

Angola Public Security Innovation Project (ANG-7)

- Executive Summary-

February 2025

1. Purpose of the ANG-7 Ex-Post Evaluation

Overview

- ♦ The purpose of this ex-post evaluation (hereinafter referred to as “evaluation”) is to analyze the 1st Angola Public Security Project (ANG-7), supported by the Economic Development Cooperation Fund (EDCF), by conducting a comprehensive performance assessment and examining the effectiveness of mechanisms to ensure sustainability.
- ♦ The evaluation also aims to assess whether the project’s final outputs have been achieved and to evaluate its contribution to the development goals. This will provide an opportunity to confirm the feasibility of additional support and identify areas for improvement in similar future projects.

1. Evaluation Method and Results

Evaluation Method

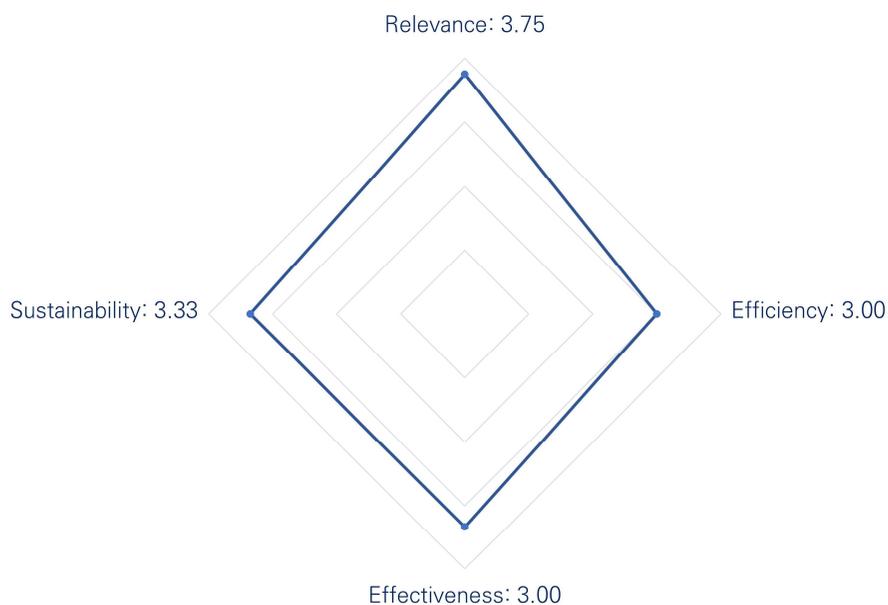
- ♦ The evaluation assessed the appropriateness of the performance evaluation indicators developed during the project planning phase (feasibility study and appraisal) and restructured them into practical indicators that can be collected and measured using the project’s site-specific database.
- ♦ The evaluation was conducted based on the OECD DAC evaluation criteria, with comprehensive consideration of cross-cutting issues such as environmental impact and gender. It utilized data collected through literature reviews, domestic stakeholder interviews, and on-site field investigations.
- ♦ However, more than 10 years have passed since the feasibility study, during which the economic analysis for this project was conducted. This extended gap, along with difficulties in obtaining the original spreadsheet containing detailed calculations and key assumptions, resulted in certain benefit items having only a limited logical connection to the overall project rationale. Consequently, additional literature reviews were undertaken to verify the data and related materials required for the ex-post evaluation.

□ Comprehensive Evaluation Result

- ♦ The comprehensive evaluation rating was determined by considering the scores for the four evaluation criteria: relevance, efficiency, effectiveness, and sustainability. The EDCF projects for Angola were rated as "successful" with a score of 3.27.

[Comprehensive Ex-Post Evaluation Result]

Criteria	Weight	Result	Rating
Relevance	25%	3.75 / 4	Very Relevant
Efficiency	25%	3.00 / 4	Efficient
Effectiveness	25%	3.00 / 4	Effective
Sustainability	25%	3.33 / 4	Sustainable
Overall Result	100%	3.27 / 4	Successful



