Office of Internal Oversight Services

INTERNAL AUDIT DIVISION

REPORT 2025/018

Audit of the seismic mitigation retrofit and life-cycle replacements project in the Economic and Social Commission for Asia and the Pacific

Despite delays in phase 2 construction, the project was substantially completed within the approved budget

27 June 2025
Assignment No. AN2025-740-01

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EXECUTIVE SUMMARY

The Office of Internal Oversight Services (OIOS) conducted an audit of the seismic mitigation retrofit and life-cycle replacements project (SMP) in the Economic and Social Commission for Asia and the Pacific (ESCAP).

The objective of the audit was to determine whether ESCAP internal controls over the seismic mitigation retrofit and life-cycle replacements project were implemented effectively to ensure timely completion of the project within the scope and budget approved by the General Assembly. The audit covered the period from May 2024 to April 2025 and included the: (a) management of construction and post-construction activities in the SMP, and (b) management of key contracts.

The SMP project was substantially completed within the approved budget. Phase 2 construction remained broadly aligned with the original contract schedule, and most of the floors in both blocks of the secretariat building had been commissioned and occupied. However, several technical, safety, and documentation issues remained unresolved, including final integration testing, operational and maintenance training, and submission of prescribed construction documentation before final close-out and handover. Given that demobilization had started, further delays could lead to lower quality documentation, increased potential for disputes and knowledge gaps, impacting warranties and future repairs and maintenance.

OIOS made one recommendation. To address issues identified in the audit, ESCAP needed to agree on a formal demobilization plan with the general contractor to ensure effective mitigation of remaining risks to the SMP, including those related to prescribed construction documentation and timely completion of close-out processes.

ESCAP accepted and implemented the recommendation, as indicated in Annex I.

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I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted its eighth annual audit of the seismic mitigation retrofit and life-cycle replacements project (SMP) in the Economic and Social Commission for Asia and the Pacific (ESCAP).

2. The SMP project proposal was approved by the General Assembly in December 2016 through its resolution 71/272 with an initial budget of $40 million, which was subsequently increased to $41.3 million. The overarching objective of the SMP is to ensure the health and safety of staff, delegates and visitors at the Commission's premises in Bangkok through: (a) retrofitting the ESCAP secretariat and service buildings to mitigate against seismic risks; (b) updating building life-safety systems in the secretariat building to meet current standards; and (c) replacing building systems in the secretariat building that have reached the end of their useful lives.

3. In October 2021, ESCAP entered into an agreement with the main construction contractor with a plan to complete all construction works by November 2023, implemented over two phases, each lasting an estimated 12 months. Phase 1 involved construction works in block B of the secretariat building and part of its central core, while phase 2 covered block A and the remaining part of the central core. Phase 1 was substantially completed in May 2024, approximately 18 months behind schedule, due to a variety of factors, including poor performance of the general contractor.

4. In June 2024, ESCAP issued the notice to proceed with phase 2 construction to the general contractor. At that time, the project's estimated date of completion was revised to December 2024 after implementing a transitional plan that dissolved the core project team and transferred primary project management responsibilities to the Facilities Management Section (FMS) in the Division of Administration. This ambitious target was, however, missed, and substantial completion[1] is now expected in June 2025.

5. Despite the schedule delays, ESCAP anticipated that construction works would still be completed within the overall budget of $41.3 million, comprising $5.9 million under section 19 (for project management costs) and $35.3 million under section 33 for construction costs and professional services. Cumulative project expenditure as of April 2025 amounted to $40.5 million, as shown in table 1.

Table 1: Cumulative project expenditure as of April 2025 (in thousands of United States dollars)

Year	2017-18	2019	2020	2021	2022	2023	2024	2025	Total
Section 33									
Construction costs		1,535	1,000	2,992	10,074	194	13,481	1,051	30,327
Professional services	1,893	296	350	173	821	604	165	80	4,382
Subtotal	**1,893**	**1,831**	**1,350**	**3,165**	**10,895**	**798**	**13,646**	**1,131**	**34,709**
Section 19									
Project management	1,263	930	1,009	865	640	610	495	12	5,824
Grand Total	**3,156**	**2,761**	**2,359**	**4,030**	**11,535**	**1,408**	**14,141**	**1,143**	**40,533**

[1] Substantial completion is the stage when the works, or the relevant section or part of the works are complete except for minor omissions and defects that do not prevent the whole of the works or the relevant section or part of the works from being used for their intended purpose.

6. The original project team, with seven posts including the Project Manager (P-5) and Project Engineer (P-4), was in place until July 2024. Thereafter, FMS took the leading role in managing the project, with the Chief of FMS as the de facto project manager, supported as needed by others in FMS and the Division of Administration, including two dedicated civil engineers at the P-3 level.

