technical support. A simple and flexible project design and scalable PDO and indicators facilitated implementation and responsiveness to evolving development needs. Easing into the OPBRC approach was particularly important given capacity constraints within the country context. The PDO and outcome indicators were simple and readily scalable, allowing for adjustments to mitigate risks such as potential cost escalations, as well as to capitalize on opportunities like scale-up restructuring.
Why was there a difference between what was planned and what happened?	No difference
What can AIIB do differently in the next project?	OPBRC model has also been adopted by other development partners financing road investments, highlighting the importance of OPBRC as a replicable model for sustainable asset management. Moreover, lessons from NR13 have been shared regionally with peers in Cambodia, Mongolia, and other countries, positioning Lao PDR as an early adopter of performance-based contracting in the region and underscoring OPBRC's value as a replicable model for sustainable asset management. AIIB will provide continued training and guidance to borrowers in enhancing their capacity to manage OPBRC contracts in the next project.

Lesson 2.

Category	Financial
What had AIIB planned would happen?	Close coordination with Development Partners to strengthen the project design, implementation and impact.
What happened during implementation?	Financing and implementation support from IDA, AIIB, and NDF for works, resettlement, and supervision, enabled the project to achieve greater scale and

	impact, in line with development partner priorities, which demonstrates how coordinated development finance can amplify impact beyond tangible physical outputs. Close cooperation between the World Bank, AIIB, and NDF under a coordinated framework enabled harmonized support and leveraged complementary expertise and financing to the Implementing Agency, MPWT, through joint missions, which is important to ensure smooth and timely implementation across the project cycle. Coordination with co-financiers — World Bank and NDF — through joint missions was a notable strength which enabled streamlined and harmonized support to the Government, reduced transaction costs for the implementing agencies, and ensured consistent messaging and alignment across development partners, which demonstrated that coordinated development finance can amplify impact beyond tangible physical outputs.
Why was there a difference between what was planned and what happened?	During implementation, the Project was expanded to cover an additional 6 km of critical, flood-prone road from Sikeut to Sikhai. This extension would allow the GoL to complete a key missing link between central Vientiane and the project section of NR13 North, using cost savings from the original project scope with no additional financing. As a result, the project was able to improve a contiguous 64km section of NR13 North beginning at Sikhai, despite fiscal constraints prevented the GoL from undertaking these additional works using their own resources, as originally planned.
What can AIIB do differently in the next project?	AIIB will explore opportunities to coordinate with co-financing development partners for future projects.

Lesson 3.

Category	Integrity/Compliance
What had AIIB planned would happen?	The project design was technically robust, incorporating climate adaptation measures such as raised road profiles and high-capacity drainage systems. Environmental and social safeguards were integrated early, with a Resettlement Action Plan (RAP) and a functioning GRM in place. The project also embedded gender-sensitive design elements, including improved pedestrian facilities near markets and schools. Fiduciary and procurement arrangements were sound, and the results framework was realistic, practical, and measurable. Implementation arrangements were embedded within existing institutional structures, and risks were appropriately identified and mitigated.
What happened during implementation?	Numerous challenges have emerged throughout the implementation of this project, including COVID-19 Pandemic-related movement restrictions, widespread shortages of labor, uncertainties about the pandemic's impact on project costs, supply chain disruptions, inflation, exchange rate fluctuations, and reduced contract capacity, etc. These challenges were mitigated through close monitoring of the contractor, increased reliance on local resources, and weekly virtual implementation support by the World Bank, AIIB and NDF. During the implementation, the construction of the Lao-China Railway and Vientiane-Vang Vieng Expressway altered runoff patterns, and introduced new flooding risks that required additional culverts and raised profiles along NR13 North. While these design modifications led to only modest cost increases, they significantly enhanced the road's resilience in response to the changing environment.

Why was there a difference between what was planned and what happened?	Because of the challenges mentioned above, the Bank together with the co-financing partners provided consistent supervision, which was proactive, consistent, and technically strong, including regular technical meetings, technical missions, and field visits. Project team engaged regularly with the PMU, offering guidance on safeguards, procurement, and economic analysis. The Bank responded flexibly to emerging challenges, including adjusting designs due to increased flooding risks from adjacent infrastructure and minimizing resettlement impact without compromising cost-effectiveness. This reflects effective project design, adaptive contract management (including the OPBRC modality), timely supervision, and close coordination with the implementing agency and co-financiers.
What can AIIB do differently in the next project?	AIIB will identify the project potential risk and propose mitigation plan during early project preparation stage.

6. Client feedback

The borrower has been appreciative of AIIB and the Project Team's professionalism during preparation and implementation and acknowledged responsiveness of the team, in close coordination with the lead co-financier. They have expressed satisfaction with AIIB's prompt support and cooperation. Also, they are keen to work with AIIB on other projects in the future. Please refer to Annex for detailed client feedback.

Annex: Client Feedback on the Project

1. Are the services and support provided by the Project Team professional, sufficient and in time, during project preparation and project implementation?

We note that the project team is professional, sufficient and in time during project preparation and project implementation.

2. Is it convenient to access the Project Team's services and support?

Yes, it is very convenient to access the project team's services and support. For example, we can access personally by Wechat and WhatsApp. This helps our work go smoothly. No need to wait for long time.

3. Does the Project Team demonstrate flexibility and efficiency during project preparation and project implementation?

During preparation and project implementation, the Team demonstrates flexibility and efficiency.

4. What is the value addition of AIIB's financing in the Project?

The National Road No.13N, which is critical section connecting to Vientiane capital for 58 km original section with 6 km additional section, by using loan savings, has been rehabilitated and improved with good results. This helps social and economic development in the region to grow very quickly. It would be more benefit if AIIB can further finance from Phonhong to Vangvieng and Kasi (up North). The AIIB Project Team support from technical and safeguards experts was essential to guide the implementation and reach the targets defined for the project.

5. Will you consider working with the AIIB again in infrastructure development? Please provide a few specific reasons.

We need AIIB to finance more as NR13 especially up North from Phonhong and down to South from Thakhek to Savannakhet and further to Pakse. Because NR 13 is the main trunk national road of the country. We do hope that we will cooperate further with next projects especially NR13. AIIB has proven to be a very constructive, cooperative and flexible partner for implementation of roads project and cooperation with the AIIB Project team has been excellent.

6. Do you have any suggestions to the Project Team and/or the AIIB?

No suggestion to Project Team. It would be much better if AIIB consider establishing its office in Lao PDR for more closer cooperation with us.

7. Will you consider working with the AIIB again in infrastructure development? Please provide a few specific reasons. Other comments (such as comments on the reporting requirement, approval of project changes, etc,):

We need AIIB to finance more as NR13 especially up North from Phonhong and down to South from Thakhek to Savannakhet and further to Pakse. Because NR 13 is the main trunk national road of the country. We do hope that we will cooperate further with next projects especially NR13. Thanks to the Project Team/AIIB for their excellent cooperation and support during the whole sometimes difficult implementation. Since AIIB provided us only civil works in the project, AIIB could consider financing on capacity building in Department of Road (DoR)/MPWT staff including PMU staff. For example, workshop organized in Xiamen on the Environmental, social and fiduciary, which was benefited to us very much.