□ Result by Evaluation Criteria

- ◆ (Relevance) The Angola Public Security Innovation Project (ANG-7), while not initially included in Korea's priority partner countries at the time of planning, aligns with Korea's Basic Plan for International Development Cooperation (2011–2015), which emphasizes the diversification of support regions (focusing on Africa) and priority sectors such as e-government. The project was implemented to address clear development demands, including those identified in the Luanda City Masterplan. The active participation of Angola's National Police ICT Bureau, which contributed at every stage from planning to post-management, demonstrated strong ownership by the partner country. The project design during the feasibility study was logically structured with verifiable indicators, despite some room for improvement. Although certain systems on-site were not utilized due to unforeseen environmental factors, other outputs were implemented according to the design. No significant changes in Angola's development needs or policies were observed during the project period, and modifications, substitutions, and additions to the project scope were effectively managed, showcasing positive adaptability over time.
- ◆ (Efficiency) The project experienced a 29-month delay due to administrative procedural delays on the partner country's side prior to commencement and the inclusion of additional tasks in the design. However, these delays were deemed unavoidable given the administrative context. Adjustments to enhance the project's completeness were managed through a rational and collaborative process involving key stakeholders. Furthermore, the project was completed without exceeding the original loan ceiling or total project budget. Cost increases resulting from additional tasks were effectively managed through budget reallocations and the appropriate use of contingency funds, ensuring smooth financial execution. This demonstrates a high level of efficiency in project management.
- ◆ (Effectiveness) While certain field systems provided under the project were left unused, the majority of key outputs—such as buildings, communication networks, and systems—were achieved. An analysis of Angola National Police performance data revealed that emergency calls to the 113 hotline significantly decreased immediately after project completion, indicating room for improvement in the utilization of the National Central Command (NCC) for public security services. As such, the project is evaluated as “partially effective.” Although the project did not explicitly target vulnerable groups, it was implemented without discriminatory

effects on them. However, certain mobile network subscribers were unable to access the 113 emergency call center service, highlighting the need for further investigation and mitigation measures.

- ♦ (Sustainability) The operating agency's finances remain relatively stable, and the partner country has largely secured the budget necessary for managing outputs and ensuring the long-term maintenance and expansion of project outcomes. While some uncertainties exist, the institutional framework required for sustainability is in place. There are no significant challenges in staffing or personnel allocation, and the agency has technical personnel capable of systematically maintaining the outputs. However, strengthening the framework for applying the established infrastructure and systems to real-time emergency response is needed. The partner country has demonstrated strong commitment to sustaining project outcomes and has shown keen interest in exploring additional ICT-based projects in the security sector beyond the second phase, resulting in a highly favorable evaluation of sustainability.

- ♦ (General Evaluation Criteria) The evaluation was conducted based on the criteria of impact, coherence, cross-cutting issues, and grant-loan linkage, as detailed below.
- (Impact) The project has contributed to enhancing public safety, deterring criminal activities, and strengthening the social security network, especially for vulnerable groups in areas with limited security coverage. Socially, the project strengthened crime prevention capabilities, stabilized public security, reduced citizen's anxiety that improved overall public safety. Economically, it created a foundation for the sustainable growth of Angola's economy by improving the foreign investment environment and facilitating corporate activities. Institutionally, the establishment of advanced security and traffic system aligned with Angola's public security modernization plans, reinforcing social order and protecting key national facilities.
- (Coherence) The project demonstrated strong alignment in both internal and external coherence throughout its implementation. Internally, it aligned with Korea's Strategic Plan for International Development Cooperation, which aims to establish a foundation for self-reliant growth in Africa. The project also created synergies through the organic linkage of grant- and loan-based ODA, leveraging technical expertise from similar EDCF-supported projects in other countries to advance digitalization and improve security systems. Externally, the project maintained complementary connections with initiatives by major donors such as the World Bank, JICA, and USAID, minimizing redundancy and fostering collaborative synergies. It was also consistent with global trends advocating for administrative efficiency and enhanced public security through ICT utilization. By aligning with both domestic and international donor strategies, as well as Angola's National Development Plan, the project strengthened its sustainability and effectiveness, ensuring a long-lasting impact.
- (Cross-cutting Issue) This project, aimed at establishing ICT-based public security infrastructure, has demonstrated positive impacts in areas such as environmental sustainability, human rights, vulnerable groups, and gender. Environmentally, while the project does not pose significant risks of large-scale environmental damage, insufficient attention has been given to e-waste management and energy consumption. The second phase of the project should prioritize the adoption of eco-friendly technologies and establish effective waste management measures. From a human rights and vulnerable groups perspective, the introduction of the security system is expected to enhance the right to safety and access to security services for

all citizens, including vulnerable populations. However, safeguards to protect personal data and prevent surveillance-related issues, alongside transparent operational measures, are essential to ensure human rights are upheld. In terms of gender mainstreaming, no significant gender-based disparities were identified. However, additional measures such as capacity-building programs for female police officers and the development of systems to address crimes against women and children are necessary to advance gender inclusivity. Addressing these cross-cutting issues will enable the sustainable and inclusive operation of public security infrastructure.