7. The Global Asset Management Policy Service (GAMPS) in the Department of Management Strategy, Policy and Compliance (DMSPC) continued to provide risk management and oversight to the project, albeit at a reduced level as the project neared completion, and shared lessons learned and best practices from other construction projects across the Secretariat.

8. ESCAP uses Umoja to manage SMP contracts and financial transactions, while SharePoint serves as the central repository for project documentation.

9. Comments provided by ESCAP are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

10. The objective of the audit was to determine whether ESCAP internal controls over the seismic mitigation retrofit and life-cycle replacements project were implemented effectively to ensure timely completion of the project within the scope and budget approved by the General Assembly.

11. This audit was included in the 2025 risk-based work plan of OIOS in accordance with the General Assembly's request for OIOS to provide oversight of the project and include information on its key findings in its annual report to the General Assembly.

12. OIOS conducted this audit from March to May 2025. The audit covered the period from May 2024 to April 2025. Based on an activity-level risk assessment, the audit covered higher and medium risks areas in the management of the SMP, which included the: (a) management of construction and post-construction activities, and (b) management of key contracts.

13. The audit methodology included: (a) interviews with key project personnel, building occupants, and key vendor representatives, (b) review of relevant documentation, (c) analytical review of data on construction expenditure in Umoja, (d) sample testing of selected financial transactions, and (e) physical observation of ongoing construction activities.

14. To assess the accuracy of construction costs, OIOS reviewed key contracts, contract amendments, and variation orders, and reconciled the progress billings to the data in Umoja. Payments were validated, certified, and supported by documentation with no audit concerns raised.

15. The audit was conducted in accordance with the Global Internal Audit Standards.

III. AUDIT RESULTS

A. Management of construction and post-construction activities

Construction accelerated during phase 2, but substantial completion was delayed

16. As described in section 10 of the main construction contract, the conditions for substantial completion of construction works are satisfied by the issuance of a substantial completion certificate by

ESCAP. The contract also addresses certificates of readiness for key systems such as the mechanical ventilation and air conditioning systems, as well as fire and life safety occupancy declarations.

17. ESCAP issued the certificate of substantial completion in June 2025 after several deferrals, and most of the floors in both blocks of the secretariat building had been commissioned and occupied. A review of the latest performance evaluation report of the general contractor's indicated that failure to adhere to the project schedule, partly because of workforce management issues, contributed to the delays in substantial completion.

18. Nevertheless, testing and commissioning were conducted progressively as each floor was completed. OIOS reviewed the interim certificates of readiness and occupancy declarations for the floors completed in block A and confirmed that floors were only released for occupancy after the issuance of certificates of readiness signed off by the testing and commissioning agent.

19. Unlike phase 1, there were no major incidents for phase 2 resulting in work stoppages, nor significant time lost to rework. The changes implemented by ESCAP after the lessons learned from phase 1, such as implementation of the transition strategy and improved supervision of contractors, led to a more efficient implementation of phase 2 approximately 12 months from the date the contractor received the notice to proceed. This is in line with the schedule in the original contract. However, it represents a delay of approximately six months from the date the general contractor committed to phase 2 construction. ESCAP has retained the right to levy delay damages on the general contractor, as outlined below.

20. Given the significant progress towards completion of the construction works, with phased occupancy that has seen most floors occupied, OIOS did not make any recommendation.

Several technical, safety and documentation issues remained unresolved before final close-out and handover

21. After substantial completion of construction works, the general contractor is expected to hand over prescribed documents such as "as-built" drawings, warranties, guarantees, and operational and maintenance manuals. However, a review of the handover documents tracker based on a table of contents agreed upon by ESCAP and the general contractor showed that 17 documents had been received and accepted, while 167 had been received but were pending review by ESCAP. An additional 130 documents on the list had not yet been received. In addition, building operations training, which is designed to capacitate the facilities management team to ensure that building systems are operated and maintained effectively after the end of construction, was delayed.

22. ESCAP indicated that the documentation and building operations training were put on hold during the past year because the contractor did not have sufficient capacity to complete the documentation while rushing to complete the physical construction works. The impact of delayed training was significantly mitigated by the implementation of the transition plan that included more active involvement by facilities management personnel in the project management.

23. Now that substantial completion has been achieved, the general contractor is expected to retain sufficient capacity to complete the remaining minor works and submit the remaining documentation. In this regard, a detailed demobilization plan, indicating specific activities, timelines, and resources necessary, is required to ensure the safe and efficient removal of personnel, equipment, and materials in compliance with contractual obligations. The demobilization plan would mitigate the risk of delays in close-out processes and lead to higher quality documentation, reduced potential for disputes and knowledge gaps, and strengthened integrity of warranties and future maintenance efforts.