- **(Grant-Loan Linkage)** This project leveraged a concessional loan to establish key infrastructure such as the National Command and Control (NCC) and the 113 emergency call center, complemented by grant-based ODA initiatives. These included training programs for police officers, invitation-based capacity-building sessions, and the dispatch of experts to enhance system operation capabilities and crime prevention skills. This complementary linkage between loan- and grant-based projects has increased the sustainability of project outcomes, expanded international cooperation networks, and maximized overall impact. For sustainable operations moving forward, it is necessary to strengthen the utilization of key infrastructures such as the NCC, 113 emergency response system, local and regional police command centers, and the criminal vehicle information system. Recommended measures include revising O&M manuals, providing training for equipment managers, offering policy advisory services to improve institutional frameworks, and developing a phased capacity-building roadmap for local police officers and government officials. These steps will establish the foundation for independent operation and management of the system and contribute to the long-term modernization of the public security framework.

2. Lessons and Recommendations

□ Lesson Learned

◆ Success Factor

- (Relevance to the Partner Country's Development Plan) This project aligns with Angola's National Development Five-Year Plan and Public Security Innovation Plan, ensuring high satisfaction from the partner country. It was particularly well-designed to address Angola's clear demands, such as those outlined in its long-term and medium-term urban development plans, while also supporting Korea's strategy to diversify cooperation regions.
- (Specific Objectives and Relevant Project Components for Enhancing National Security Capabilities) The project integrated Luanda's police central command system with IT-based security and traffic information systems, aiming to maintain social order and ensure citizen safety. The 113 emergency response system, connected to VSS, VTS, and VES systems, enhanced crime prevention and response capabilities. The establishment of a 24-hour operational framework for emergency crime response significantly contributed to protecting citizens' lives and property. Additionally, training and remote support provided by the Korean National Police on the 112 system complemented the operation of the 113 system, enabling smooth and effective system management.
- (Strong Commitment and Institutional Alignment of the Implementing Agency) As the implementing agency, the Angola National Police ICT Bureau demonstrated strong commitment by addressing challenges related to IT-based system integration and human resource shortages. It enhanced technical workforce allocation and training, enabling the agency to independently resolve technical issues that might arise during system operations, ensuring stable post-project system management.
- (Mutually Beneficial Project Execution Leveraging Korea's Expertise and Operational Experience) This project utilized Korea's expertise in e-government and ICT systems to improve the central command system and introduce security and traffic information systems, significantly strengthening Angola's public security capabilities. It achieved notable results, including reduced traffic accidents and enhanced crime prevention. Additionally, the project promoted broader economic cooperation between the two countries by supporting the international expansion of Korean companies and increasing exports of ICT equipment, thereby contributing to Korea's economic growth.

◆ Limitations

- (Underdeveloped Emergency Response Processes Compared to the Provided ICT Infrastructure) Despite the establishment of the 113 integrated command system and emergency response infrastructure, the Angola National Police has not developed a clear operational model for emergency response. System utilization remains low due to the absence of an interconnected system between response units and technical limitations. Current operations largely follow traditional workflows with minimal IT integration.
- (Insufficient National Geographic Data in Angola) Although the 113 system aims to operate using a digital map, the lack of digitalized geographic information, such as road and building names, hampers effective map development and operation. Currently, temporary digital maps based on satellite imagery are used, with communication relying on radio transmissions. This limits the accuracy and utility of the system.
- (Limitations in Data Transmission via TRS Network) The insufficient capacity and signal strength of the TRS network restrict the use of MDT devices. Additionally, the discontinuation of the TETRA-based TRS system makes further installations and problem resolution challenging. These issues stem from a lack of technical strategy during the project design phase.
- (Constraints in System Utilization Due to Insufficient National Telecommunications Infrastructure) Angola's inadequate telecommunications infrastructure hinders accurate location tracking of callers and smooth data transmission, forcing reliance on radio communication for command delivery. Many MDT devices are either underutilized or stored in warehouses, reducing the efficiency of the system.
- (Lack of Maintenance and Operational Management Capabilities for System Sustainability) The system suffers from insufficient maintenance and operational management capacity, with delays in procuring parts and financial constraints raising concerns about sustainability. The operation of security management system applications heavily depends on Korean companies providing free support. Establishing a robust technical support system and introducing paid service contracts are necessary to ensure operational stability.
- (Insufficient Coordination Among Departments After the Project Completion) While the ICT Bureau led the infrastructure development, collaboration with frontline departments responsible for system operation remains insufficient, reducing the overall effectiveness of the integrated system.

□ Recommendations

◆ Korea Eximbank

- (Ex-Post Support Measures for Ensuring Stable System Operation and Maintenance) To ensure the stable operation of the 113 system, establishing an emergency response system and securing the stable procurement of components is essential. To achieve this, measures should be devised to maintain an appropriate stock of key components, enabling the beneficiary institution to respond effectively to emergencies. Additionally, the feasibility of utilizing locally manufactured or compatible components should be assessed. To reduce dependence on imports, priority should be given to technology transfer and enhancing the maintenance capabilities of local personnel through regular technical training and the implementation of a certification system. Furthermore, a secondary and tertiary technical support system should be established in collaboration with domestic suppliers to address major technical issues. It is also necessary to explore financial and institutional support measures that would enable the beneficiary institution to enter into paid technical support contracts.
- (Institutional Mechanisms for Managing Project Performance Indicators) To ensure the timely acquisition of baseline evaluation indicators and statistical data agreed upon with the beneficiary institution at the initial stage of the project, the adoption of a Tollgate model should be considered. The monitoring process should be strengthened by defining procedures for phased performance reviews and data provision, thereby enhancing the accountability of the beneficiary institution. To this end, Korea Eximbank should establish pre-agreed baseline indicators and data provision standards with the beneficiary institution and reinforce systematic project management through continuous implementation monitoring.
- (Enhancing Technical Cooperation for Ex-Post Project Management and Strengthening the Linkage Between Grant and Loan Assistance) Korea Eximbank should promote technical cooperation to ensure the effective operation of the 113 emergency response system and strengthen the self-sufficient operational capabilities of local personnel through tailored capacity-building programs. In the second phase of the project, efforts should be made to enhance the operational capacity of the Angola National Police's Directorate of Telecommunications and Information Technology by establishing a comprehensive operational framework and implementing a technology transfer and training program benchmarked against the Korean National Police Agency's 112 system.

To ensure the sustainability and expertise of the project, it is necessary to secure a dedicated budget for technical cooperation within the loan project or to systematize collaboration between EDCF and grant aid agencies. Additionally, the establishment of an integrated grant-loan linkage platform should facilitate cooperation from project preparation to post-management, maximizing synergy effects and ultimately enhancing the credibility and effectiveness of Korea's ODA initiatives.

- (Preemptive Risk Analysis of the Recipient Country's Administrative, Technical, and Financial Capacity to Prevent Project Delays) To ensure the smooth implementation of the second-phase project and prevent delays, continuous analysis of the recipient country's administrative, technical, and financial capacity is required. Administrative risks should be minimized by reviewing approval procedures, document processing, and cooperation mechanisms, while efforts should be made to optimize the system and strengthen maintenance and operational frameworks, taking into account local IT infrastructure limitations. Furthermore, technical training should be provided to enhance the maintenance capabilities of local personnel, and supply chain stability should be monitored to prevent delays in component procurement, with irreplaceable components secured in advance. Financial risks should be mitigated through budget analysis, coordination with international organizations for financial support, and the establishment of paid technical support contracts, thereby ensuring the long-term sustainability of the project.

- ♦ The National Police of Angola

- (Establishing a Joint Performance Management Model and Managing Project Outcomes with EDCF) The Angola National Police should collaborate with EDCF to define short- and long-term objectives for the second phase of the project and establish a joint performance management framework. A monitoring system based on performance indicators aligned with project goals should be implemented, with regular evaluations and reporting to track progress. The policy agency should proactively set KPIs and leverage real-time monitoring to maximize project outcomes.
- (Improving Efficient Communication and Information Delivery Systems) To reduce redundancies and improve the efficiency of communication networks, the Angola National Police should implement separate communication networks based on incident type and adopt a dual communication system. Alternatives such as smartphones and commercial communication networks should be explored. Additionally, integrating TRS radio networks and GPS data with digital maps will help reduce response times and enhance public security capabilities.
- (Developing Situation-Specific Process Flowcharts and Manuals) The current 113 emergency system includes code classification procedures but lacks clear departmental processing standards based on urgency and importance, with limited information sharing between departments. Systematic procedures and manuals tailored to incident types should be developed, accompanied by regular training and inspections for operational personnel. This will improve real-time information sharing and enable swift responses to emergencies.
- (Reception, Training, and Human Resource Management for Dispatch and Command Personnel) Personnel responsible for receiving emergency calls and dispatching commands should be selected and trained based on their expertise in geographic information and incident response experience. To retain skilled personnel in the demanding environment of the 113 operations center, an appropriate compensation system should be established to encourage long-term service.
- (Integration of Work-spaces for NCC Call Reception, Command, and Monitoring Personnel) Call reception staff operate in separate spaces from other personnel, which limits situational awareness. Establishing a unified workspace where reception, dispatch, and monitoring personnel can collaborate around a central large-screen display would enable faster information sharing and enhance response efficiency.

- (Efficient Operation and Management of Facilities and Equipment) To sustain the security system's operations, dedicated budgets and personnel should be secured, and the fiber-optic communication network should be transferred to a telecommunications operator for subscription-based management. For stable system operations, redundancy and alternative routing for equipment should be strengthened, and UPS units and backup generators should be installed separately to prevent simultaneous damage during disasters. Additionally, the CPL electrical room generator's malfunction must be resolved promptly, with regular inspections to ensure consistent and reliable service.