(1) ESCAP should agree on a formal demobilization plan with the general contractor to ensure effective mitigation of remaining risks to the seismic mitigation retrofit and life-cycle replacements project, including those related to prescribed construction documentation and timeliness of close-out processes.

ESCAP accepted recommendation 1 and stated that the substantial completion certificate included details for handover and demobilization by 31 July 2025.

Building occupants were generally satisfied with the renovated spaces; however, ESCAP could benefit from conducting formal post-occupancy evaluations

24. ESCAP is expected to timely and effectively respond to occupant feedback with transparent communication and corrective actions. Occupants could raise service tickets through either the Bangkok Service Hub or by contacting FMS staff directly (in which case FMS staff would raise the tickets).

25. Interviews with building occupants, including two tenants occupying a total of three floors in block B and portions of block A, indicated that occupants were generally satisfied with their new spaces and ESCAP's responsiveness as issues were reported. They, however, highlighted some concerns with aspects of personal comfort such as: (a) air quality inside meeting rooms during periods of increased occupancy, (b) noise levels within the open plan office areas, and (c) exposure to the sun and the resulting heat gain, flagged as the main concern, as window coverings had been excluded from the scope of the project. OIOS observed that some occupants were using temporary window coverings and indoor fans in attempts to improve their comfort.

26. ESCAP partially resolved the issue of window coverings by installing an energy-saving film on all windows. ESCAP indicated that they intended to fully resolve the issue by adding motorized blinds, which will be funded from alternative sources outside the SMP budget.

27. Formal post-occupancy evaluations had, however, not yet been conducted. Such evaluations can help to collect qualitative feedback that, together with data from the building management system, can provide a more holistic understanding of building performance. Without formal post-occupancy evaluations, latent issues may go unreported, potentially reducing the value of the defects notification period as a contractual safeguard.

28. ESCAP informed that they would undertake a post-occupancy survey during the defects liability period after full occupancy of the secretariat building by both ESCAP and its tenants to gain feedback on the solutions implemented, with a focus on the office space layout and related facilities and equipment.

Project risk management activities were winding down as the project neared completion

29. The scale of risk management activities was reduced this year. The contract with the independent risk management firm expired in November 2024, and any risk management support they previously provided was brought in-house, except for the Monte-Carlo simulation, which was not conducted during the audit period. While the project team continued to engage with GAMPS to review the risk register, the number of key risks was reduced to two risks related to quality assurance and documentation, which continued to be actively managed through weekly progress meetings, inspections, testing and commissioning, and planning for demobilization. This was reasonable considering the completion status of the project.

30. The project was progressing within budget parameters and was expected to be completed within the budget approved by the General Assembly. The ability to stay within budget was enabled by measures

taken by ESCAP, such as dissolving the core project team and transferring its responsibilities primarily to FMS, as well as funding some aspects of the project using resources from outside the SMP budget (e.g., the funding of the contract for motorized blinds). Some financial risks related to THB-United States dollar exchange rate fluctuations remained.

B. Management of key contracts

Key contracts were managed effectively, but potential delay damages remained undecided

31. Following the difficulties in phase 1, ESCAP engaged the two main vendors — the general contractor, and the construction administration services contractor — to identify process improvements and lessons learned that would contribute to a more efficient and effective process in phase 2. These contracts were effectively managed through appropriate contract amendments that covered time extensions, delay damages, and, in the case of the construction administration services contractor, a reduction in the scope of their services as ESCAP brought some of the construction supervision services in-house, including a large portion of the inspection work. The construction administration services contract expired at the end of March 2025 and was not renewed. ESCAP believed that they had sufficient internal capacity to take over the remaining services, especially since no new variation orders were anticipated.

32. Vendor performance assessments were completed in accordance with the procurement manual and reflected the challenges in phase 1. In particular, ESCAP met with the two main contractors on a weekly basis to review progress and control project performance.

33. While timely delivery of the project remained an ongoing challenge, phase 2 was completed within the 12-month period stipulated in the original contract. ESCAP initially deferred the collection of additional delay damages between 1 August 2024 and 31 December 2024 and, in February 2025, waived its rights to collect delay damages during this period in recognition of the efforts the contractor had made to speed up work in the second half of 2024. However, ESCAP retained its right to collect further delay damages for the period from 1 January 2025 to the date of substantial completion at a rate of $3,000 per day. The total delay in the completion of construction to date is 17 months, all of which were carried over from phase 1. As previously reported in OIOS seventh annual audit report (2024/031), ESCAP received $531,000 in delay damages from the general contractor for the period to June 2024.

34. Due to the current phase of construction, no major procurement actions were planned. However, to address user concerns about solar heat gain and glare in the new offices, ESCAP signed two new contracts covering two aspects of window coverings: (a) an energy-saving film at a total cost of Thai Baht (THB) 14.4 million ($392,270), and (b) motorized blinds at a cost of THB 15.4 million ($451,400). The procurement process for both was satisfactory.

Payments to key contractors were valid and timely

a) Payments under the main construction contract were adequately certified and supported

35. As of April 2025, the main contractor had been paid approximately THB 797.6 million ($23 million) for certified work, which represented about 90 per cent of the contracted value. This amount included THB 96.6 million ($3.1 million) in variation orders, which were reviewed and finalized before the expiry of the contract with the construction administration services contractor.

36. A sample review of 10 of 13 progress billings between May 2024 and April 2025 valued at THB 337.4 million ($9.8 million) showed that they were appropriately approved and paid in a timely manner.

Until March 2025, the construction administration services contractor certified completed works before invoices from the general contractor were approved for payment. Since then, ESCAP took over responsibility for certifying work in progress and all steps required to approve progress payments.

37. ESCAP stated that the performance bond and retention funds would be sufficient to mitigate any remaining risks, including the risk of poor quality or incomplete documentation. ESCAP retained 5 per cent of all progress billings in line with the terms of the contract, and half of the retention will be released upon certification of substantial completion. The remaining 2.5 per cent will be released at the end of the 24-month defects liability period.

38. In addition, ESCAP deducted 10 per cent of the THB 83.8 million ($2.5 million) from each invoice, which was originally advanced to the contractor at the start of construction. As of April 2025, the advance had fully been recovered.

b) Payments for construction supervision, administration and technical support services were timely and adequately reviewed

39. As of April 2025, ESCAP had disbursed a total of THB 63.3 million ($1.8 million) for services under three categories, as below:

- THB 42.8 million for category 1 (construction supervision and administration services)
- THB 17.9 million for category 2 (design services), and
- THB 2.5 million for category 3 (on-call design and technical services).

40. A review of five selected payments under category 1, amounting to THB 4.2 million billed between May 2024 and April 2025, showed that the payments were valid, well-supported, and processed in accordance with contract terms. Similarly, all four payments under categories 2 and 3 for the same period, valued at THB 1.5 million, were adequately supported and timely. Overtime payments of THB 352,162 were also appropriately reviewed and approved.

41. While overall payments to the vendor remained within the contract's not-to-exceed value of THB 69.97 million, the payments to the construction administration services contractor under category 1 exceeded the original budgeted amount by THB 3.6 million due to delays and slippage in construction activities.

IV. ACKNOWLEDGEMENT

42. OIOS wishes to express its appreciation to the management and staff of ESCAP for the assistance and cooperation extended to the auditors during this assignment.

Internal Audit Division
Office of Internal Oversight Services

ANNEX I

STATUS OF AUDIT RECOMMENDATIONS

Audit of the seismic mitigation retrofit and life-cycle replacements project in the Economic and Social Commission for Asia and the Pacific

Rec. no.	Recommendation	Critical[2]/ Important[3]	C/ O[4]	Actions needed to close recommendation	Implementation date[5]
1.	ESCAP should agree on a formal demobilization plan with the general contractor to ensure effective mitigation of remaining risks to the seismic mitigation retrofit and life-cycle replacements project, including those related to prescribed construction documentation and timeliness of close-out processes.	Important	C	Action complete	Implemented

[2] Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.
[3] Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.
[4] Please note the value C denotes closed recommendations whereas O refers to open recommendations.
[5] Date provided by ESCAP in response to recommendations.

APPENDIX I

Management Response

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Rec. no.	Recommendation	Critical[1]/ Important[2]	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1.	ESCAP should agree on a formal demobilization plan with the general contractor to ensure effective mitigation of remaining risks to the seismic mitigation retrofit and life-cycle replacements project, including those related to prescribed construction documentation and timeliness of close-out processes	Important	Yes	Chief Facilities Management Section	23 June 2025	**Propose for closure.** The importance of a formal demobilization plan and mitigation of risks in receiving a full set of documentation during close out is fully understood with the retention sum of 5% being withheld accordingly. In this regard, the demobilisation documents consist of the substantial completion document, covering onsite works completion, site office removal, temporary accommodation for the reduced team on site, as well as offsite works. Attached, please find the Substantial Completion certificate "CE_CX-GEN_ 001.0_00_Substantial Completion 20250531" which references in milestone 4 the demobilisation and downsizing in July 2025 of the onsite team for completion of the punch list items. In addition to the substantial completion documents, please find attached the two org charts for June and July 2025 are contained in annex in "Demobilisation_Plan_2025".

[1] Critical recommendations address those risk issues that require immediate management attention. Failure to take action could have a critical or significant adverse impact on the Organization.

[2] Important recommendations address those risk issues that require timely management attention. Failure to take action could have a high or moderate adverse impact on the Organization.